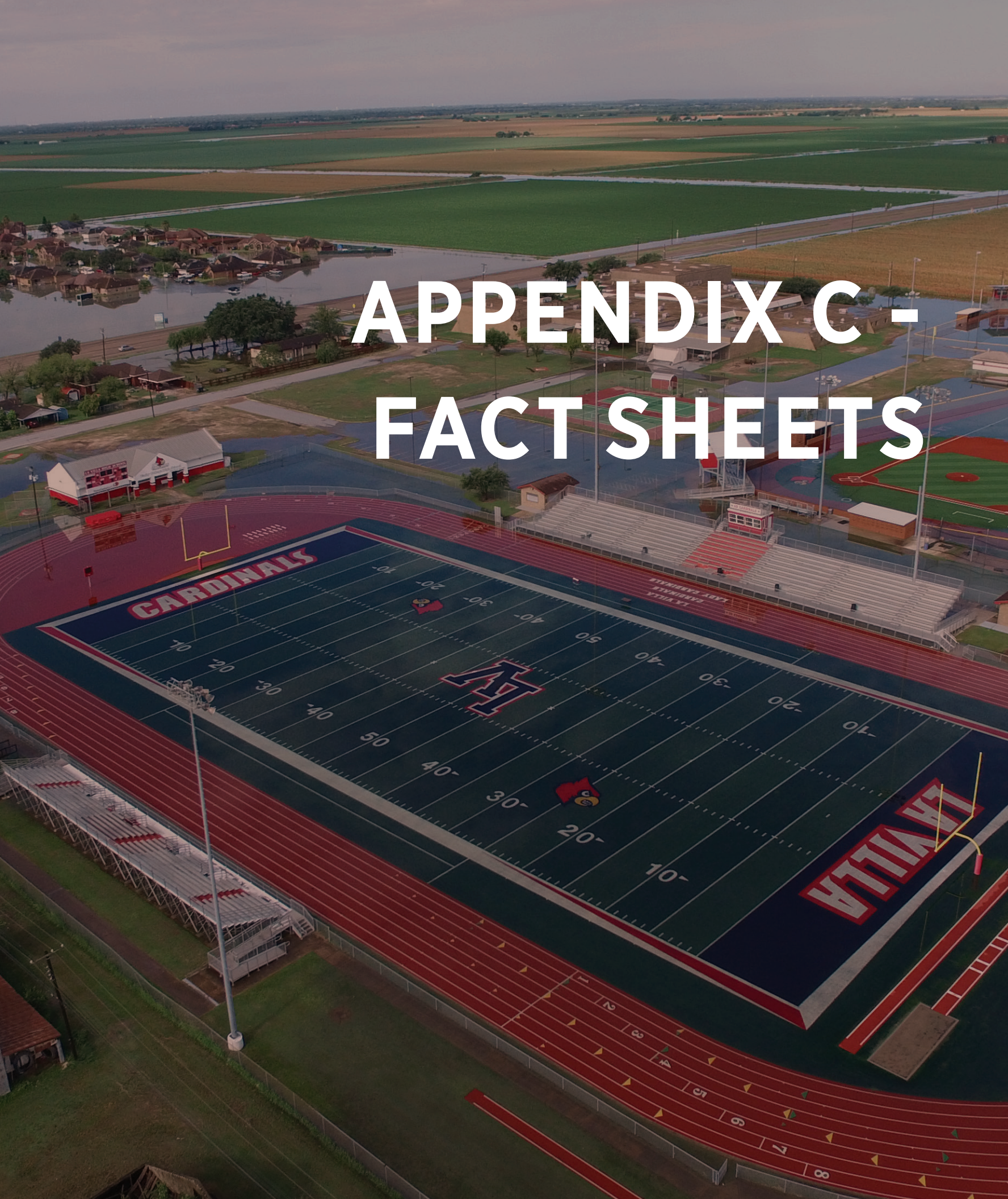


2023 REGIONAL FLOOD PLAN
REGION 15
LOWER RIO GRANDE

VOL. 3-2

APPENDIX C - FACT SHEETS



An aerial photograph of a sports complex, likely a high school or college stadium, showing significant flooding. The football field is the central focus, with yard lines and numbers clearly visible. The field is surrounded by a red running track and bleachers. The surrounding area, including parking lots and buildings, is also flooded. The sky is overcast, and the overall scene conveys a sense of a major weather event.

**FLOOD MANAGEMENT
EVALUATIONS
(FMES)
FACT SHEETS**

Brooks County Master Drainage Study

FME ID: 151000001

FME Description

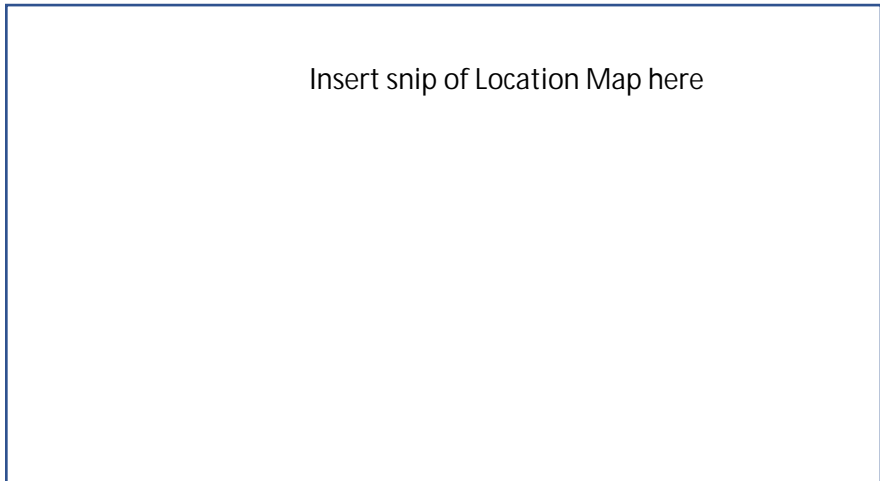
Develop Flood risk maps for the county of Brooks and develop CIP

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Brooks
HUC 8
HUC 12
Study Area (sq. mi.) 685.70



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Study Costs

Total Cost: \$250,000 Study Sponsor:
Estimated year to start: Entity with Oversight
Time to complete? Included in a CIP or other plan? Yes No
Funding Dedicated? Yes No (Potential) Source of Funding

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

FME ID: 151000002

Bayview Action #6

FME Description

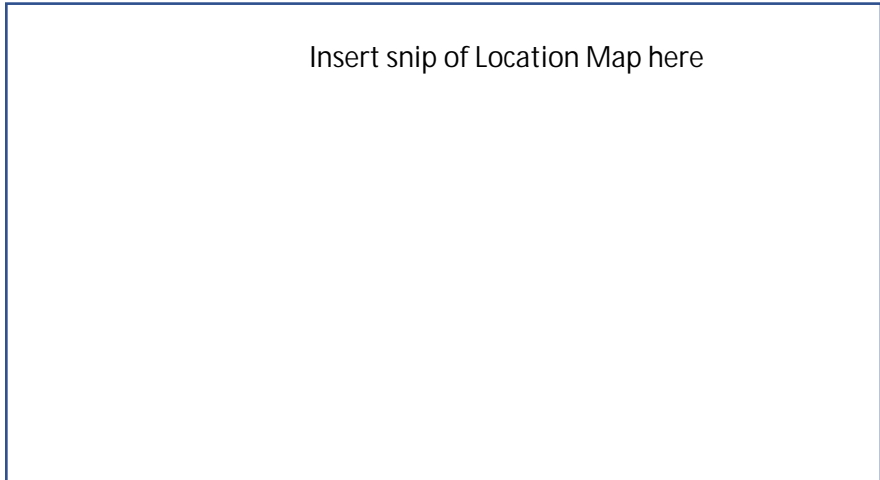
Upgrade three roadway bridges and one footbridge including structural improvements and stabilization to reduce damages caused by flooding and high winds.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Bayview
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12 121102080800,
 121102080900
 Study Area (sq. mi.) N/A



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$369,600	Study Sponsor:	Bayview
Estimated year to start:	2018	Entity with Oversight	Bayview
Time to complete?	2020	Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Action Plan or other plan?	
		(Potential) Source of Funding	HMGP; USDA; Other Grants

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Indian Lake Action #1

FME ID: 151000007

FME Description

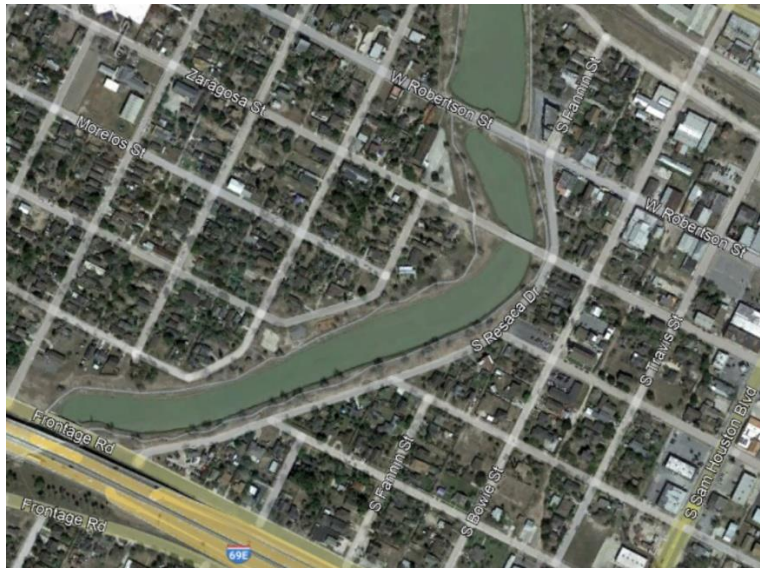
Elevate and harden S Resaca Shore Drive bridge to reduce risk of damages and maintaining critical access route.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Indian Lake
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12 121102080900
 Study Area (sq. mi.) 0.21



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$92,400	Study Sponsor:	Indian Lakes
Estimated year to start:	2018	Entity with Oversight:	Indian Lakes
Time to complete?	2020	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding:	General Fund; HMGP

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes v No

Indian Lake Action #12

FME ID: 151000008

FME Description

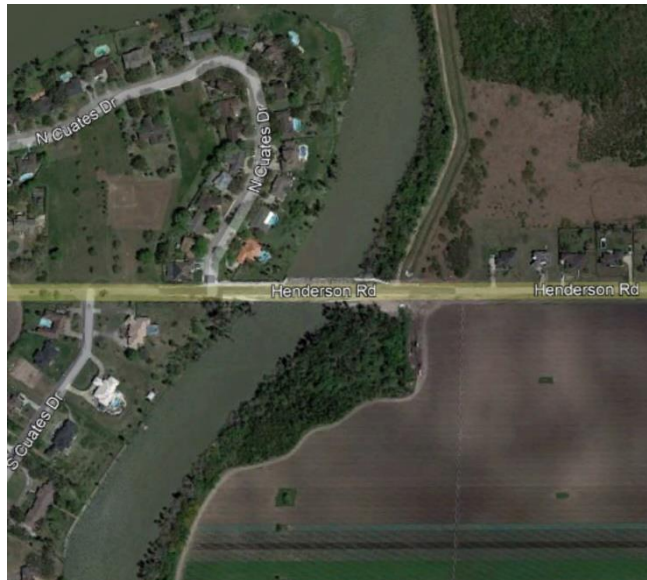
Upgrade/Elevate Henderson Road bridge over Resaca to remove from potential floodway, reduce the risk of damages, and maintain critical access route.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Indian Lake
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12 121102080900
 Study Area (sq. mi.) 0.16



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$184,800	Study Sponsor:	Indian Lakes
Estimated year to start:	2019	Entity with Oversight	Indian Lakes
Time to complete?	2021	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	General Fund; HMGP

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes v No

Indian Lake Action #17

FME ID: 151000009

FME Description

Upgrade shoulders and provide turnouts along Henderson Road to support evacuation route.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Indian Lake
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12 121102080900
 Study Area (sq. mi.) 0.78



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding: # of structures inundated
Population at Risk		Miles inundated?
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:		

Study Costs

Total Cost:	\$9,240	Study Sponsor:	Indian Lakes
Estimated year to start:	2019	Entity with Oversight	Indian Lakes
Time to complete?	2021	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	General Fund; HMGP

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes v No

Indian Lake Action #18

FME ID: 151000010

FME Description

Harden critical facilities, to include the Town Hall/Police Station, to reduce or eliminate wind, hail, and flood damage and ensure continuity of emergency services.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Indian Lake
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12 121102080900
 Study Area (sq. mi.) 0.50



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$27,720	Study Sponsor:	Indian Lakes
Estimated year to start:	2018	Entity with Oversight	Indian Lakes
Time to complete?	2020	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	General Fund; HMGP

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Laguna Vista Action #10

FME ID: 151000012

FME Description

Drainage Improvements: Harden and reinforce head wall along the Laguna Madre bay off Beach Boulevard.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Laguna Vista
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12 121102080800,
 121102080900
 Study Area (sq. mi.) 0.41



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$924,000	Study Sponsor:	Laguna Vista
Estimated year to start:	2018	Entity with Oversight	Laguna Vista
Time to complete?	2020	Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Action Plan or other plan?	
		(Potential) Source of Funding	HMGP; Local Funds; Other Grants; Drainage Fee

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes v No

Laguna Vista Action #11

FME ID: 151000013

FME Description

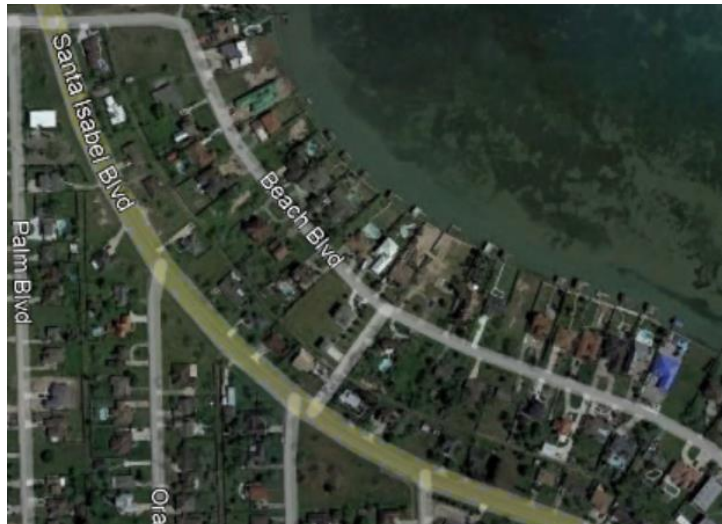
Drainage Improvements: Upgrade 48" drainage pipe located at 1004 Beach Blvd to increase capacity and reduce risk of flood damages.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Laguna Vista
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12 121102080800,
 121102080900
 Study Area (sq. mi.) 0.01



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$92,400	Study Sponsor:	Laguna Vista
Estimated year to start:	2018	Entity with Oversight	Laguna Vista
Time to complete?	2020	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	HMGP; Local Funds; Other Grants; Drainage Fee

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes v No

Laguna Vista Action #12

FME ID: 151000014

FME Description

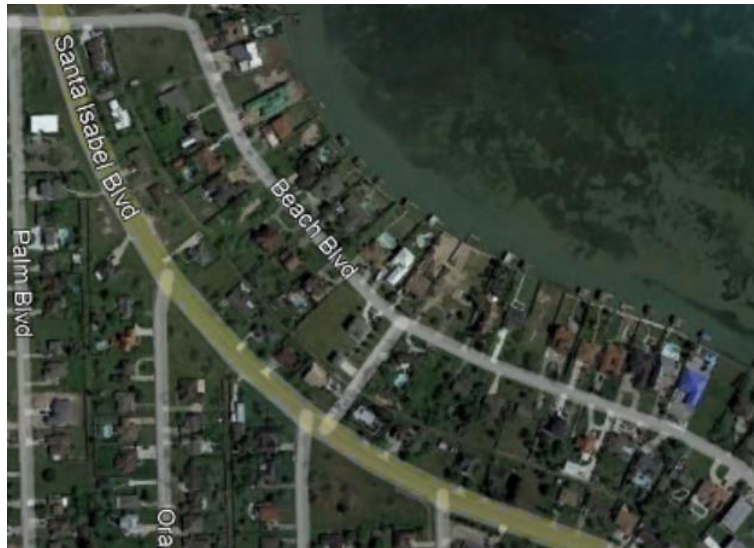
Drainage Improvements: Relocate and upgrade existing 36" drainage pipe located at 1026 Beach Blvd to increase capacity and reduce risk of flood damages.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Laguna Vista
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12 121102080800,
 121102080900
 Study Area (sq. mi.) 0.01



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$92,400	Study Sponsor:	Laguna Vista
Estimated year to start:	2018	Entity with Oversight	Laguna Vista
Time to complete?	2020	Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Action Plan or other plan?	
		(Potential) Source of Funding	HMGP; Local Funds; Other Grants; Drainage Fee

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes v No

Laguna Vista Action #19

FME ID: 151000015

FME Description

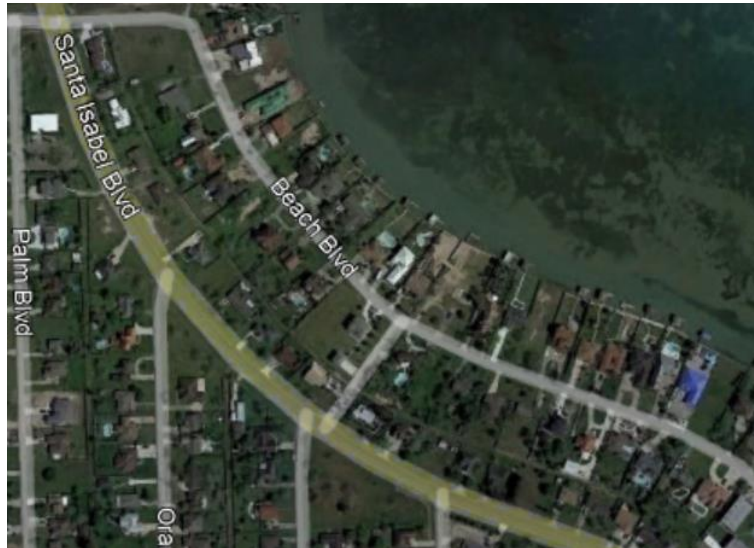
Harden Town Hall with wind, hail, and flood mitigation measures to reduce damages and ensure continuity of services

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Laguna Vista
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12 121102080800,
 121102080900
 Study Area (sq. mi.) 0.01



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$18,480	Study Sponsor:	Laguna Vista
Estimated year to start:	2018	Entity with Oversight	Laguna Vista
Time to complete?	2020	Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Action Plan or other plan?	
		(Potential) Source of Funding	HMGP; Local Funds; Other Grants; Drainage Fee

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Laguna Vista Action #3

FME ID: 151000017

FME Description

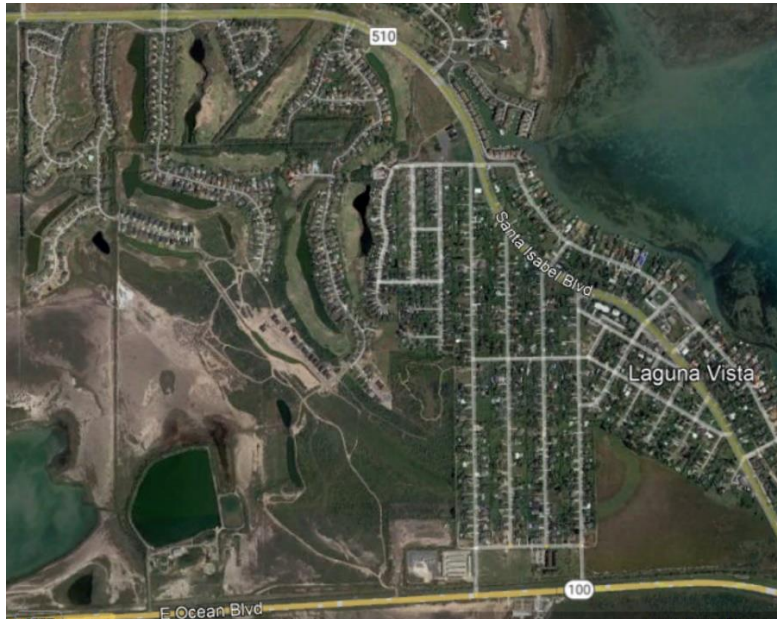
Drainage improvements Basin "D": Install upgraded drainage system west side of State Highway 510 for 80 acre residential area. Current system is inadequate to carry storm water runoff.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Laguna Vista
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12 121102080800,
 121102080900
 Study Area (sq. mi.) 1.87



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$924,000	Study Sponsor:	Laguna Vista
Estimated year to start:	2018	Entity with Oversight	Laguna Vista
Time to complete?	2020	Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
		Action Plan or other plan?	
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	HMGP; Local Funds; Other Grants; Drainage Fee

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Laguna Vista Action #4

FME ID: 151000018

FME Description

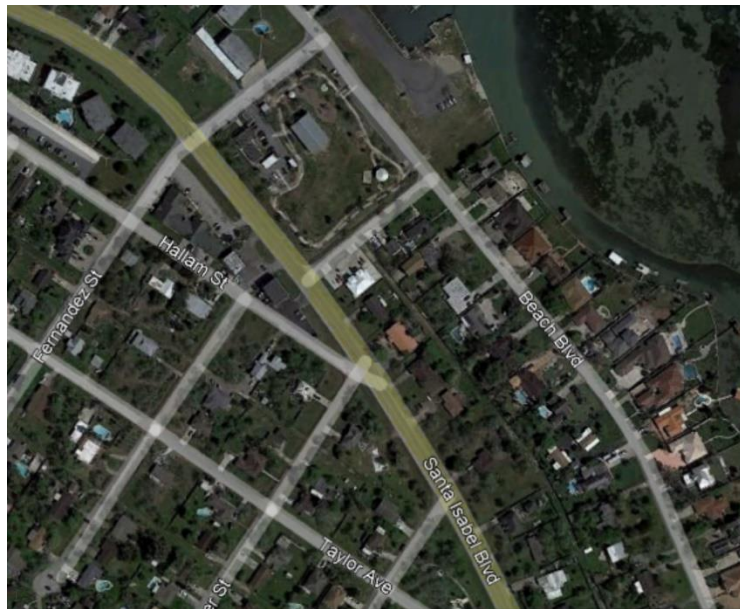
Drainage improvements Basin "E": Install upgraded drainage system off Saunders Street and State Highway 510 that drains acreage south of Fernandez Street and north of Morris Street.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Laguna Vista
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12 121102080800,
 121102080900
 Study Area (sq. mi.) N/A



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$924,000	Study Sponsor:	Laguna Vista
Estimated year to start:	2018	Entity with Oversight	Laguna Vista
Time to complete?	2020	Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Action Plan or other plan?	
		(Potential) Source of Funding	HMGP; Local Funds; Other Grants; Drainage Fee

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes v No

Laguna Vista Action #5

FME ID: 151000019

FME Description

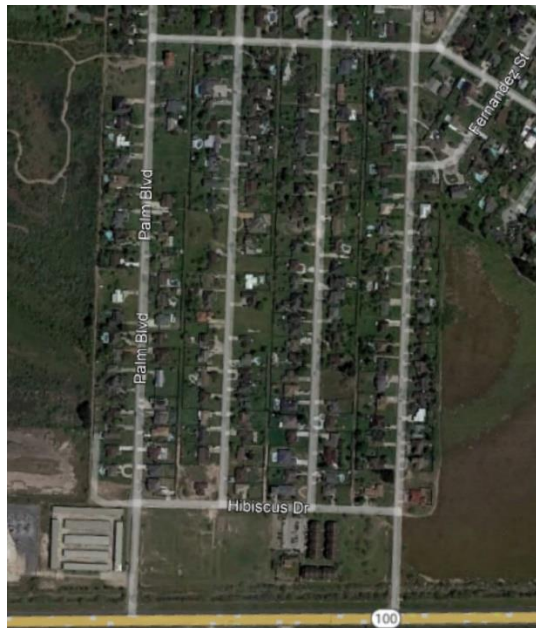
Drainage improvements Basin "F": Install drainage system at the most southwestern part of the Town limits, bounded by State Highway 100 and State Highway 510.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Laguna Vista
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12 121102080800,
 121102080900
 Study Area (sq. mi.) 0.18



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No
 Population at Risk
 Roadways flooded Yes No
 Critical Facilities Impacted Yes No
 Notes:

Frequency of flooding:
 # of structures inundated
 Miles inundated?
 Agricultural Land impacted Yes No

Study Costs

Total Cost: \$924,000
 Estimated year to start: 2018
 Time to complete? 2020
 Funding Dedicated? Yes No

Study Sponsor: Laguna Vista
 Entity with Oversight Laguna Vista
 Included in a Hazard Mitigation Action Plan or other plan? Yes No
 (Potential) Source of Funding HMGP; Local Funds; Other Grants; Drainage Fee

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Laguna Vista Action #6

FME ID: 151000020

FME Description

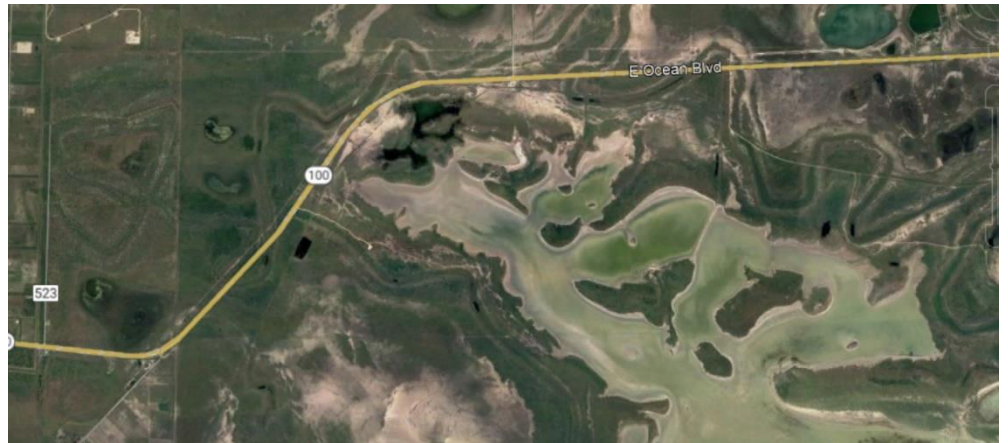
Drainage improvements SH 100: Regrade the existing drainage ditch that parallels State Highway 100 to increase capacity and reduce risk of flooding.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Laguna Vista
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12 121102080800,
 121102080900
 Study Area (sq. mi.) 13.5



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$369,600	Study Sponsor:	Laguna Vista
Estimated year to start:	2018	Entity with Oversight	Laguna Vista
Time to complete?	2020	Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
		Action Plan or other plan?	
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	HMGP; Local Funds; Other Grants; Drainage Fee

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Laguna Vista Action #7

FME Description

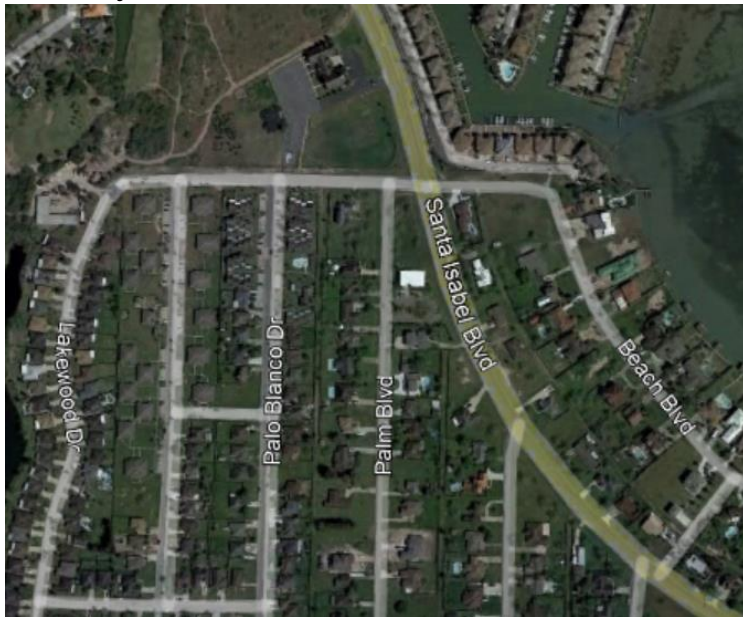
Drainage improvements SH 100: Regrade the existing drainage ditch that parallels State Highway 100 to increase capacity and reduce risk of flooding.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Laguna Vista
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12 121102080800,
 121102080900
 Study Area (sq. mi.) 0.01



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$369,600	Study Sponsor:	Laguna Vista
Estimated year to start:	2018	Entity with Oversight	Laguna Vista
Time to complete?	2020	Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
		Action Plan or other plan?	
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	HMGP; Local Funds; Other Grants; Drainage Fee

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Laguna Vista Action #8

FME ID: 151000022

FME Description

Drainage Improvements: Upgrade the drainage system on Holley Beach to increase capacity and reduce risk of flooding.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Laguna Vista
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12 121102080800,
 121102080900
 Study Area (sq. mi.) 3.99



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$369,600	Study Sponsor:	Laguna Vista
Estimated year to start:	2018	Entity with Oversight	Laguna Vista
Time to complete?	2020	Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
		Action Plan or other plan?	
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	HMGP; Local Funds; Other Grants; Drainage Fee

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Laguna Vista Action #9

FME ID: 151000023

FME Description

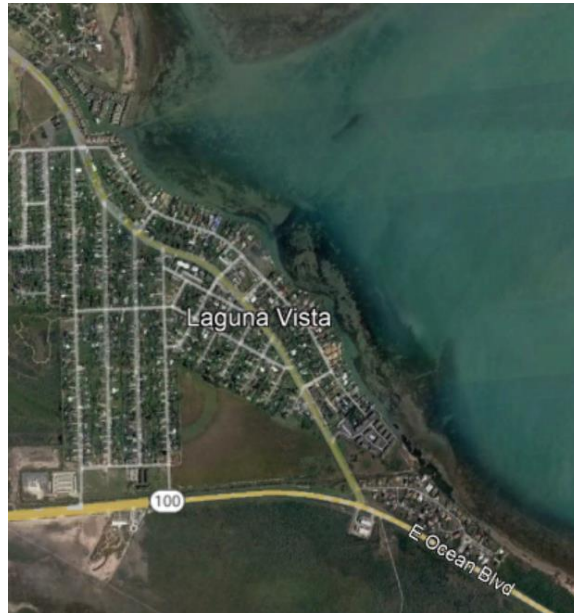
Drainage Improvements: Upgrade and harden drainage structure on Town-owned marina to increase capacity and reduce risk of damages.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Laguna Vista
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12 121102080800,
 121102080900
 Study Area (sq. mi.) 0.51



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$554,400	Study Sponsor:	Laguna Vista
Estimated year to start:	2018	Entity with Oversight	Laguna Vista
Time to complete?	2020	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	HMGP; Local Funds; Other Grants; Drainage Fee

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Los Fresnos Action #13

FME ID: 151000024

FME Description

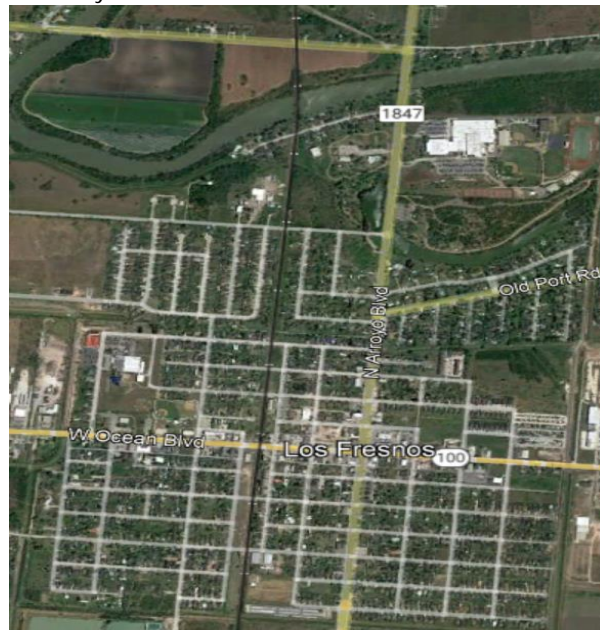
Upgrade culverts and install drainage improvements at various locations to increase capacity and reduce risk of flood damages. Purchase trailer mounted water trash pump to reduce or eliminate flooding. Drainage Improvement locations: Drainage Ditch South of Highway 100 causes flooding on East Fifth Street, East Sixth Street, East Seventh Street, East Eighth Street, East Ninth Street and East Tenth Street. South Nogal Street Causes Flooding on West First Street, West Second Street, West Third Street, Valle Alto Street & Bougainvillea Street, Jacqueline Street & North Canal Street Drain Pipe Collapse, Olmo Street from West Eighth Street to West Tenth Street, Holly Lane Drain Under Canal, Pasto Drive at California Road Drain Under Canal, and Resaca Escondido Drain Pipe Collapse. The following Resaca Crossings are Too Low: Henderson Road East Side, Henderson Road West Side, and Whipple Road West Side.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities	Los Fresnos
County/ Counties	Cameron
HUC 8	12110208
HUC 12	121102080800, 121102080900
Study Area (sq. mi.)	1.40



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$1,848,000	Study Sponsor:	Los Fresnos
Estimated year to start:	2018	Entity with Oversight	Los Fresnos
Time to complete?	2020	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	HMGP; General Funds, Drainage Fee

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did not meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Port Isabel Action #19

FME ID: 151000027

FME Description

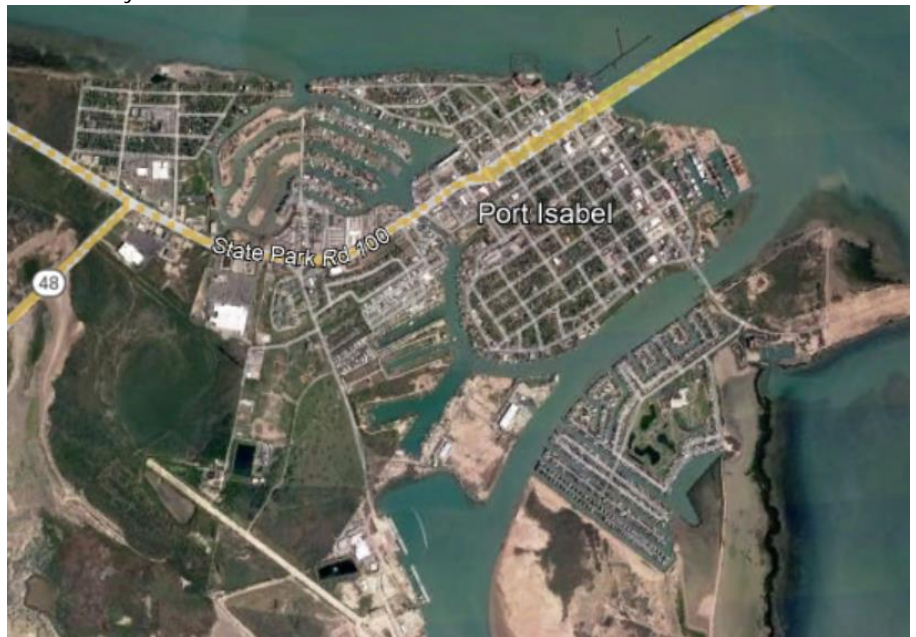
Elevate and widen coastal roads as well as evacuation routes to reduce risk of flood damages and maintain emergency access.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Port Isabel
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12 121102081000,
 121102081000
 Study Area (sq. mi.) 2.72



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$554,400	Study Sponsor:	Los Fresnos
Estimated year to start:	2018	Entity with Oversight	Los Fresnos
Time to complete?	2020	Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
		Action Plan or other plan?	
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	HMGP; General Funds

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Port Isabel Action #22

FME ID: 151000028

FME Description

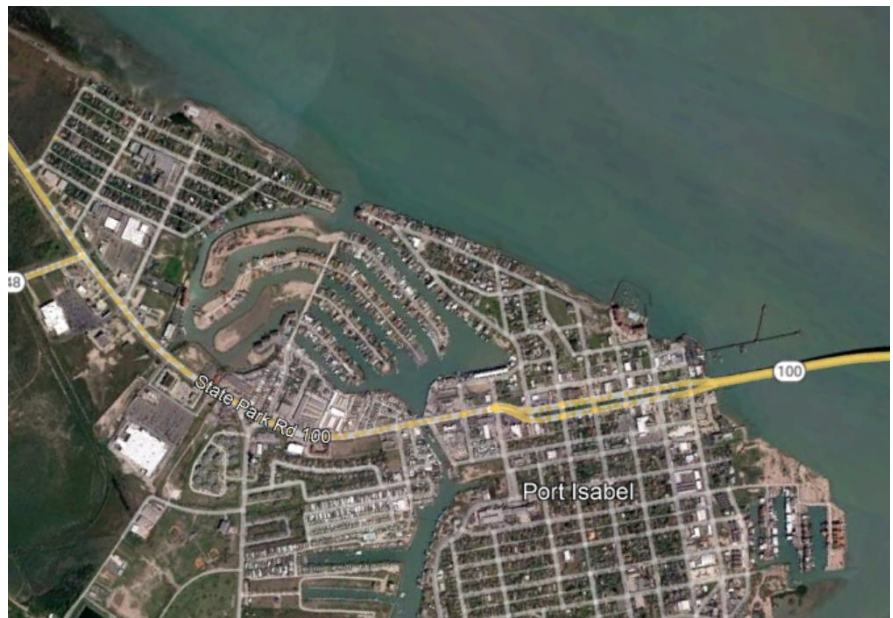
Build breakwater or similar shoreline protection for harbor.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Port Isabel
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12 121102081000,
 121102081000
 Study Area (sq. mi.) 0.47



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$1,108,800	Study Sponsor:	Los Fresnos
Estimated year to start:	2018	Entity with Oversight	Los Fresnos
Time to complete?	2020	Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
		Action Plan or other plan?	
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	HMGP; General Funds

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Primera Action #2

FME ID: 15100029

FME Description

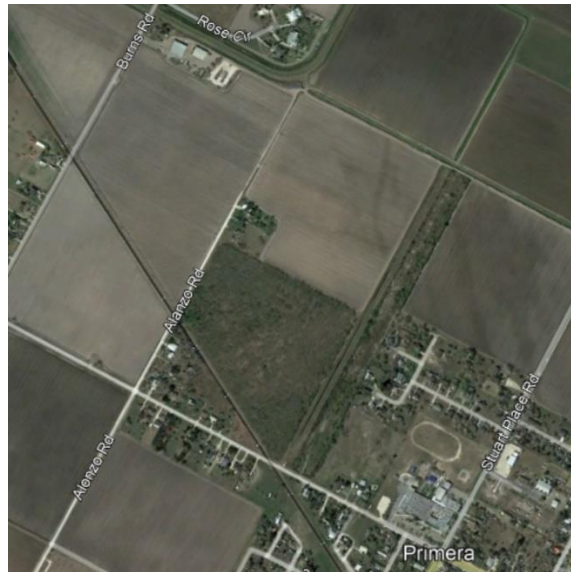
Construct a large retention/detention pond in the northwest part of town to hold water during heavy rain events.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Primera
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12 121102080700
 Study Area (sq. mi.) 0.1



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$92,400	Study Sponsor:	Primera
Estimated year to start:	2018	Entity with Oversight:	Primera
Time to complete?	2020	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Local Funds; HMGP; Cameron County Drainage District

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

South Padre Island #6

FME ID: 151000030

FME Description

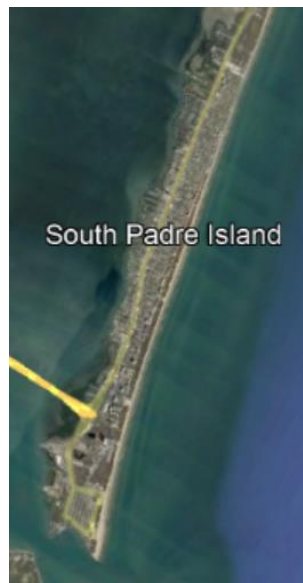
Upgrade undersized culverts throughout the Island to increase capacity and reduce flood risk.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities South Padre
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12 121102081000
 Study Area (sq. mi.) 4.62



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$1,848,000	Study Sponsor:	South Padre Island
Estimated year to start:	2018	Entity with Oversight:	South Padre Island
Time to complete?	2020	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	HMGP; CDBG

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Dimmit County Master Drainage Study

FME ID: 151000031

FME Description

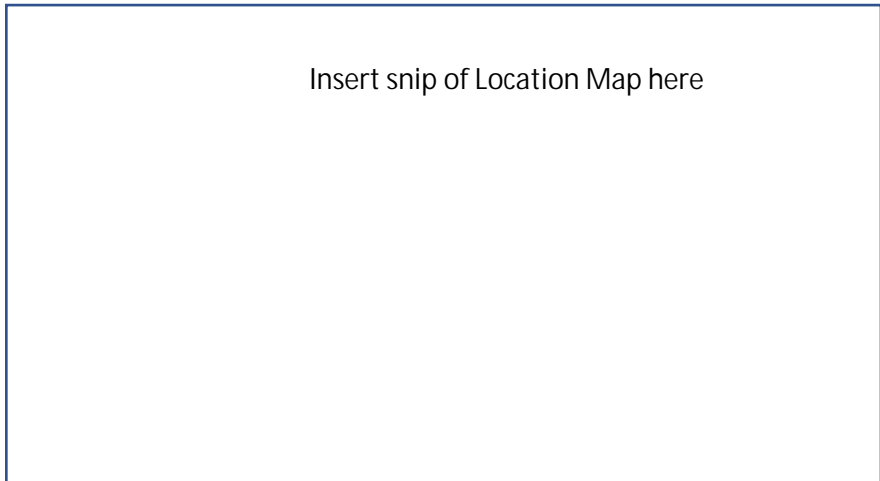
Develop Flood risk maps for the county of Dimmit and develop CIP

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Dimmit
HUC 8
HUC 12
Study Area (sq. mi.) 172.15



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Study Costs

Total Cost: \$250,000 Study Sponsor:
Estimated year to start: Entity with Oversight
Time to complete? Included in a CIP or other plan? Yes No
Funding Dedicated? Yes No (Potential) Source of Funding

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Edwards County Master Drainage Study

FME ID: 151000032

FME Description

Develop Flood risk maps for the county of Edwards and develop CIP

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Edwards
HUC 8
HUC 12
Study Area (sq. mi.) 138.80

Insert snip of Location Map here

Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$250,000	Study Sponsor:	
Estimated year to start:		Entity with Oversight	
Time to complete?		Included in a CIP or other plan?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

FM 491 and Mile 3 Study

FME ID: 151000033

FME Description

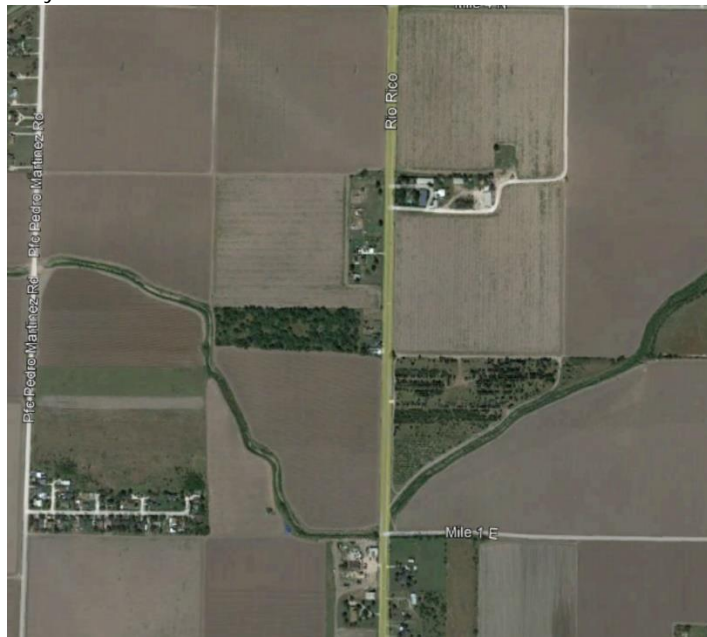
Local Drainage Improvements- County Road 1771

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Mercedes
 County/ Counties Hidalgo
 HUC 8 12110207
 HUC 12
 Study Area (sq. mi.) 0.81



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$60,000	Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Pumps and Sumps Study

FME ID: 151000034

FME Description

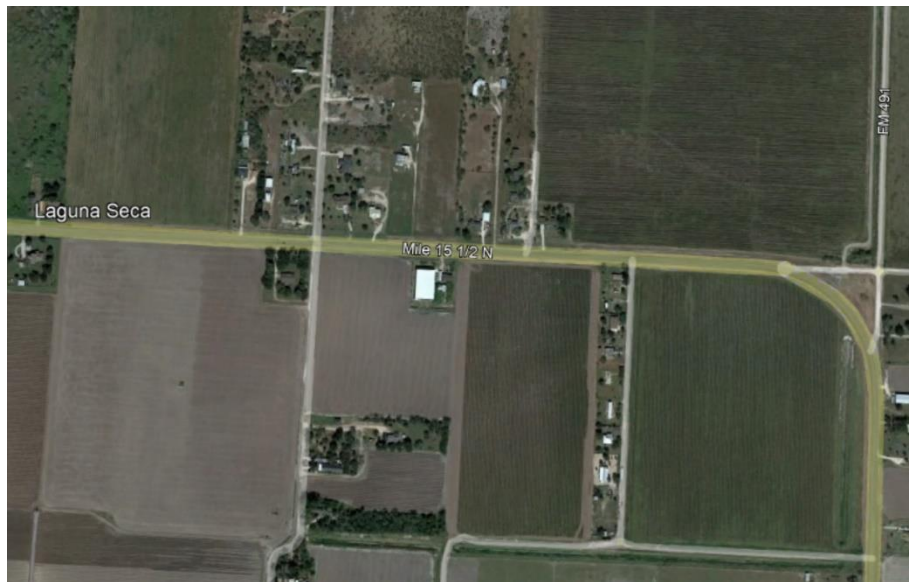
Pump Station H & Sump

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110207
HUC 12
Study Area (sq. mi.) 0.31



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$217,500	Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Pumps and Sumps Study

FME ID: 151000035

FME Description

Pump Station I & Sump

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110207
HUC 12
Study Area (sq. mi.) 3.73



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$388,500	Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Pumps and Sumps Study

FME ID: 151000036

FME Description

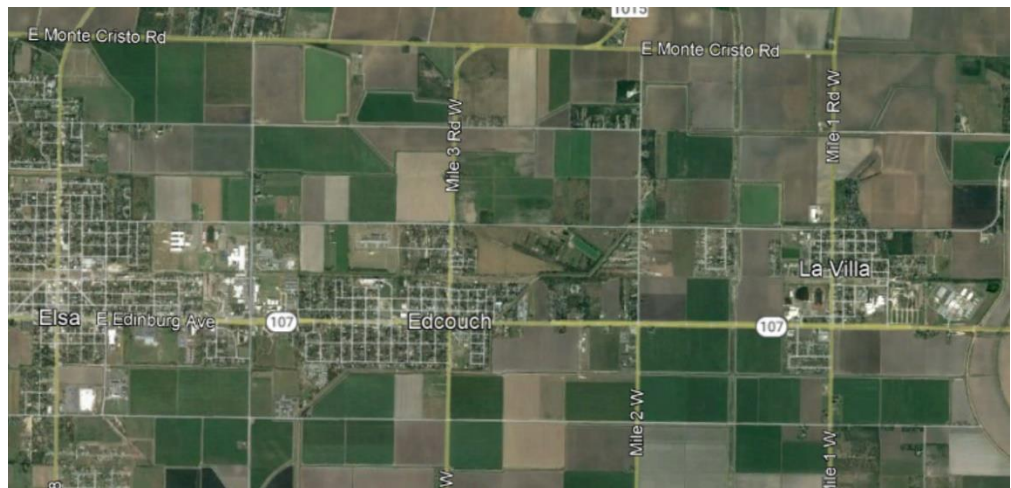
Pump Station J & Sump

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110207
HUC 12
Study Area (sq. mi.) 6.23



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$310,500	Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Pumps and Sumps Study

FME ID: 151000037

FME Description

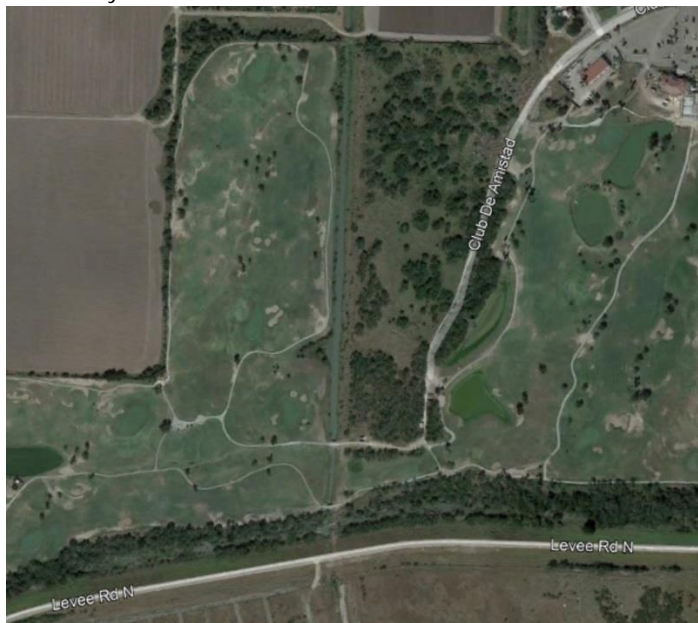
Pump Station K

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110207
HUC 12
Study Area (sq. mi.) 0.1



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$165,000	Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Pumps and Sumps Study

FME ID: 151000038

FME Description

Pump Station L

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110207
HUC 12
Study Area (sq. mi.) 1.30



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$165,000	\$Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Lott Rd & Soderquist Study

FME ID: 151000039

FME Description

Local Drainage Improvements- North of Lott Road and East of Soderquist Rd.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Donna
 County/ Counties Hidalgo
 HUC 8 12110207
 HUC 12
 Study Area (sq. mi.) 0.27



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$190,500	Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Mile 2 E & Expy 83 Study

FME ID: 151000040

FME Description

Local Drainage Improvements- North of Interstate 2 and West of Mile 2 1/2

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Mercedes
 County/ Counties Hidalgo
 HUC 8 12110207
 HUC 12
 Study Area (sq. mi.) 0.43



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$215,250	Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

TX 88 & W Sugar Cane Dr Study

FME ID: 151000041

FME Description

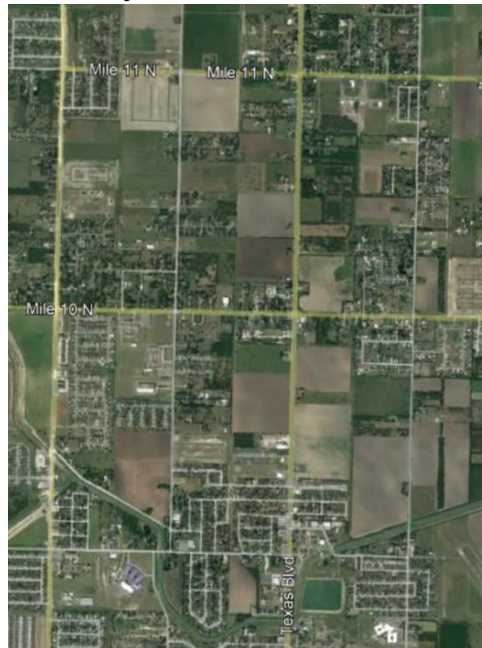
Channel Improvements- Ditch 17B2A1, Ditch 17B2A1 Detention West, Local Drainage Improvements (North of W Sugar Cane West of Ditch17B2A1), Ditch 17B2A1 Detention East, and Local Drainage Improvements (North of W Sugar Cane East of Ditch17B2A1)

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Weslaco
 County/ Counties Hidalgo
 HUC 8 12110207
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$375,900	Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Mile 11 N & Mile 6 W Study

FME ID: 151000042

FME Description

Channel Improvements- Ditch 17B2A1A, Channel Improvements- Ditch 7T,7T1, Local Drainage Improvements- West of Ditch17B2A1A, and Ditch 17B2A1 Detention West

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Weslaco
 County/ Counties Hidalgo
 HUC 8 12110207
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No
 Population at Risk
 Roadways flooded Yes No
 Critical Facilities Impacted Yes No
 Notes:

Frequency:
 # of structures inundated
 Miles inundated?
 Agricultural Land impacted Yes No

Study Costs

Total Cost:	\$570,300	Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight:	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Clark Rd & Mile 1 E Study

FME ID: 151000043

FME Description

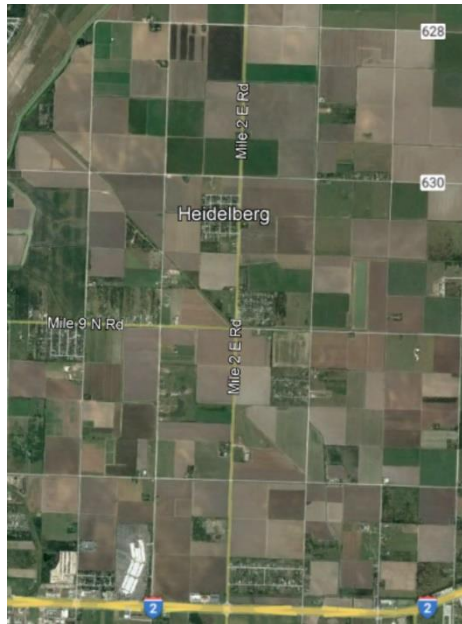
Channel Improvements- Ditch 19,19B,19H,23; Local Drainage Improvements-Los Laureles; Local Detention-Los Laureles; Local Drainage Improvements-Clark road and Mile 1 Road; and Bypass Channel and Sump Area for Pump Station

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Mercedes
 County/ Counties Hidalgo
 HUC 8 12110207
 HUC 12
 Study Area (sq. mi.) 12.3



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$1,526,550	Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

International & E Mile 5 N Study

FME ID: 151000044

FME Description

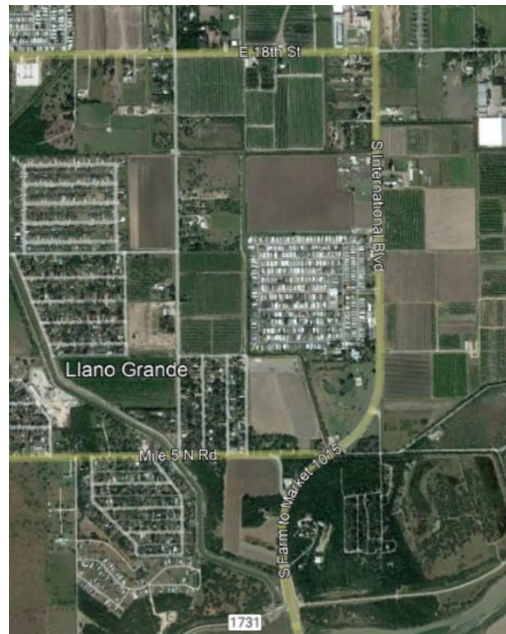
Channel Improvements just upstream of Ditch 35B; Culvert Improvements; Detention North of Llano Grande Lake Just West of 3 Mile Rd; 2- 130,000 GPM Pumps; Channel Improvements Ditch 34, 34B, 34BExt; Regional Detention; Bypass channel from Ditch 34; and Culvert Improvements-Ditch 34 Passing International Blvd.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Weslaco
 County/ Counties Hidalgo
 HUC 8 12110207
 HUC 12
 Study Area (sq. mi.) 1.71



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No
 Population at Risk
 Roadways flooded Yes No
 Critical Facilities Impacted Yes No
 Notes:

Frequency:
 # of structures inundated
 Miles inundated?
 Agricultural Land impacted Yes No

Study Costs

Total Cost: \$1,093,500 Study Sponsor: HCDD1
 Estimated year to start: 2023 Entity with Oversight HCDD1
 Time to complete? 2025 Included in a CIP or other plan? Yes No
 Funding Dedicated? Yes No (Potential) Source of Funding

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

S Alamo and Rancho Blanco Study

FME ID: 151000045

FME Description

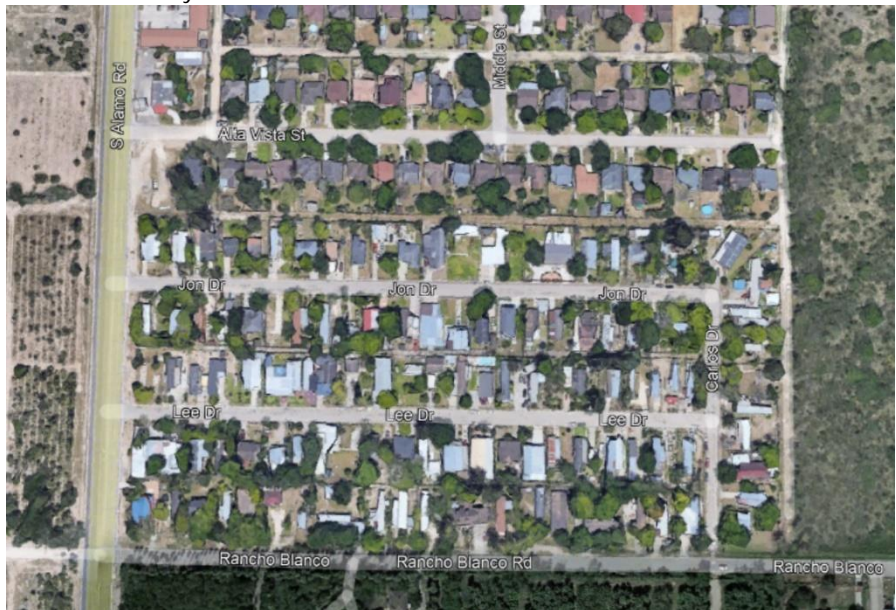
Local Drainage Improvements-Storm Drain and Detention North of Rancho Blanco and east of S. Alamo Road

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Alamo
 County/ Counties Hidalgo
 HUC 8 12110207
 HUC 12
 Study Area (sq. mi.) 0.03



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$525,750	Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

FM 1423 and Main Grove Study

FME ID: 151000046

FME Description

Local Drainage Improvements- Main Street, North Street

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Donna
 County/ Counties Hidalgo
 HUC 8 12110207
 HUC 12
 Study Area (sq. mi.) 0.12



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$107,100	Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

FM 1423 and Nolana Study

FME ID: 151000047

FME Description

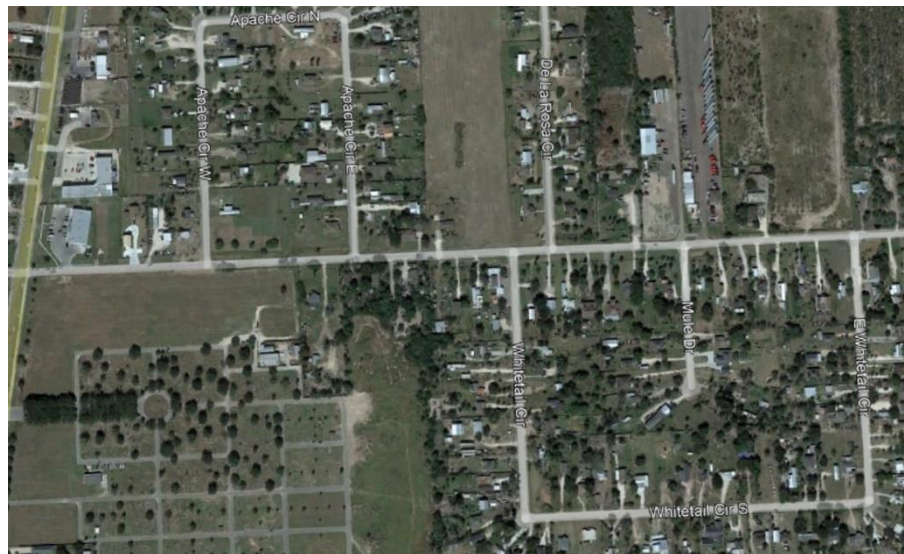
Local Drainage Improvements--Storm Drain and Detention South of Earling Road West of Val Verde Street

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Donna
 County/ Counties Hidalgo
 HUC 8 12110207
 HUC 12
 Study Area (sq. mi.) 0.38



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$321,000	Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

N Tower Study

FME ID: 151000048

FME Description

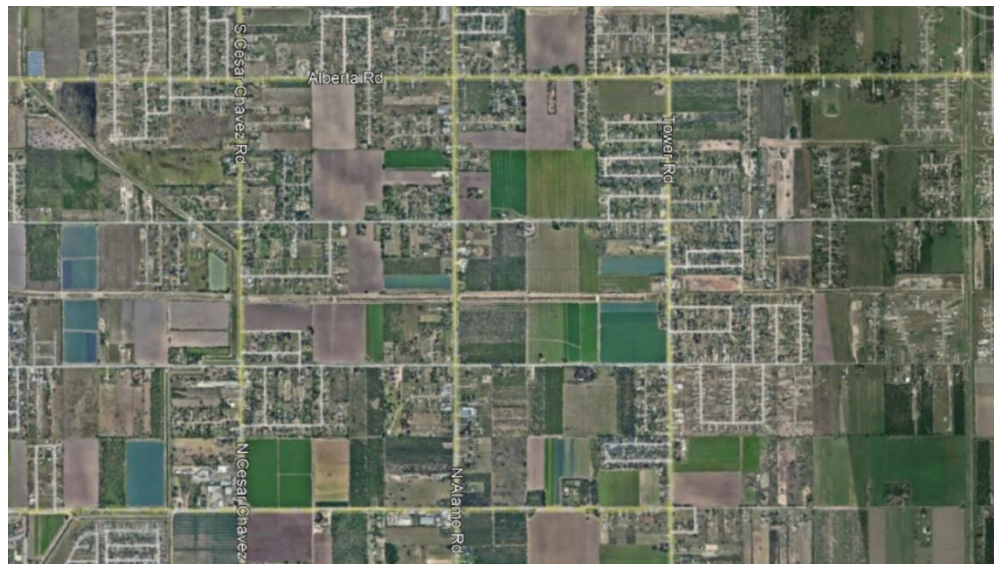
Local Drainage Improvements-Storm Drain North of Minnesota Road

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Alamo
 County/ Counties Hidalgo
 HUC 8 12110207
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$201,000	Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Dillon and Roosevelt Study

FME ID: 151000049

FME Description

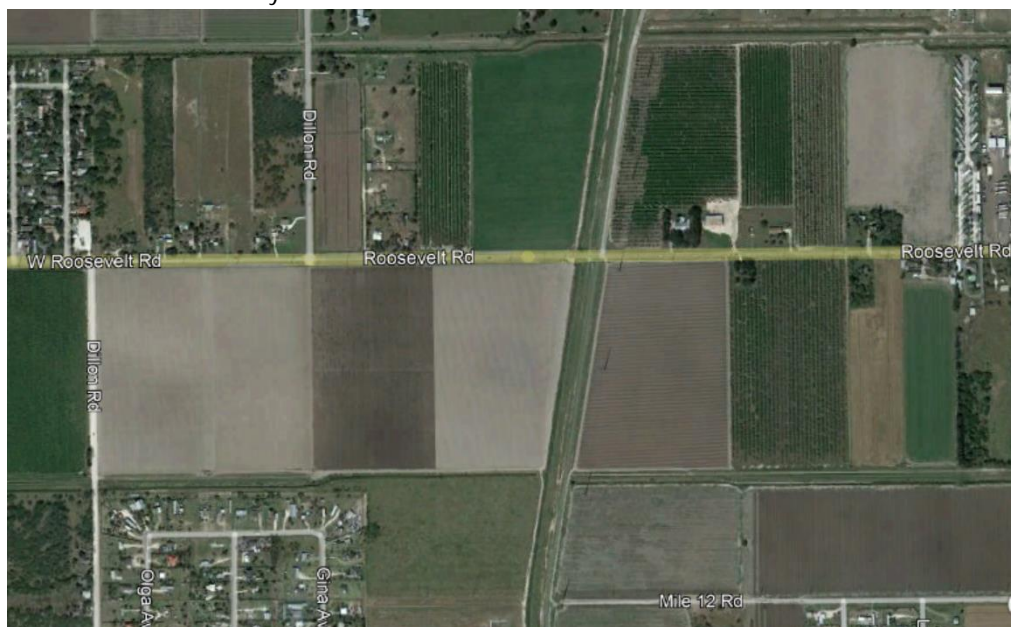
Local Drainage Improvements-Just North of E Roosevelt Rd

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Donna
 County/ Counties Hidalgo
 HUC 8 12110207
 HUC 12
 Study Area (sq. mi.) 0.68



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$216,600	Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Canton and Dillon Study

FME ID: 151000050

FME Description

Local Drainage Improvements-Along Canton Road and adjacent neighborhoods

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Donna
 County/ Counties Hidalgo
 HUC 8 12110207
 HUC 12
 Study Area (sq. mi.) 1.1



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$454,050	Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

FM 1925 and Mile 4 Study

FME ID: 151000051

FME Description

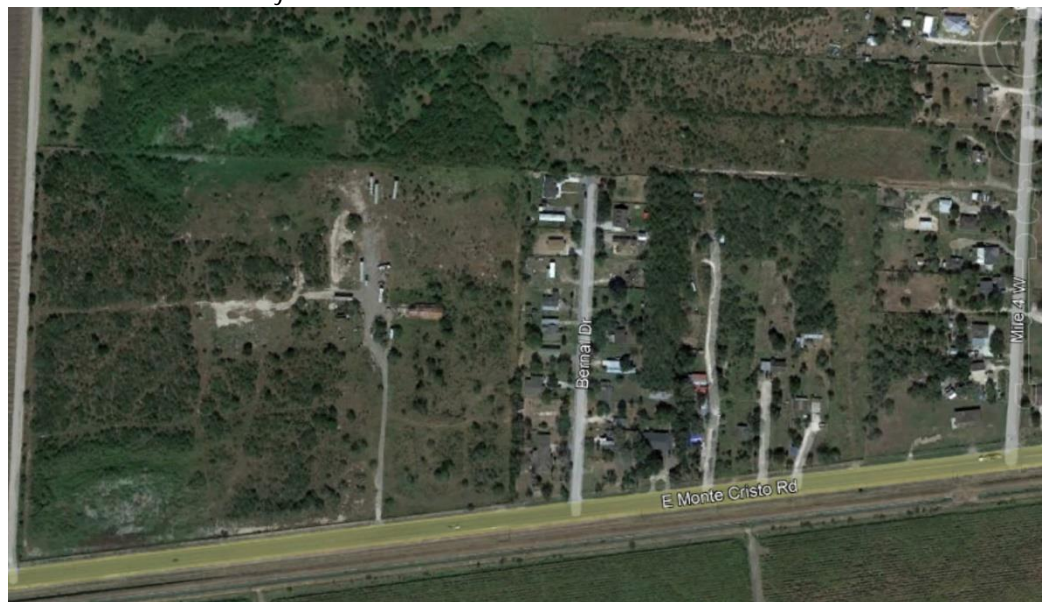
Local Drainage Improvements-Along Bernal Court

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Donna
 County/ Counties Hidalgo
 HUC 8 12110207
 HUC 12
 Study Area (sq. mi.) 0.16



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$143,550	Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

FME ID: 151000052

Pumps and Sumps Study

FME Description

Pump Station A & Sump

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110207
HUC 12
Study Area (sq. mi.) 0.1



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$213,000	Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Pumps and Sumps Study

FME ID: 151000053

FME Description

Pump Station B & Sump

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110207
HUC 12
Study Area (sq. mi.)

Insert snip of Location Map here

Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$244,500	Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Pumps and Sumps Study

FME ID: 151000055

FME Description

Pump Station D

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110207
HUC 12
Study Area (sq. mi.) 4.67



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$165,000	Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Pumps and Sumps Study

FME ID: 151000056

FME Description

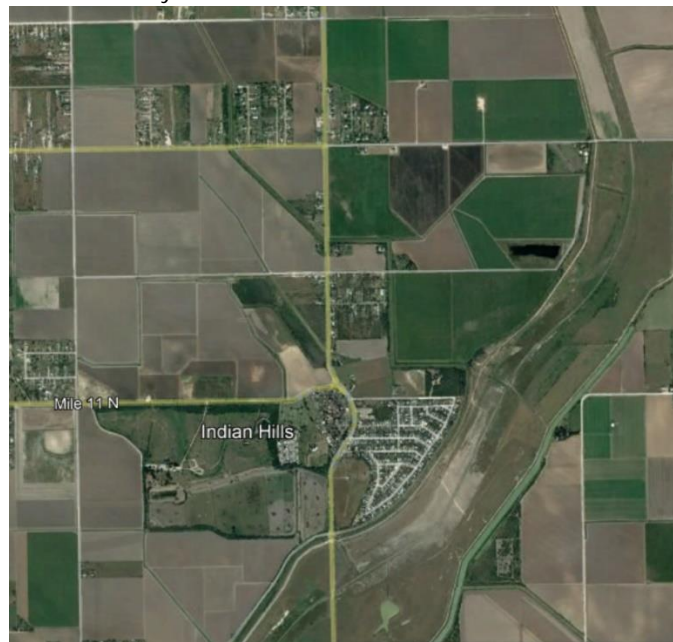
Pump Station E & Sump

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110207
HUC 12
Study Area (sq. mi.) 3.45



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$124,500	Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Pumps and Sumps Study

FME ID: 151000057

FME Description

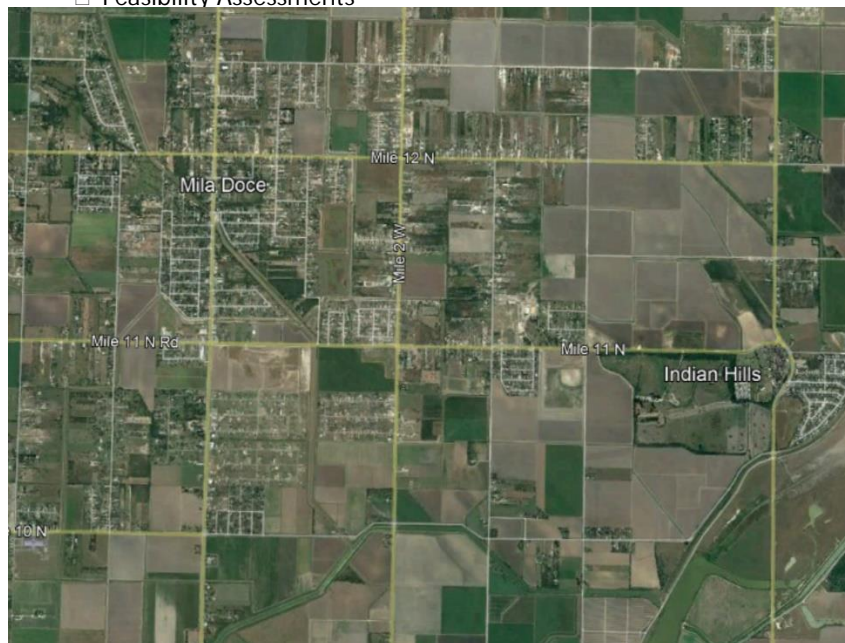
Pump Station F & Sump

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110207
HUC 12
Study Area (sq. mi.) 12.4



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$480,000	Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Pumps and Sumps Study

FME Description

Pump Station G & Sump

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110207
HUC 12
Study Area (sq. mi.) 2.71



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$271,500	Study Sponsor:	HCDD1
Estimated year to start:	2023	Entity with Oversight	HCDD1
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Sullivan City Master Drainage Study

FME ID: 151000059

FME Description

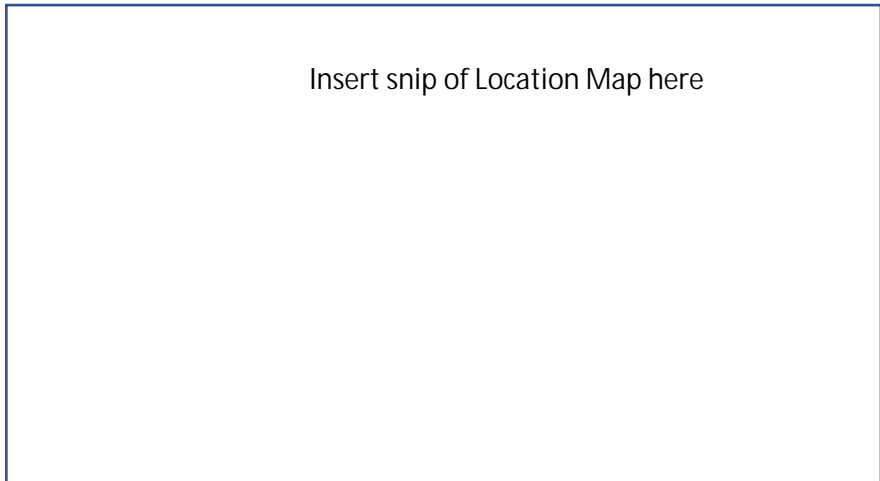
Develop Flood risk maps for the city of Sullivan City and develop CIP

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Sullivan City
County/ Counties Hidalgo
HUC 8 12110208
HUC 12
Study Area (sq. mi.) 3.60



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Study Costs

Total Cost: \$250,000 Study Sponsor:
Estimated year to start: Entity with Oversight
Time to complete? Included in a CIP or other plan? Yes No
Funding Dedicated? Yes No (Potential) Source of Funding

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Alton MDP - West Mile 5 Road and Louisiana Street Alternative 2

FME ID: 151000060

FME Description

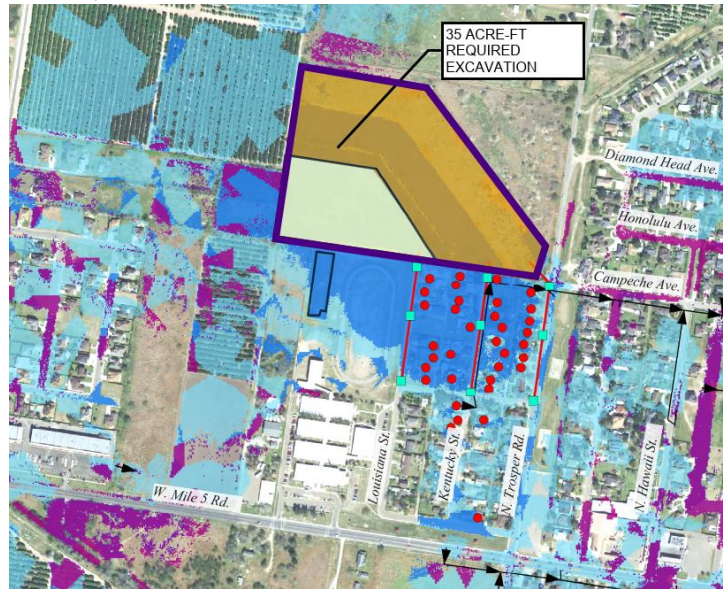
Alternative 2 is designed to remove structures from the 10-year floodplain. Approximately 35 acre-feet of volume is proposed to be excavated. construction consists of 1,940 LF of 36-inch diameter pipe sloped at 0.2% along Louisiana, Kentucky, and Trospen Road out falling directly into the retention pond, 3 headwalls and approximately 9 inlets. Additional inlets and smaller pipe may be needed to catch low lying areas that pond between the houses or regrading with swales to take runoff to the street.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Flood preparedness studies
- Feasibility Assessments

Study Area

City/ Cities Alton
 County/ Counties Hidalgo
 HUC 8 12110207,
 12110208
 HUC 12 121102080200,
 121102080300
 Study Area (sq. mi.) 0.1



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$322,898	Study Sponsor:	City of Alton
Estimated year to start:	2023	Entity with Oversight	City of Alton
Time to complete?	2025	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did not meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Alton MDP - North Inspiration Road and West St. Jude Avenue Alternative 2

FME ID: 151000062

FME Description

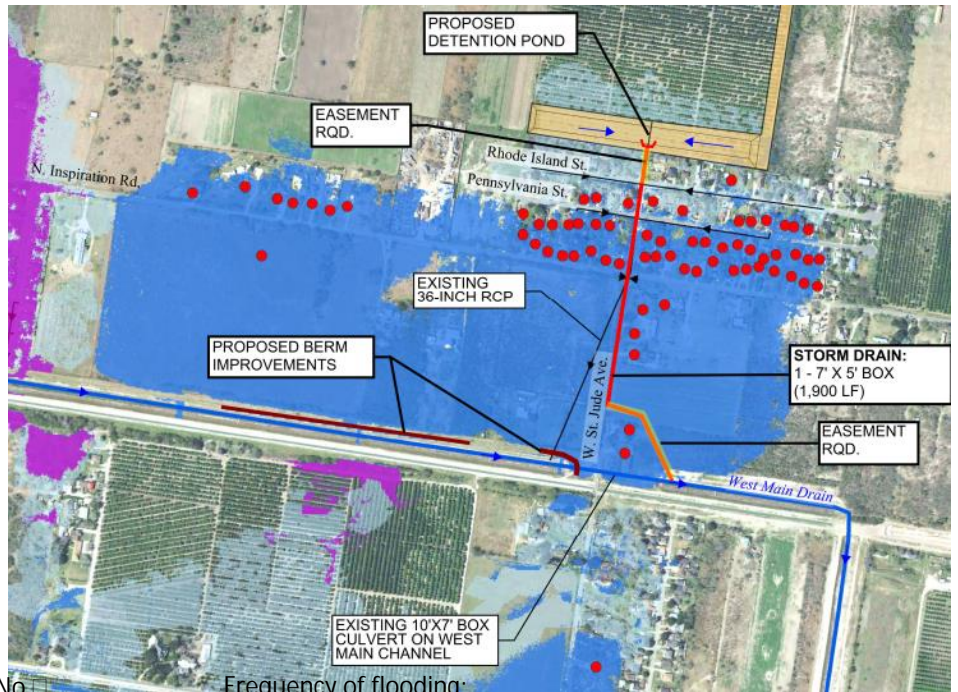
Alternative 2, is designed to remove structures from the 25-year floodplain and more frequent storms. This alternative consists of upsizing the storm drain under West St Jude Avenue. The trunk line will consist of 1,900 LF of a single 7' X 5' reinforced concrete box sloped at 0.5% from the area just west of the neighborhood on W. St. Jude Avenue to the West Main Drain Channel, downstream (north) of the existing 10' X 7' box culvert.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities	Alton
County/ Counties	Hidalgo
HUC 8	12110207, 12110210
HUC 12	121102080200, 121102080300
Study Area (sq. mi.)	0.16



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$422,690	Study Sponsor:	City of Alton
Estimated year to start:	2023	Entity with Oversight	City of Alton
Time to complete?	2025	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did not meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Alton MDP - West Mile 5 and South Glasscock Road Alternative 3

FME ID: 151000063

FME Description

Alternative 3 is simply the buyout and removal of 23 properties on the north side of Buchanan from the 10-year floodplain. Once structures are removed, the vacant land can be excavated and used as a park/regional retention pond.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities	Alton
County/ Counties	Hidalgo
HUC 8	12110207, 12110213
HUC 12	121102080200, 121102080300
Study Area (sq. mi.)	0.23



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$249,480	Study Sponsor:	City of Alton
Estimated year to start:	2023	Entity with Oversight	City of Alton
Time to complete?	2025	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did not meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Weslaco Stormwater Improvement Plan - Pleasantview Drive and 11th Street

FME ID: 151000064

FME Description

Installation of 3,220 LF of new storm drain system consisting of two – 8' x 4' RCBs along Mile 3 ½.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Weslaco
 County/ Counties Hidalgo
 HUC 8 12110207,
 12110228
 HUC 12 121102080100,
 121102080300
 Study Area (sq. mi.) 0.22



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$819,390	Study Sponsor:	City of Weslaco
Estimated year to start:		Entity with Oversight	City of Weslaco
Time to complete?		Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Action Plan or other plan?	
		(Potential) Source of Funding	FIF, local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Weslaco Stormwater Improvement Plan - Mile 10 N and Mile 5 1/2 W

FME ID: 151000065

FME Description

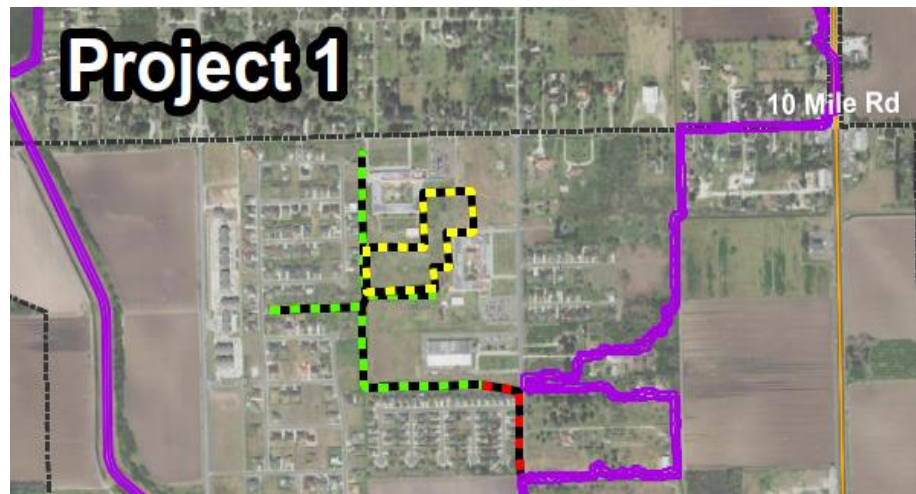
Construction of an 8 acre detention pond, with approximately 4,000 LF of channel widening along the back of the neighborhoods and between the Justice Raul A. Gonzalez Elementary School and Joe Calvillo Jr Career & Technology Education Complex; replacement of existing undersized channel culvert with two – 8' x 5' reinforced concrete boxes (RCBs), and adding two – 8' x 5' RCBs to connect the existing drainage ditches to the drain channel system on the east.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities	Weslaco
County/ Counties	Hidalgo
HUC 8	12110207, 12110230
HUC 12	121102080100, 121102080300
Study Area (sq. mi.)	0.40



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$666,151	Study Sponsor:	City of Weslaco
Estimated year to start:		Entity with Oversight	City of Weslaco
Time to complete?		Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did not meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Weslaco Stormwater Improvement Plan - South International Boulevard and Business 83

FME ID: 151000066

FME Description

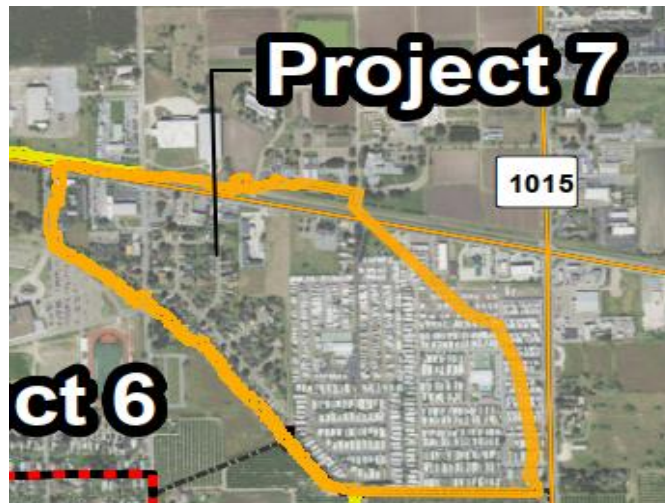
Replacement of 48 – inch culverts at two roadway crossings with 6’ x 4’ RCBs.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Weslaco
 County/ Counties Hidalgo
 HUC 8 12110207,
 12110231
 HUC 12 121102080100,
 121102080300
 Study Area (sq. mi.) 0.39



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$14,071	Study Sponsor:	City of Weslaco
Estimated year to start:		Entity with Oversight	City of Weslaco
Time to complete?		Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
		Action Plan or other plan?	
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Weslaco Stormwater Improvement Plan - Texas Boulevard to Airport Drive, South of Business 83

FME ID: 151000067

FME Description

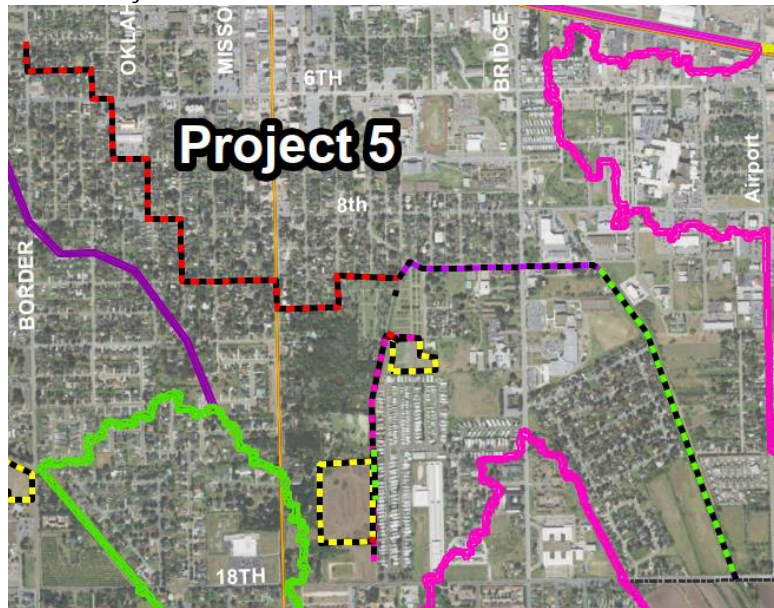
Construction of two detention ponds, 10 acres near Texas Boulevard and 18th Street and 3 acres south of Dawson Street, a berm, approximately 5,400 LF of channel widening and extension, and installation of an 8' x 4' RCB storm drain system near Border

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Weslaco
 County/ Counties Hidalgo
 HUC 8 12110207,
 12110232
 HUC 12 121102080100,
 121102080300
 Study Area (sq. mi.) 1.34



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$6,597,680	Study Sponsor:	City of Weslaco
Estimated year to start:		Entity with Oversight	City of Weslaco
Time to complete?		Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did not meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Weslaco Stormwater Improvement Plan - West Weslaco

FME ID: 151000068

FME Description

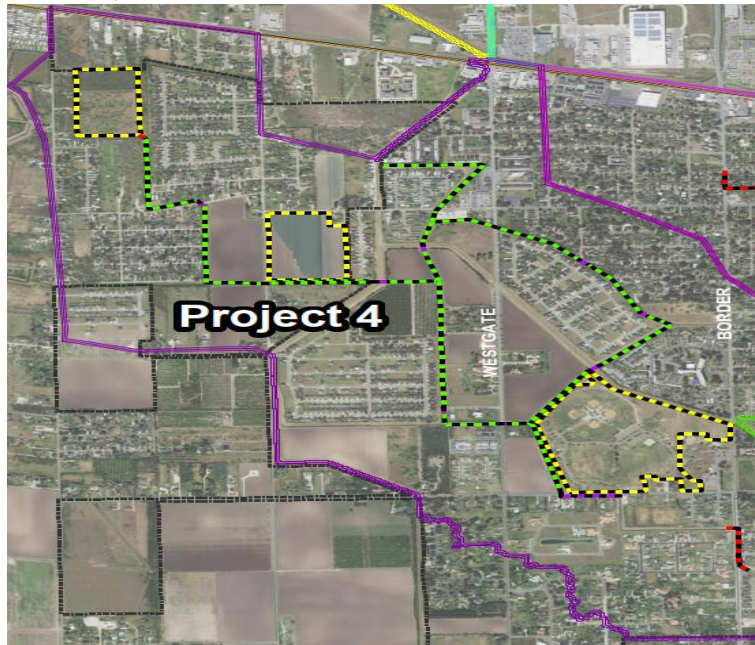
The Study is located just west of Border Avenue, between US 83 and Zelma Street. Construction of three detention ponds, 18 acres east of Vaughn Road and Midway Road, 26 acres near West 6th Street and Milano Road and 60 acres at Harlon Block Sports Complex, approximately 17,000 LF of channel widening connecting the ponds, and installation of approximately 4500 LF of large (8' x 4', 8' x 5', 8' x 6') RCB storm drain system to improve conveyance along the channels to the ponds.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities	Weslaco
County/ Counties	Hidalgo
HUC 8	12110207, 12110233
HUC 12	121102080100, 121102080300
Study Area (sq. mi.)	2.00



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$5,595,880	Study Sponsor:	City of Weslaco
Estimated year to start:		Entity with Oversight	City of Weslaco
Time to complete?		Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did not meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Weslaco Stormwater Improvement Plan - Westgate Drive and Sugar Cane Drive

FME Description

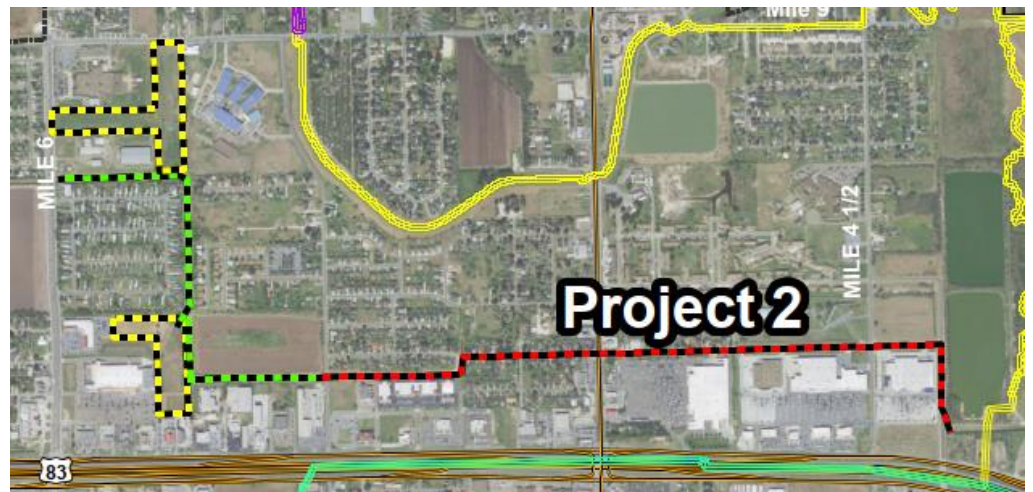
Construction of two detention ponds, 11 acres near Clecker-Heald Elementary School and 8 acres behind the commercial properties north of Interstate 2, approximately 4,500 LF of channel widening connecting the two ponds, addition of a new 42-inch reinforced concrete pipe (RCP) culvert east of Border Avenue, and installation of approximately 5,600 LF of an 8' x 4' RCB storm drain system along West Paisano Lane and East Ballard Street.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Flood preparedness studies
- Feasibility Assessments

Study Area

City/ Cities	Weslaco
County/ Counties	Hidalgo
HUC 8	12110207, 12110234
HUC 12	121102080100, 121102080300
Study Area (sq. mi.)	1.58



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$1,664,860	Study Sponsor:	City of Weslaco
Estimated year to start:		Entity with Oversight	City of Weslaco
Time to complete?		Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Action Plan or other plan?	
		(Potential) Source of Funding	FIF, local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did not meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Precinct 4 MDP - Risk Area A at Mile 8.5 Rd. & Ware Rd.

FME ID: 151000071

FME Description

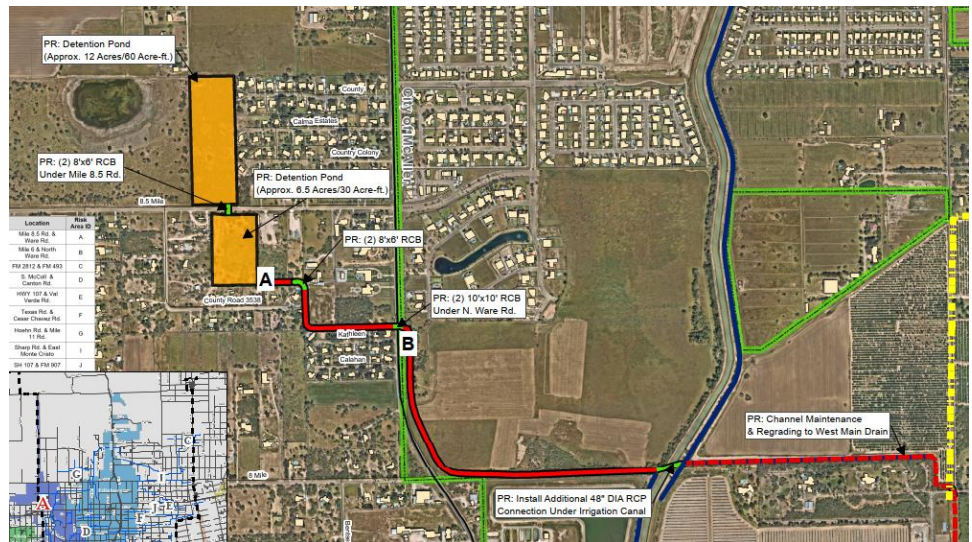
Approximately 1 mile of proposed channel improvements. Proposed culverts. Proposed Detention Ponds with pond north of Mile 8.5 Rd. to collect runoff from the west and has an approximate footprint of 12 acres and storage capacity of 60 acre-ft and will outfall south towards the pond south of Mile 8.5 Rd.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Flood preparedness studies
- Feasibility Assessments

Study Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110279
HUC 12	121102080400, 121102070100, 121102080200
Study Area (sq. mi.)	0.79



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$2,984,850	Study Sponsor:	Hidalgo County Precinct 4
Estimated year to start:	2023	Entity with Oversight	Hidalgo County Precinct 4
Time to complete?	2025	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did not meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Precinct 4 MDP - Risk Area B at Mile 6 & North Ware Rd.

FME ID: 151000072

FME Description

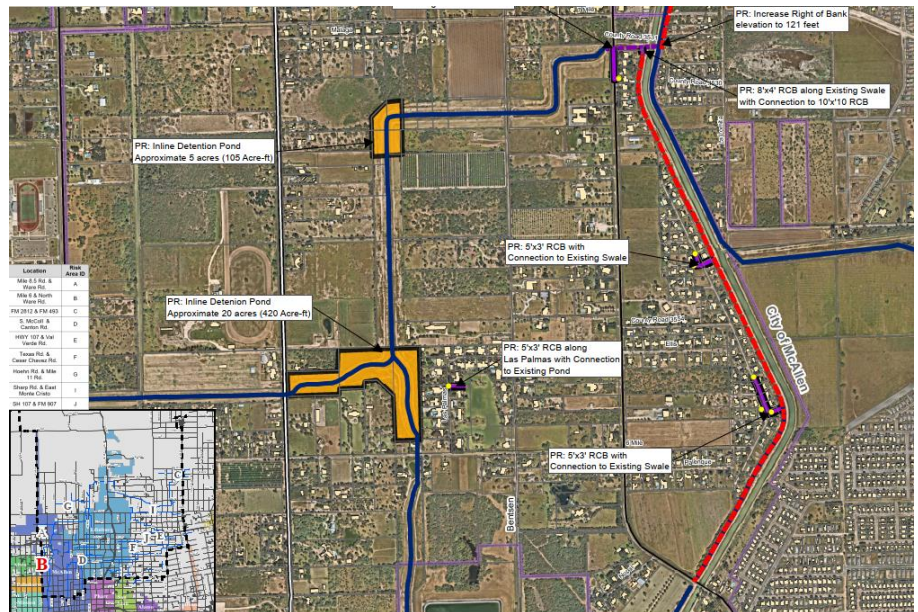
Regional Detention Facilities with a pond footprint of 25 acres along the Existing HCDD1 West Main Drain. Storm Drain and Local Drainage Improvements. Channel maintenance.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Flood preparedness studies
- Feasibility Assessments

Study Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110280
HUC 12	121102080400, 121102070100, 121102080200, 121102080200
Study Area (sq. mi.)	0.15



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$4,076,320	Study Sponsor:	Hidalgo County Precinct 4
Estimated year to start:	2023	Entity with Oversight	Hidalgo County Precinct 4
Time to complete?	2025	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did not meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Precinct 4 MDP - Risk Area C at FM 2812 & FM 493

FME ID: 151000073

FME Description

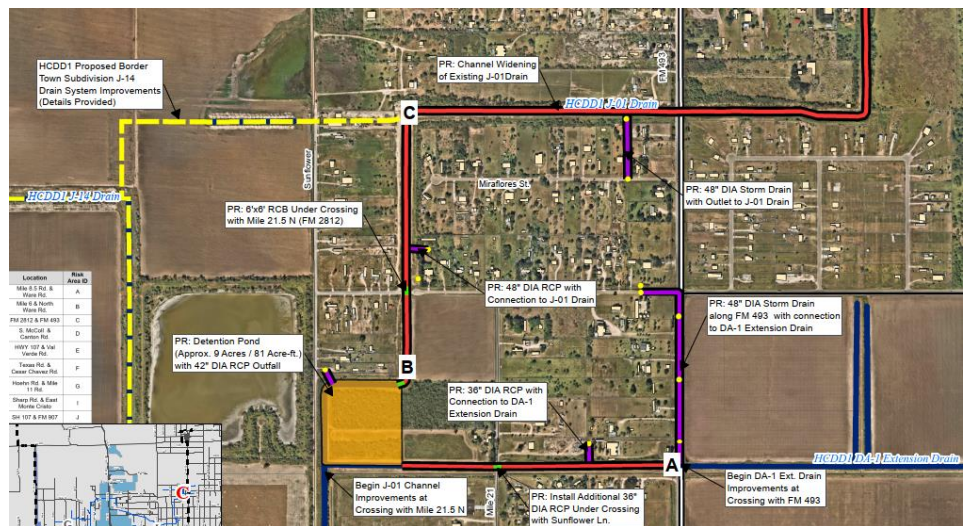
Channel Improvements (Widening & Regrading) to Existing J-01 Drain with approximately 1.5 miles of proposed improvements. Channel Improvements (Channel Maintenance & Flowline Regrading) to Existing DA-1 Ext. Drain with approximately 0.4 miles of proposed improvements. Proposed detention pond will have an approximate footprint of 9 acres and storage capacity of 90 acre-ft. Grate inlets & proposed storm drain channel maintenance & debris removal.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110281
HUC 12	121102080400, 121102070100, 121102080200, 121102080200
Study Area (sq. mi.)	3.23



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding: # of structures inundated	
Population at Risk		Miles inundated?	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>		

Notes:

Study Costs

Total Cost:	\$1,183,050	Study Sponsor:	Hidalgo County Precinct 4
Estimated year to start:	2023	Entity with Oversight	Hidalgo County Precinct 4
Time to complete?	2025	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did not meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Precinct 4 MDP - Risk Area D at S. McColl & Canton Rd.

FME ID: 151000074

FME Description

Channel Improvements (Widening & Regrading) to Existing McAllen Lateral & North Main Drain with approximately 2.25 miles of proposed improvements from S McColl St. to State Highway 107. Crossings at W Canton Rd., W Freddy Gonzalez Dr., and W Sprague St. were all evaluated up to the 25-year design storm criteria for upsizing evaluation.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

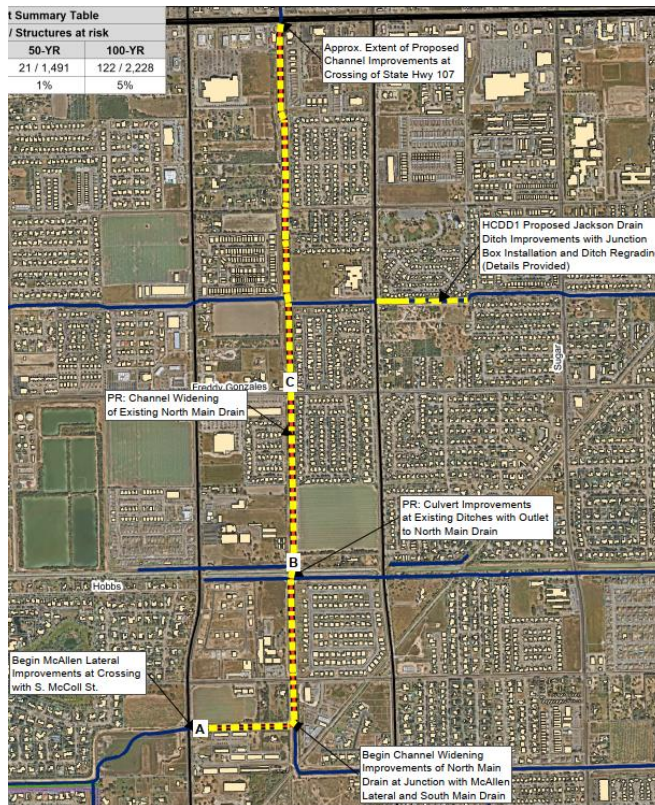
City/ Cities

County/ Counties Hidalgo

HUC 8 12110207,
12110282

HUC 12 121102080400,
121102070100,
121102080200,
121102080200

Study Area (sq. mi.) 1.40



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No

Population at Risk Yes No

Roadways flooded Yes No

Critical Facilities Impacted Yes No

Notes:

Study Costs

Total Cost: \$953,700

Estimated year to start: 2023

Time to complete? 2025

Funding Dedicated? Yes No

Study Sponsor: Hidalgo County Precinct 4

Entity with Oversight Hidalgo County Precinct 4

Included in a Hazard Mitigation Action Plan or other plan? Yes No

(Potential) Source of Funding

FIF, local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did not meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Precinct 4 MDP - Risk Area E at Hwy 107 & Val Verde Rd.

FME ID: 151000075

FME Description

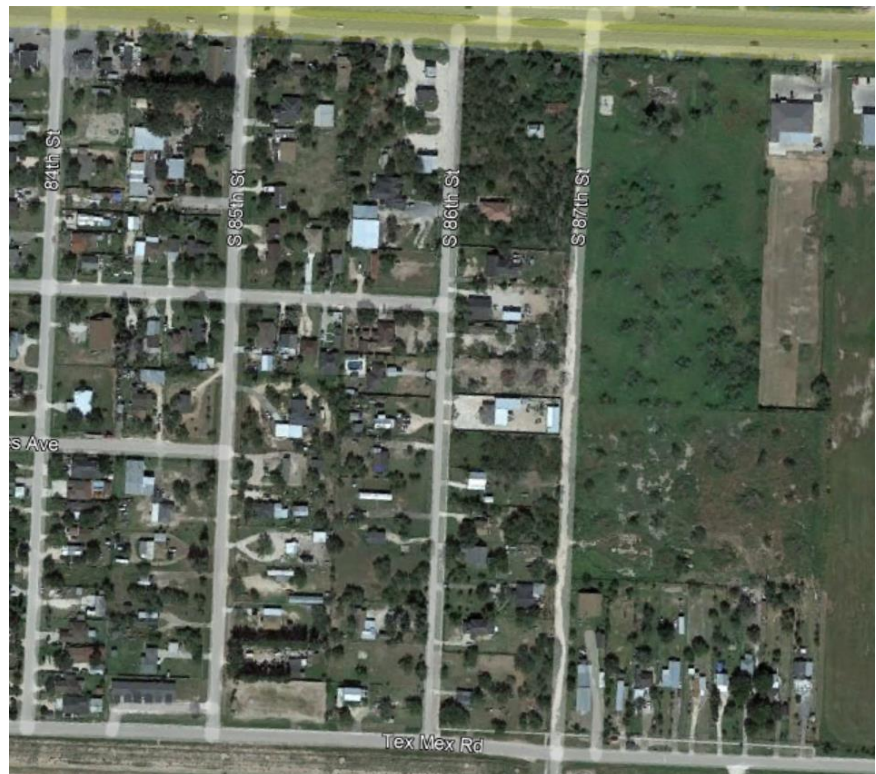
Channel Improvements with approximately 0.3 miles of proposed improvements. Proposed detention pond north of Tex-Mex Rd. and east of S 87th St. has an approximate footprint of 4.25 acres and capacity of 20 acre-ft. Grate Inlets and Proposed Storm Drain 5'x5' grate inlets spaced along every 500' of storm drain with a 4'x2' RCB along S 85th St.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110207,
12110283
HUC 12 121102070100,
121102080200,
121102080400,
Study Area (sq. mi.) 0.1



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$747,450	Study Sponsor:	Hidalgo County
Estimated year to start:	2023	Entity with Oversight	Hidalgo County
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, Local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did not meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Precinct 4 MDP - Risk Area F at Texas Rd. & Cesar Chavez Rd.

FME ID: 151000076

FME Description

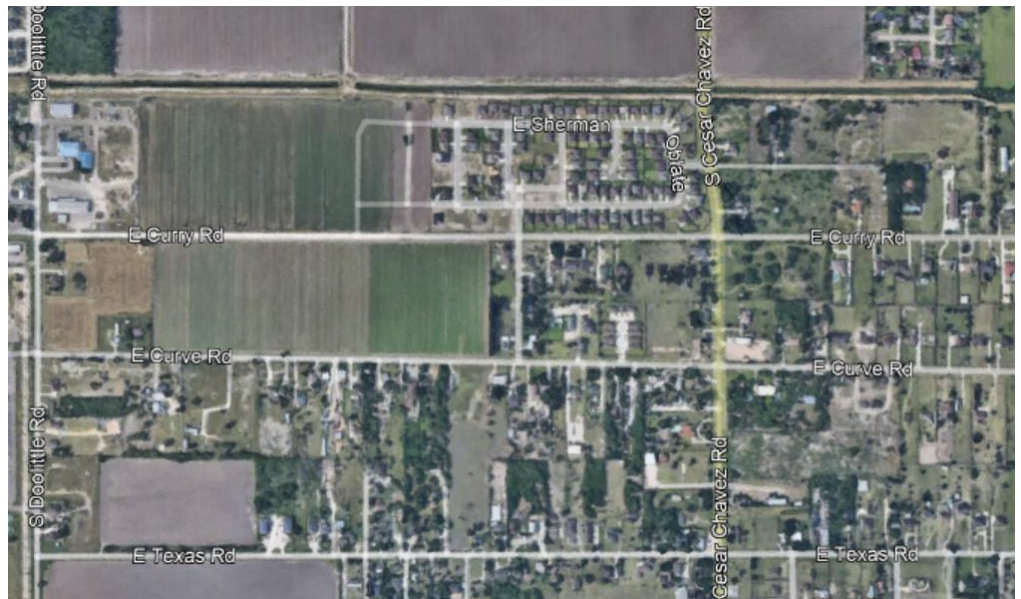
Channel Improvements with approximately 0.6 miles of proposed improvements. Grate Inlets and Proposed Storm Drain with grate inlets in sag spaced along every 500' tying into a 42" RCP along Cesar Chavez Road starting at just south of Texas Rd to the Curry Drain. Culvert Improvements with connections between the proposed open channels and existing HCDD1 Edinburg Stub will require the installation of 4'x3' RCBs.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110284
HUC 12	121102070100, 121102080200, 121102080400,
Study Area (sq. mi.)	0.56



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$1,188,000	Study Sponsor:	Hidalgo County
Estimated year to start:	2023	Entity with Oversight	Hidalgo County
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, Local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did not meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Precinct 4 MDP - Risk Area G at Hoehn Rd. & Mile 11 Rd.

FME ID: 151000077

FME Description

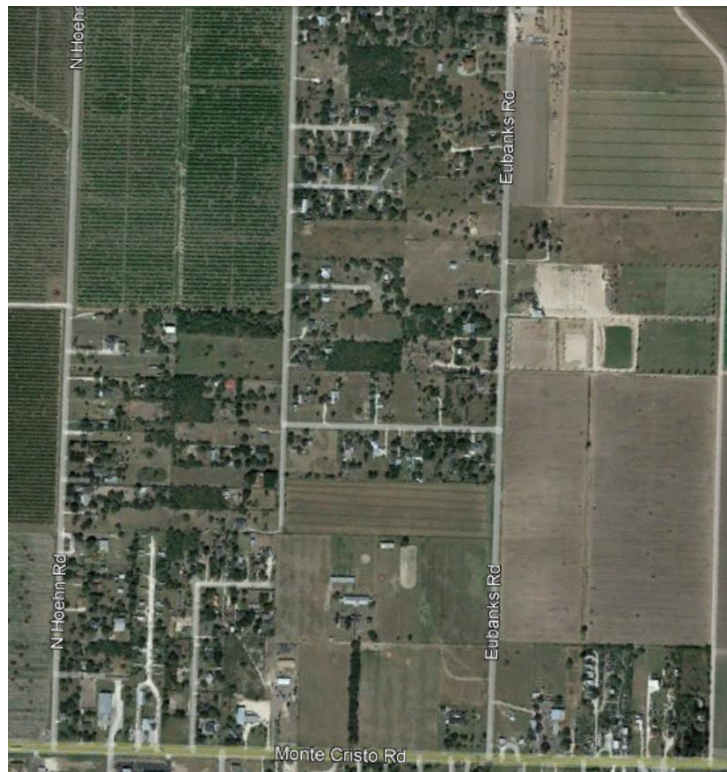
Channel Improvements with approximately 0.75 miles of proposed improvements. Proposed Pond north of County Road 3424 and west of County Road 3421 has an approximate footprint of 5 acres and capacity of 35 acre-ft. Grate Inlets and Proposed Storm Drain 5'x5' grate inlets will be located at the southwest corner of Eubanks and County Road 3424 with a connection to a 42" DIA RCP storm drain. Proposed culverts.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110207,
12110285
HUC 12 121102070100,
121102080200,
121102080400,
Study Area (sq. mi.) 0.79



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No
Population at Risk
Roadways flooded Yes No
Critical Facilities Impacted Yes No
Notes:

Frequency:
of structures inundated
Miles inundated?
Agricultural Land impacted Yes No

Study Costs

Total Cost: \$909,150
Estimated year to start: 2023
Time to complete? 2025
Funding Dedicated? Yes No

Study Sponsor: Hidalgo County
Entity with Oversight: Hidalgo County
Included in a CIP or other plan? Yes No
(Potential) Source of Funding: FIF, Local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did not meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Precinct 4 MDP - Risk Area I at Sharp Rd. & E Monte Cristo Rd

FME ID: 151000078

FME Description

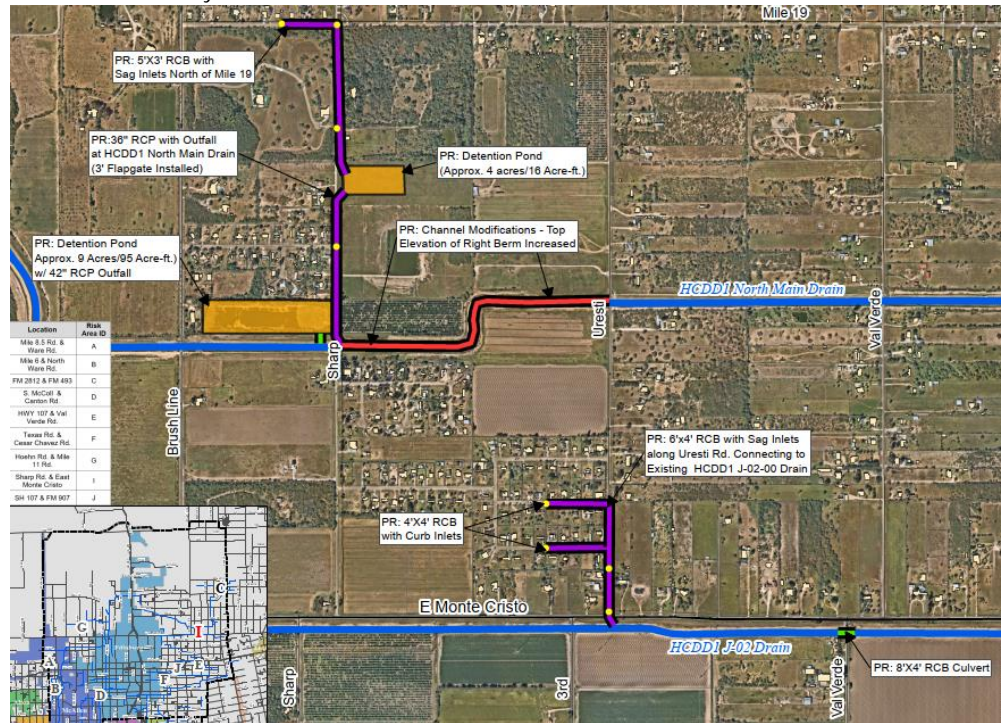
Inlets and proposed storm drain with Approximately 1,100' of 4'x4' RCB storm drain with curb inlets to be installed along Hendrix Dr. and Gaston Cr. with approximately 1,200' of 6'x4' RCB storm with grate and sag inlets along Uresti Rd. with connection to the HCDD1 J-02 Drain. Proposed installation of grate and sag inlets along Mile 19 Rd. (Phase Two) and proposed installation of grate and sag inlets along Sharp Rd. (Phase Two). Proposed Culverts Improvements (Phase One). Proposed detention pond with 9 acre footprint. Channel maintenance.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110286
HUC 12	121102080400, 121102070100, 121102080200, 121102080200
Study Area (sq. mi.)	0.73



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$899,250	Study Sponsor:	Hidalgo County Precinct 4
Estimated year to start:	2023	Entity with Oversight	Hidalgo County Precinct 4
Time to complete?	2025	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did not meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Precinct 4 MDP - Risk Area J at SH107 & FM

FME ID: 151000079

FME Description

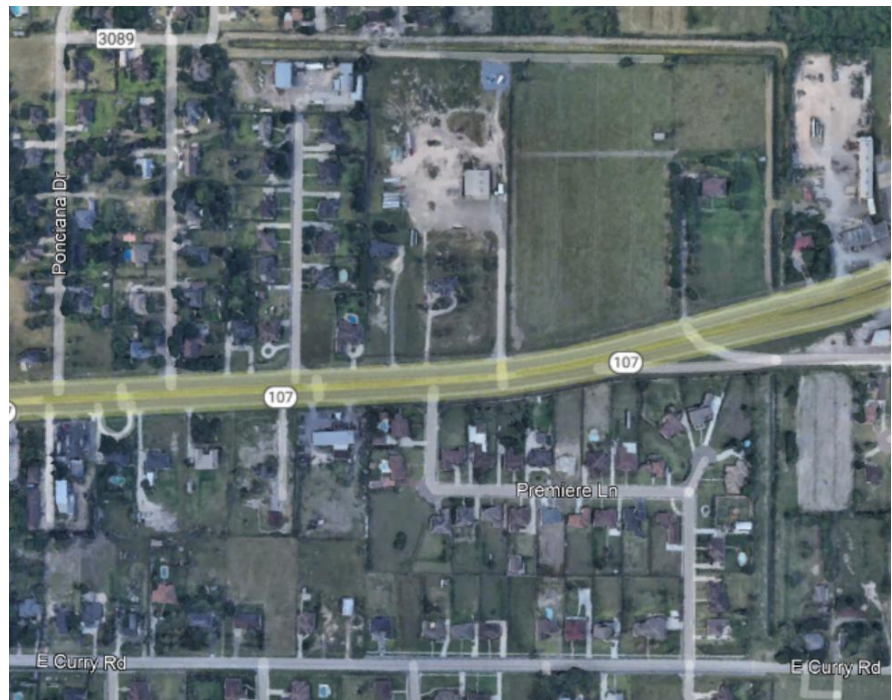
Channel Improvements (Widening & Regrading) to Existing HCDD1 "Y" drain with approximately 0.75 miles of proposed channel improvements beginning at Fresno Dr. and ending at E Curry Rd. Proposed Drainage Grate Inlets approximately 3,800' of storm drain to provide local drainage improvements north and west of existing HCDD1 "Y" Drain in two separate systems. Proposed culverts improvements. Proposed detention pond with a 2.7 acre footprint.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110287
HUC 12	121102070100, 121102080200, 121102080400,
Study Area (sq. mi.)	0.15



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$541,200	Study Sponsor:	Hidalgo County
Estimated year to start:	2023	Entity with Oversight	Hidalgo County
Time to complete?	2025	Included in a CIP or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, Local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did not meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Jim Hogg County Master Drainage Study

FME ID: 151000082

FME Description

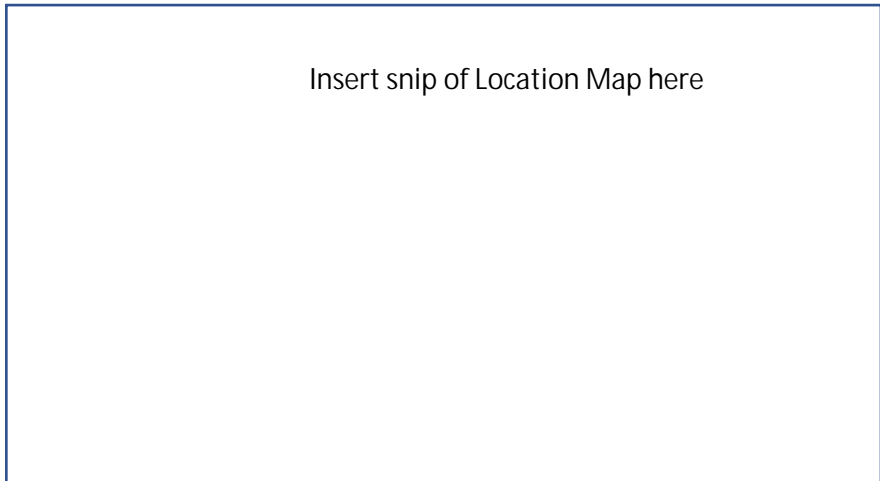
Develop Flood risk maps for the county of Jim Hogg and develop CIP

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Jim Hogg
HUC 8
HUC 12
Study Area (sq. mi.) 870.56



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Study Costs

Total Cost: \$250,000 Study Sponsor:
Estimated year to start: Entity with Oversight
Time to complete? Included in a CIP or other plan? Yes No
Funding Dedicated? Yes No (Potential) Source of Funding

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Kenedy County Master Drainage Study

FME ID: 151000083

FME Description

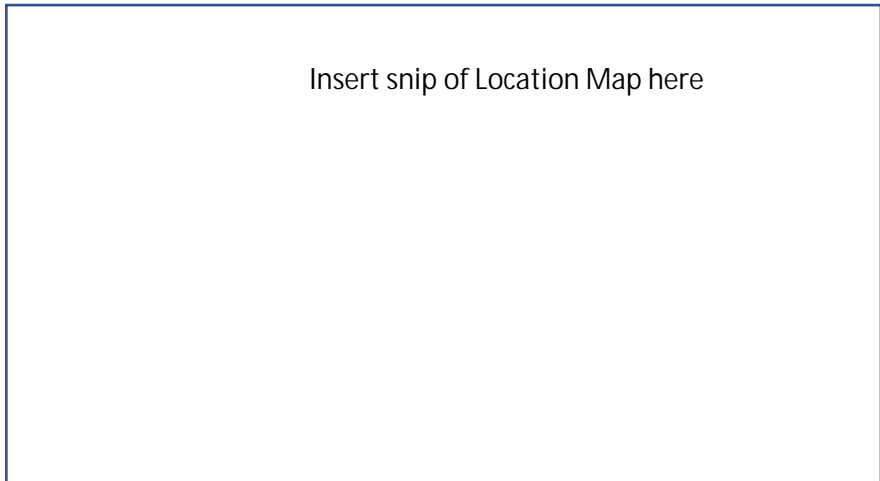
Develop Flood risk maps for the county of Kenedy and develop CIP

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Kenedy
HUC 8
HUC 12
Study Area (sq. mi.) 1478.25



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Study Costs

Total Cost: \$250,000 Study Sponsor:
Estimated year to start: Entity with Oversight
Time to complete? Included in a CIP or other plan? Yes No
Funding Dedicated? Yes No (Potential) Source of Funding

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Fort Clark MUD Master Drainage Study

FME ID: 151000084

FME Description

Develop Flood risk maps for Fort Clark MUD and develop CIP

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Kinney
HUC 8
HUC 12
Study Area (sq. mi.) 4.21

Insert snip of Location Map here

Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:
Population at Risk		# of structures inundated
Roadways flooded	Yes <input type="checkbox"/> No <input type="checkbox"/>	Miles inundated?
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted
Notes:		Yes <input type="checkbox"/> No <input type="checkbox"/>

Study Costs

Total Cost:	\$250,000	Study Sponsor:
Estimated year to start:		Entity with Oversight
Time to complete?		Included in a CIP or other plan?
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding
		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No



Kinney County Master Drainage Study

FME ID: 151000085

FME Description

Develop Flood risk maps for the county of Kinney and develop CIP

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

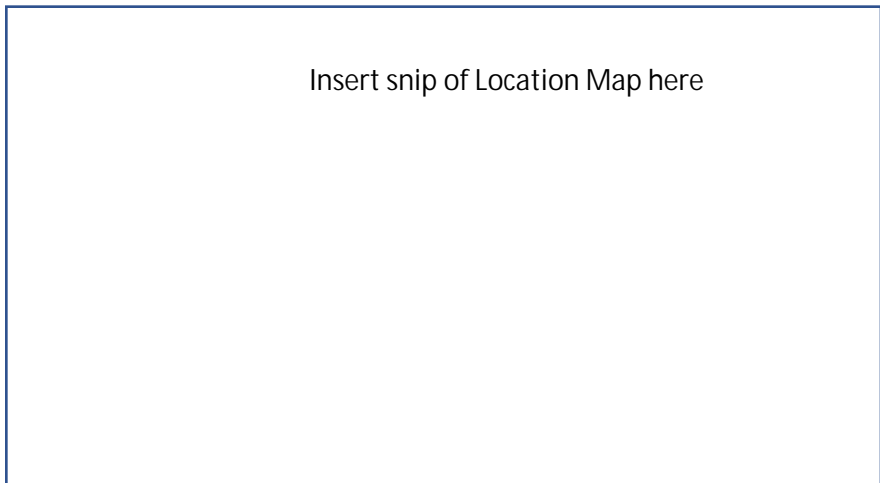
City/ Cities

County/ Counties Kinney

HUC 8

HUC 12

Study Area (sq. mi.) 751.29



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$250,000	Study Sponsor:	
Estimated year to start:		Entity with Oversight	
Time to complete?		Included in a CIP or other plan?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Risk Area 11 Rancho Escondido

FME ID: 151000086

FME Description

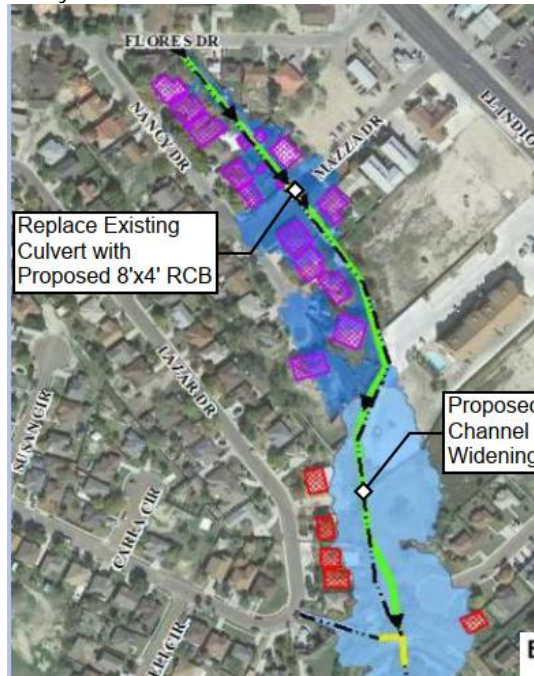
Study includes constructing 10'x2' U-shaped channel from Flores Drive to just south of Microtel Inn Suites, replacing existing culvert under Maza Drive with 1-8'x4' RCB, and installing curb inlet at cul-de-sac on Nancy Drive.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities	Eagle Pass
County/ Counties	Maverick
HUC 8	13080001, 13080002
HUC 12	130800020703, 130800020702
Study Area (sq. mi.)	0.03



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$136,785	Study Sponsor:	City of Eagle Pass
Estimated year to start:		Entity with Oversight	City of Eagle Pass
Time to complete?		Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Risk Area 12 Fox Borough Drive

FME ID: 151000087

FME Description

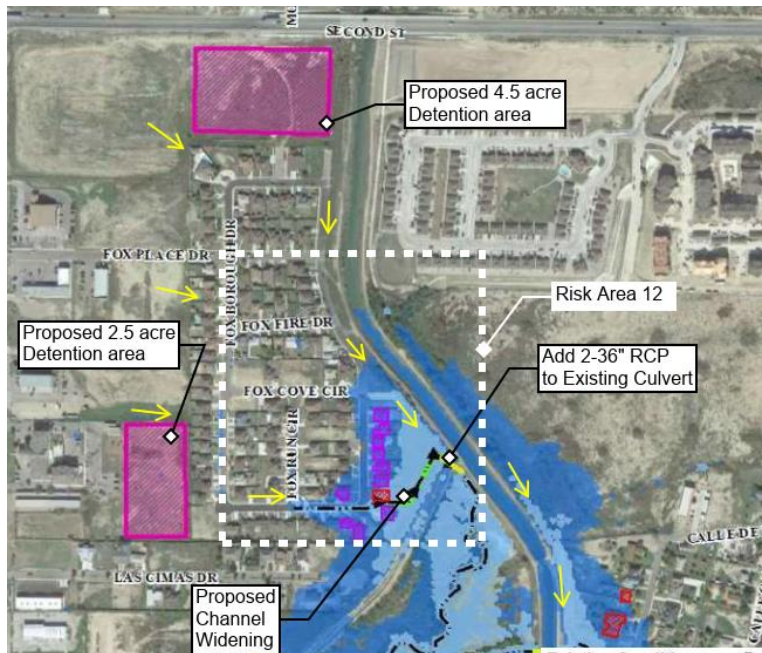
Study includes bypassing flow from inlet at PointLoma Drive and North Point Drive to the detention pond with 1 - 8'x4' RCB and Installing additional curb inlets on N. Point Drive and Silver Oak Circle.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities	Eagle Pass
County/ Counties	Maverick
HUC 8	13080001, 13080002
HUC 12	130800020703, 130800020702
Study Area (sq. mi.)	0.05



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$177,870	Study Sponsor:	City of Eagle Pass
Estimated year to start:		Entity with Oversight	City of Eagle Pass
Time to complete?		Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Risk Area 13 Celle De Los Santos neighborhood. Additional culvert under irrigation canal.

FME ID: 151000088

FME Description

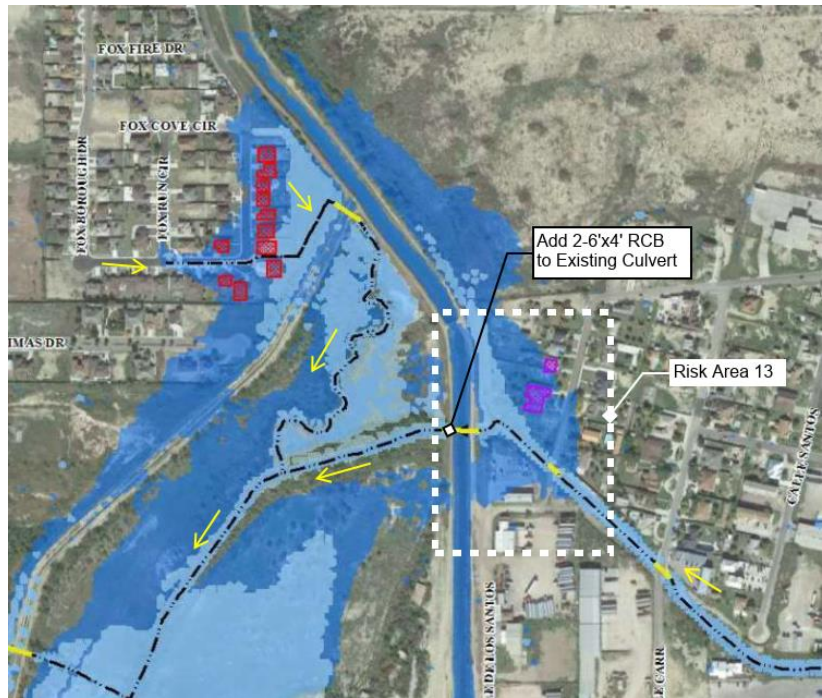
Study includes upgrading existing culvert crossing irrigation canal from 2-6'x4' RCB to 4-6'x4' RCB.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities	Eagle Pass
County/ Counties	Maverick
HUC 8	13080001, 13080002
HUC 12	130800020703, 130800020702
Study Area (sq. mi.)	0.03



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Population at Risk	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Roadways flooded	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Critical Facilities Impacted	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Notes:	Agricultural Land impacted Yes <input type="checkbox"/> No <input type="checkbox"/>	

Study Costs

Total Cost:	\$27,225	Study Sponsor:	City of Eagle Pass
Estimated year to start:		Entity with Oversight	City of Eagle Pass
Time to complete?		Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
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- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Risk Area 15 Trib 3 Detention at Main Street

FME ID: 151000089

FME Description

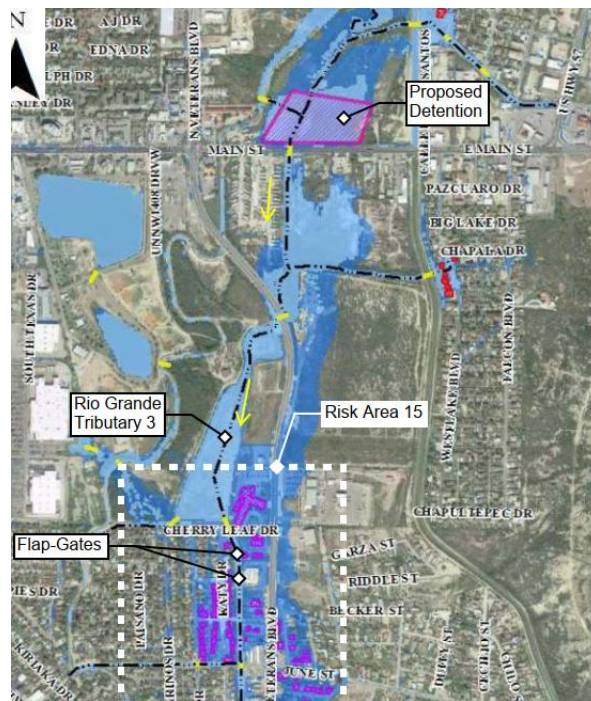
Study includes constructing 10 acre detention pond (29 ac-ft volume) along East Channel north of Highway 277 and installing flap-gates at flume outfalls on Omar Drive and Jana Drive, to prevent more frequent stormwater from backing up into the neighborhood on the west side of the channel.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities	Eagle Pass
County/ Counties	Maverick
HUC 8	13080001, 13080002
HUC 12	130800020703, 130800020702
Study Area (sq. mi.)	0.05



Emergency Need

Yes No

Known Flood Risk

- History of Flooding? Yes No
 - Population at Risk Yes No
 - Roadways flooded Yes No
 - Critical Facilities Impacted Yes No
- Notes:

Agricultural Land impacted Yes No

Study Costs

Total Cost: \$124,245
Estimated year to start:
Time to complete?

Study Sponsor: City of Eagle Pass
Entity with Oversight: City of Eagle Pass
Included in a Hazard Mitigation Action Plan or other plan? Yes No
(Potential) Source of Funding: FIF, local

Funding Dedicated? Yes No

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Risk Area 2 Treasure Hills

FME ID: 151000090

FME Description

Study includes constructing a 4' deep trapezoidal concrete channel with 8' bottom width and 2:1 side slopes, from detention pond outfall to existing culverts.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities	Eagle Pass
County/ Counties	Maverick
HUC 8	13080001, 13080002
HUC 12	130800020703, 130800020702
Study Area (sq. mi.)	0.06



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$89,595	Study Sponsor:	City of Eagle Pass
Estimated year to start:		Entity with Oversight	City of Eagle Pass
Time to complete?		Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Risk Area 3 Arrow Point Boulevard

FME ID: 151000091

FME Description

Study includes constructing small retaining wall at downstream of flume outfall to force flow towards Stone Way and constructing a 2' wide and 6" deep concrete flume from existing flume outfall to Stone Way.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Are

City/ Cities Eagle Pass
 County/ Counties Maverick
 HUC 8 13080001,
 13080002
 HUC 12 130800020703,
 130800020702
 Study Area (sq. mi.) 0.02



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$7,920	Study Sponsor:	City of Eagle Pass
Estimated year to start:		Entity with Oversight	City of Eagle Pass
Time to complete?		Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
		Action Plan or other plan?	
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Risk Area 4 Bibb & Misty Willow storm drain

FME ID: 151000092

FME Description

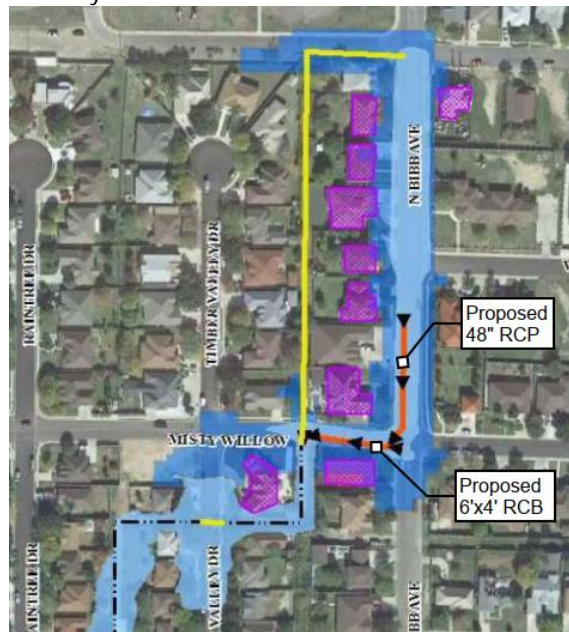
Study includes installing 6'x4' RCB along Misty Willow Drive from N Bibb Avenue to existing channel between N Bibb Avenue and Timber Valley and installing curb inlets on N Bibb Avenue and Misty Willow Drive.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities	Eagle Pass
County/ Counties	Maverick
HUC 8	13080001, 13080002
HUC 12	130800020703, 130800020702
Study Area (sq. mi.)	0.02



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$47,520	Study Sponsor:	City of Eagle Pass
Estimated year to start:		Entity with Oversight	City of Eagle Pass
Time to complete?		Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Risk Area 5 Debona Drive

FME ID: 151000093

FME Description

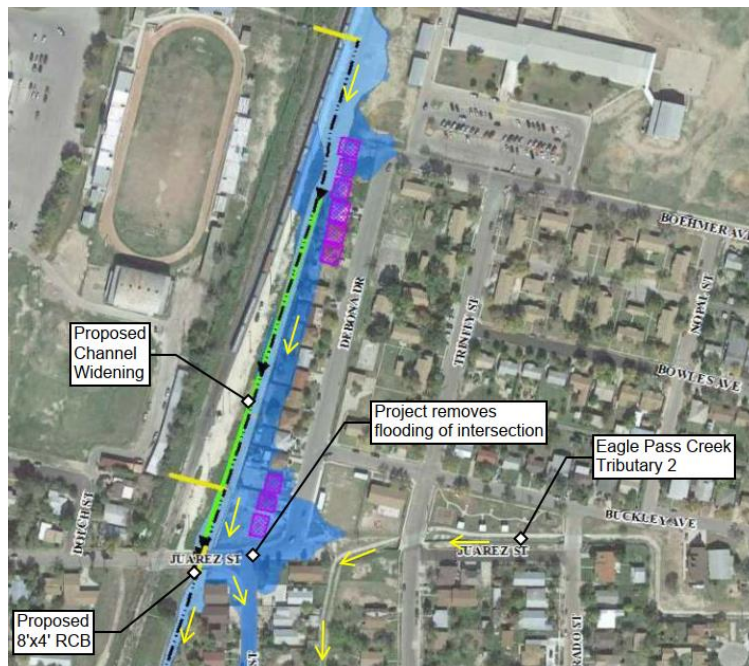
Study includes constructing a 5' deep trapezoidal channel approximately 30 feet wide with 3:1 side slopes and a 5' concrete pilot channel, replacing Juarez Street culvert with 8'x4' box culvert, and realigning existing channel to provide additional distance from homes.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities	Eagle Pass
County/ Counties	Maverick
HUC 8	13080001, 13080002
HUC 12	130800020703, 130800020702
Study Area (sq. mi.)	0.02



Emergency Need

Yes No

Known Flood Risk

- History of Flooding? Yes No
 - Population at Risk Yes No
 - Roadways flooded Yes No
 - Critical Facilities Impacted Yes No
- Notes:

Miles inundated? _____
Agricultural Land impacted Yes No

Study Costs

Total Cost: \$53,955
Estimated year to start: _____
Time to complete? _____
Funding Dedicated? Yes No

Study Sponsor: City of Eagle Pass
Entity with Oversight: City of Eagle Pass
Included in a Hazard Mitigation Action Plan or other plan? Yes No
(Potential) Source of Funding: FIF, local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Risk Area 6 Trib 2 bypass & detention at Eagle Pass High School fields

FME ID: 151000094

FME Description

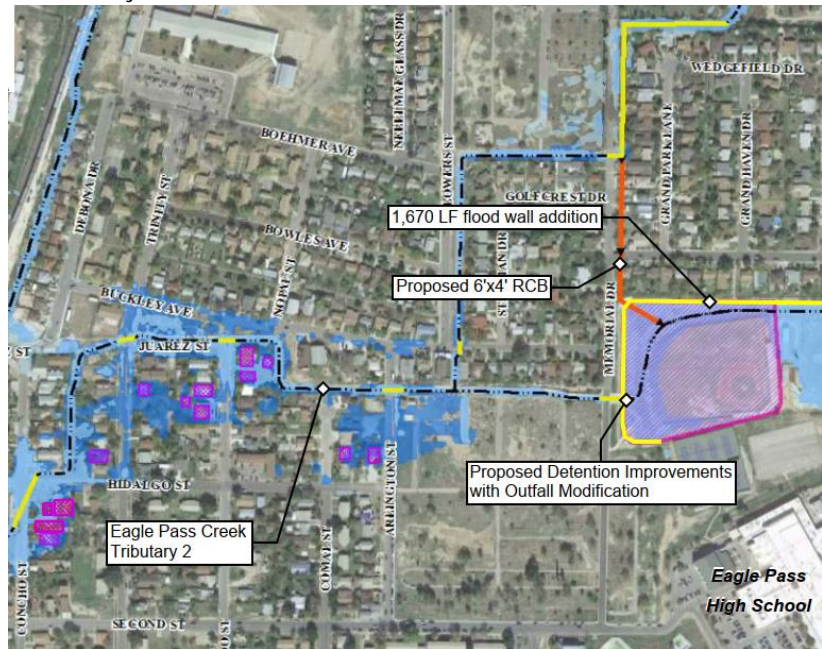
Study includes bypassing flow from Golfcrest Drive to the detention pond with 1-6'x4', RCB Modifying outfall structure from 2-5'x3' RCB to 1-5'x3' RCB, and Lowering existing baseball field by 3 ft to provide an additional 30 ac-ft of storage.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities	Eagle Pass
County/ Counties	Maverick
HUC 8	13080001, 13080002
HUC 12	130800020703, 130800020702
Study Area (sq. mi.)	0.10



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$143,550	Study Sponsor:	City of Eagle Pass
Estimated year to start:		Entity with Oversight	City of Eagle Pass
Time to complete?		Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Action Plan or other plan?	
		(Potential) Source of Funding	FIF, local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did not meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Risk Area 8 Tributary 2 channel widening near Alexander Drive

FME ID: 151000095

FME Description

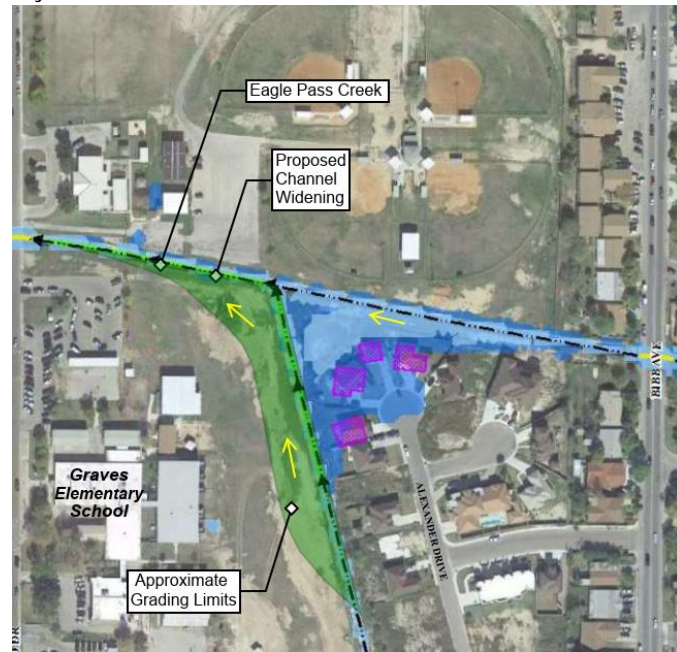
Study includes constructing a 3' deep trapezoidal channel with a 76' bottom width with 4:1 side slopes from Graves Elementary School to the confluence of existing channels and constructing a 4' deep trapezoidal channel with a 11' bottom width with 4:1 side slopes from confluence of existing channels to existing culvert at Kelso Drive.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Eagle Pass
 County/ Counties Maverick
 HUC 8 13080001,
 13080002
 HUC 12 130800020703,
 130800020702
 Study Area (sq. mi.) 0.04



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	12,045	Study Sponsor:	City of Eagle Pass
Estimated year to start:		Entity with Oversight	City of Eagle Pass
Time to complete?		Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
		Action Plan or other plan?	
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did not meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Maverick County Master Drainage Study

FME ID: 151000096

FME Description

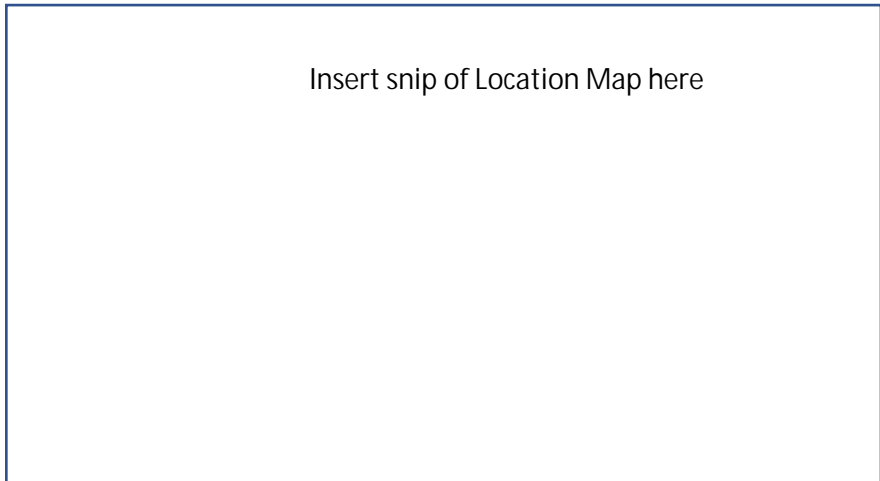
Develop Flood risk maps for the county of Maverick and develop CIP

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Maverick
HUC 8 13080001,
 13080002
HUC 12
Study Area (sq. mi.) 768.49



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$250,000	Study Sponsor:	
Estimated year to start:		Entity with Oversight	
Time to complete?		Included in a CIP or other plan?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Starr County Master Drainage Study

FME ID: 151000097

FME Description

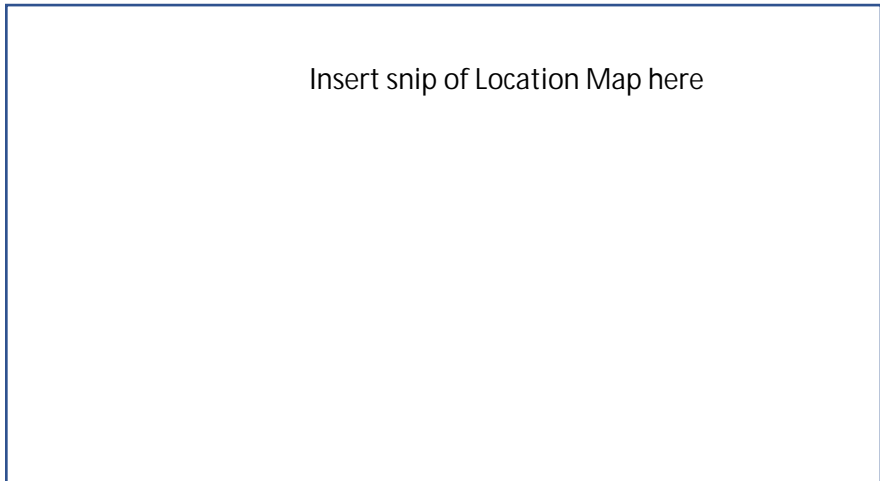
Develop Flood risk maps for the county of Starr and develop CIP

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Starr
HUC 8 12110207,
12110208
HUC 12
Study Area (sq. mi.) 1232.38



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$250,000	Study Sponsor:	
Estimated year to start:		Entity with Oversight	
Time to complete?		Included in a CIP or other plan?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Starr County Drainage District Master Drainage Study

FME ID: 151000098

FME Description

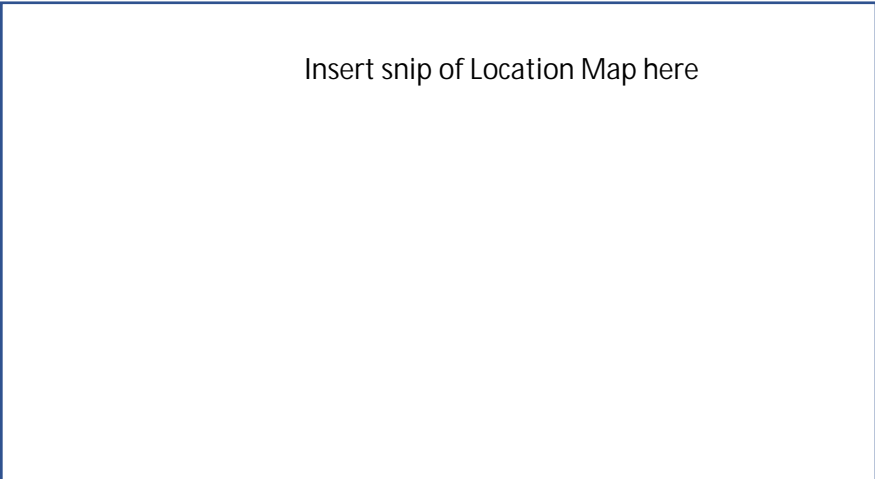
Develop Flood risk maps for the Starr County Drainage District and develop CIP

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Starr
HUC 8 12110207,
12110208
HUC 12
Study Area (sq. mi.) 1232.34



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:
Population at Risk		# of structures inundated
Roadways flooded	Yes <input type="checkbox"/> No <input type="checkbox"/>	Miles inundated?
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted
Notes:		Yes <input type="checkbox"/> No <input type="checkbox"/>

Study Costs

Total Cost:	\$250,000	Study Sponsor:
Estimated year to start:		Entity with Oversight
Time to complete?		Included in a CIP or other plan?
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding
		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did not meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

La Grulla Master Drainage Study

FME ID: 151000099

FME Description

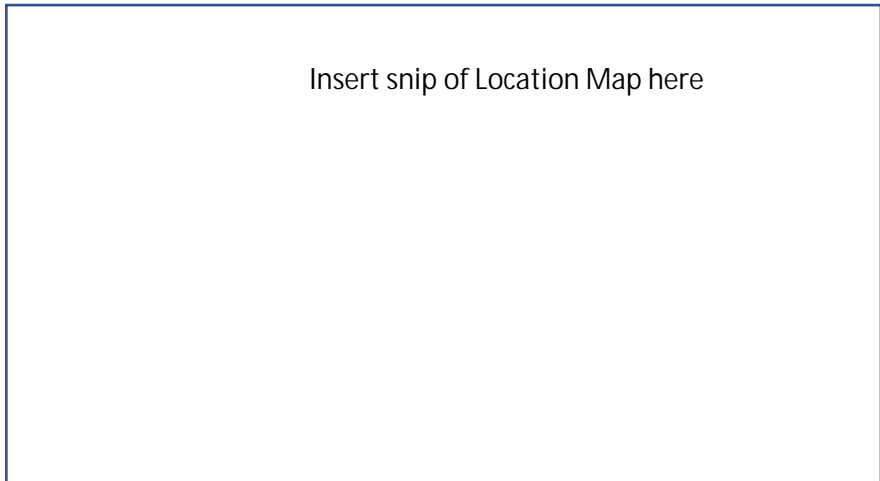
Develop Flood risk maps for the city of La Grulla and develop CIP

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities La Grulla
 County/ Counties Starr
 HUC 8 12110207,
 12110208
 HUC 12
 Study Area (sq. mi.) 0.94



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$250,000	Study Sponsor:	
Estimated year to start:		Entity with Oversight	
Time to complete?		Included in a CIP or other plan?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Roma Master Drainage Study

FME ID: 151000100

FME Description

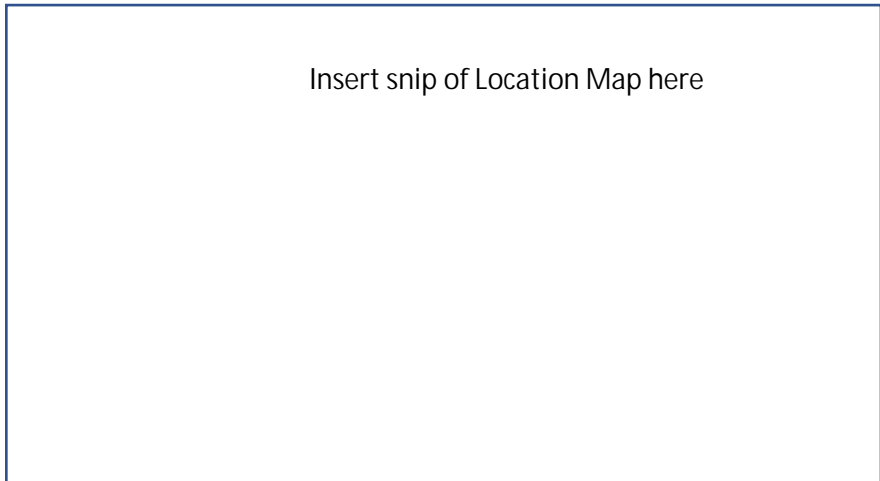
Develop Flood risk maps for the city of Roma and develop CIP

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Roma
 County/ Counties Starr
 HUC 8 12110207,
 12110208
 HUC 12
 Study Area (sq. mi.) 5.98



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$250,000	Study Sponsor:	
Estimated year to start:		Entity with Oversight	
Time to complete?		Included in a CIP or other plan?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Escobares Master Drainage Study

FME ID: 151000101

FME Description

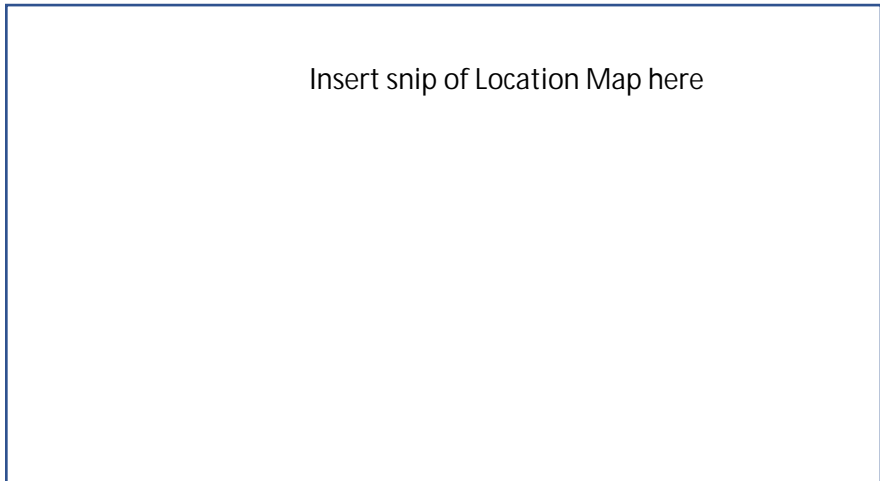
Develop Flood risk maps for the city of Escobares and develop CIP

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Escobares
 County/ Counties Starr
 HUC 8 12110207,
 12110208
 HUC 12
 Study Area (sq. mi.) 2.73



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$250,000	Study Sponsor:	
Estimated year to start:		Entity with Oversight	
Time to complete?		Included in a CIP or other plan?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
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- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Rio Grande City Master Drainage Study

FME ID: 151000102

FME Description

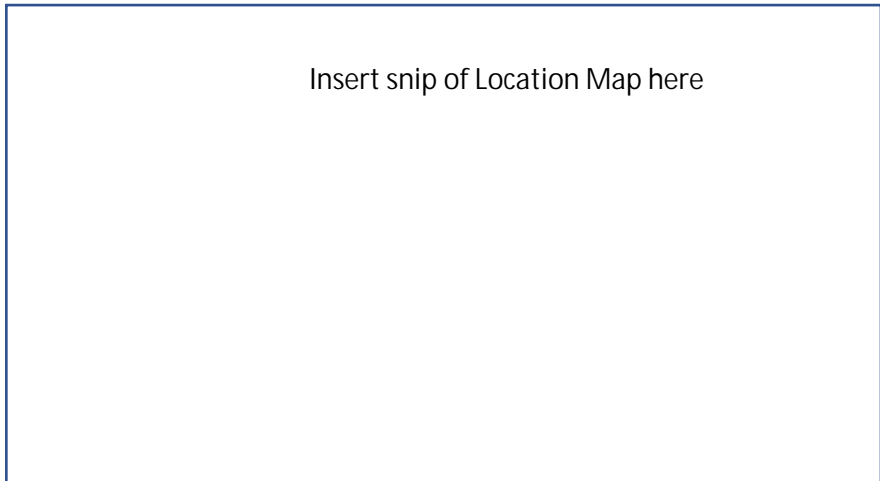
Develop Flood risk maps for the city of Rio Grande City and develop CIP

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Rio Grande City
 County/ Counties Starr
 HUC 8 12110207,
 12110208
 HUC 12
 Study Area (sq. mi.) 11.38



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$250,000	Study Sponsor:	
Estimated year to start:		Entity with Oversight	
Time to complete?		Included in a CIP or other plan?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Rgc Public Works, Escobares City, And Starr Public Works Roadway Improvements

FME ID: 151000103

FME Description

Improve Roadways, By Widening And Raising, And Create Drainage Culverts Or Bridges. (Morenos Creek And Garceno Creek)(Kelsey Creek, Rio Grande City)

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

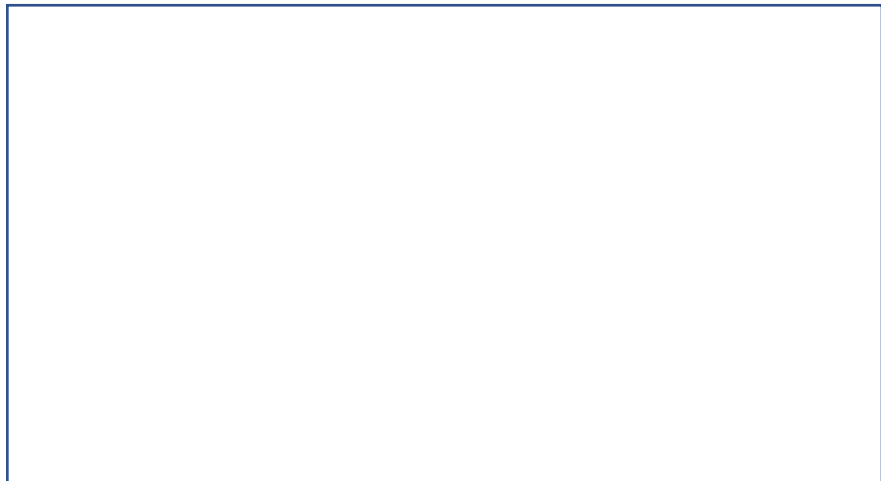
City/ Cities

County/ Counties STARR

HUC 8 12110207,
13090001

HUC 12 121102070100,
130900011301,
130900011302,
130900011304,
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130900011701, 130900011702, 130900011703,
130900011704, 130900011705, 130900011706,
130900011107, 130900011109, 130900011112



Study Area (sq. mi.)

Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Study Costs

Total Cost:	\$528,000	Study Sponsor:	Starr County
Estimated year to start:		Entity with Oversight	Starr County
Time to complete?		Included in a CIP or other plan?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	TDA/Local

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings

Flood Management Evaluations Fact Sheet

- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Val Verde County Master Drainage Study

FME ID: 151000124

FME Description

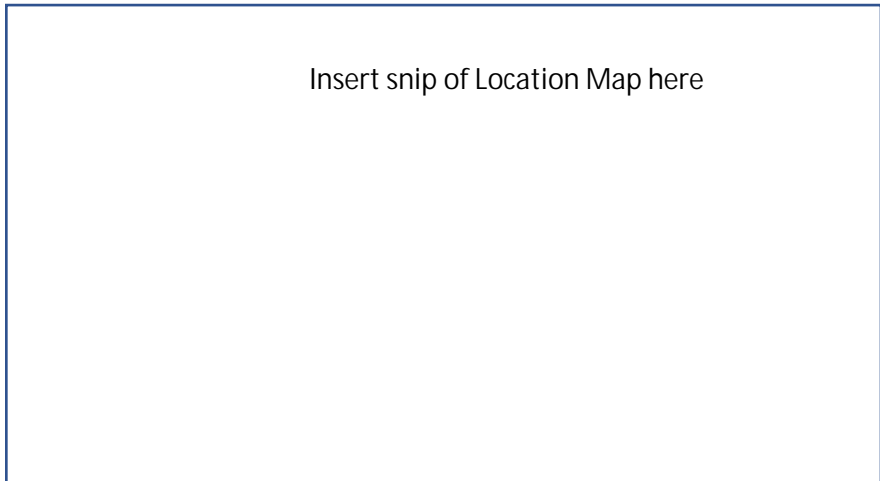
Develop Flood risk maps for the county of Val Verde and develop CIP

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Val Verde
HUC 8 13080001
HUC 12
Study Area (sq. mi.) 349.71



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Study Costs

Total Cost: \$500,000 Study Sponsor:
Estimated year to start: Entity with Oversight
Time to complete? Included in a CIP or other plan? Yes No
Funding Dedicated? Yes No (Potential) Source of Funding

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
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- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Webb County Drainage District #1 Master Drainage Study

FME ID: 151000125

FME Description

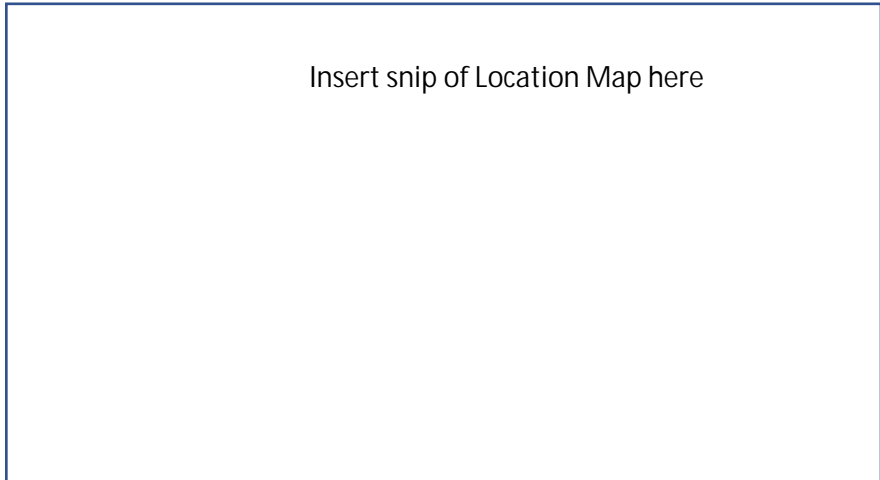
Develop Flood risk maps for the Webb County Drainage District #1 and develop CIP

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Webb
HUC 8 13080002
HUC 12
Study Area (sq. mi.) 9.12



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$1,000,000	Study Sponsor:	
Estimated year to start:		Entity with Oversight	
Time to complete?		Included in a CIP or other plan?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
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- Develop and maintain an operational stormwater asset management plan
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- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Rio Bravo Master Drainage Study

FME ID: 151000127

FME Description

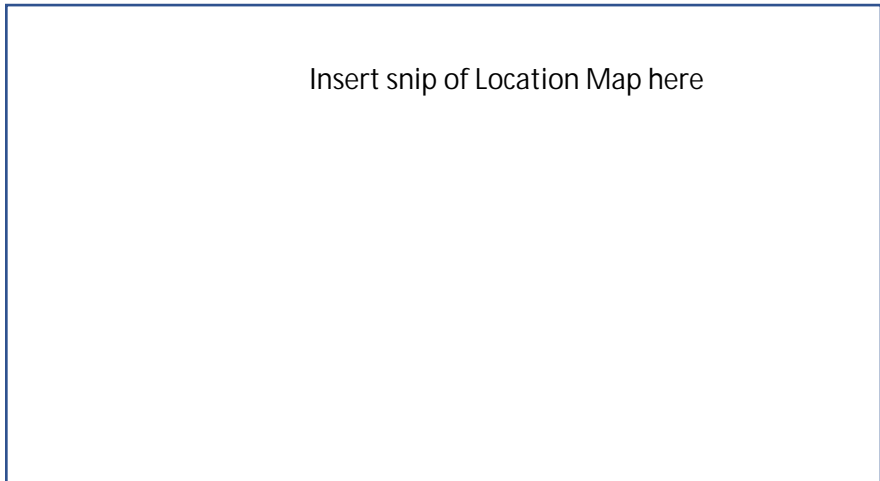
Develop Flood risk maps for the city of Rio Bravo and develop CIP

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities Rio Bravo
 County/ Counties Webb
 HUC 8 13080002
 HUC 12
 Study Area (sq. mi.) 0.66



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Study Costs

Total Cost: \$250,000 Study Sponsor:
 Estimated year to start: Entity with Oversight
 Time to complete? Included in a CIP or other plan? Yes No
 Funding Dedicated? Yes No (Potential) Source of Funding

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
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- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes v No

El Cenizo Master Drainage Study

FME ID: 151000128

FME Description

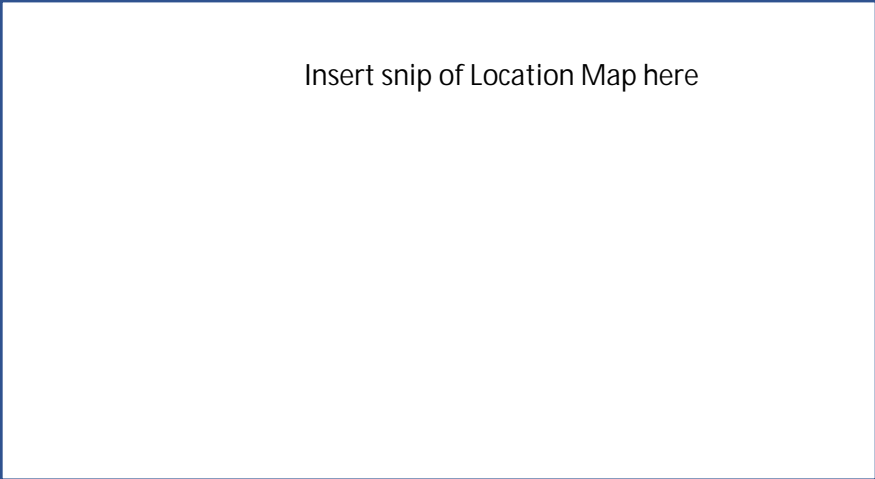
Develop Flood risk maps for the city of El Cenizo and develop CIP

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities El Cenizo
 County/ Counties Webb
 HUC 8 13080002
 HUC 12
 Study Area (sq. mi.) 0.53



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$250,000	Study Sponsor:	
Estimated year to start:		Entity with Oversight	
Time to complete?		Included in a CIP or other plan?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

City of Laredo Project 6

FME ID: 151000130

FME Description

Vidaurri Avenue Roadway Drainage Improvements to prevent future drainage in the area. Street improvements from Scott Street to Jefferson Street.

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities	Laredo
County/ Counties	Webb
HUC 8	13080002
HUC 12	130800022405, 130800022610, 130800022611, 130800022612, 130800022801, 130800022802, 130800022804, 130800022805, 130800022809, 130800030208, 130800022806
Study Area (sq. mi.)	0.70



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No
 Population at Risk
 Roadways flooded Yes No
 Critical Facilities Impacted Yes No

Frequency:
 # of structures inundated
 Miles inundated?
 Agricultural Land impacted Yes No

Notes:

Study Costs

Total Cost: \$330,000

Study Sponsor: Laredo

Flood Management Evaluations Fact Sheet

Estimated year to start: _____ Entity with Oversight Laredo
 Time to complete? _____ Included in a CIP or other plan? Yes No
 Funding Dedicated? Yes No (Potential) Source of Funding N/A

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did not meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Webb County Master Drainage Study

FME ID: 151000131

FME Description

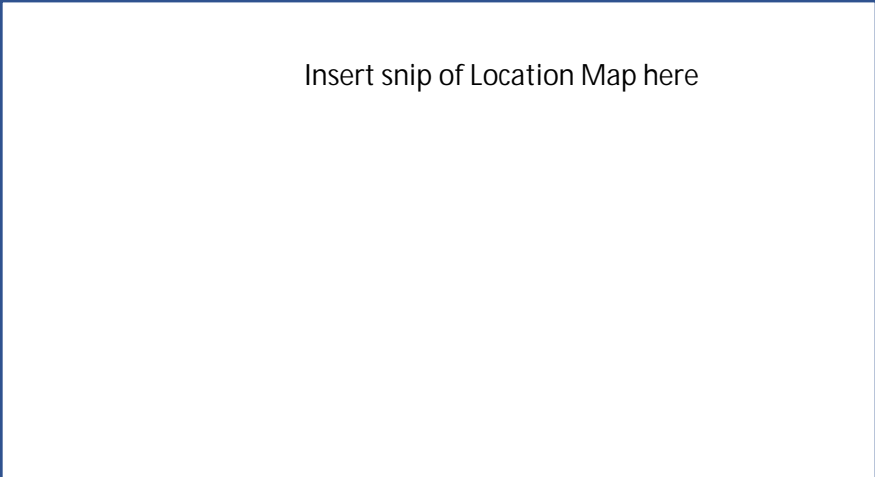
Develop Flood risk maps for the county of Webb and develop CIP

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Webb
HUC 8 13080002
HUC 12
Study Area (sq. mi.) 1654.59



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Study Costs

Total Cost: \$1,000,000 Study Sponsor:
Estimated year to start: Entity with Oversight
Time to complete? Included in a CIP or other plan? Yes No
Funding Dedicated? Yes No (Potential) Source of Funding

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Zapata County Master Drainage Study

FME ID: 151000132

FME Description

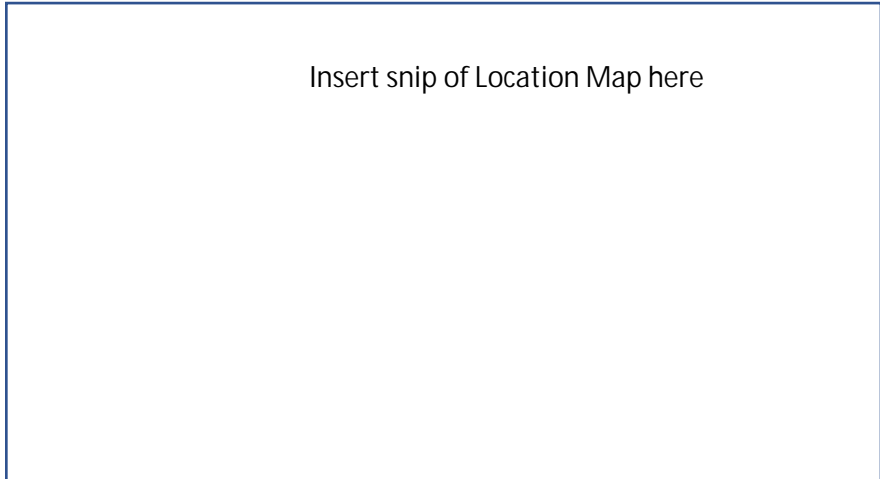
Develop Flood risk maps for the county of Zapata and develop CIP

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Zapata
HUC 8
HUC 12
Study Area (sq. mi.) 150.03



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Study Costs

Total Cost: \$250,000 Study Sponsor:
Estimated year to start: Entity with Oversight
Time to complete? Included in a CIP or other plan? Yes No
Funding Dedicated? Yes No (Potential) Source of Funding

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

San Ygnacio MUD Master Drainage Study

FME ID: 151000133

FME Description

Develop Flood risk maps for San Ygnacio MUD and develop CIP

Study Type

- Flood risk modeling/mapping
- Flood mitigation study
- Alternative Analysis
- Feasibility Assessments
- Flood preparedness studies

Study Area

City/ Cities
County/ Counties Zapata
HUC 8
HUC 12
Study Area (sq. mi.)

Insert snip of Location Map here

Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Study Costs

Total Cost:	\$250,000	Study Sponsor:	
Estimated year to start:		Entity with Oversight	
Time to complete?		Included in a CIP or other plan?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	

Study identified as a gap by Region 15 Regional Flood Planning Group (RFPG)

Yes No

Study identified because project could not be included as an Flood Mitigation Project (FMP) in the Region 15 Regional Flood Plan because it did meet the minimum requirements, per TWDB guidance for Regional Flood Planning or the provisions of Title 31 of TAQC Chapters 361 and 362.

Yes No

Was the project missing sufficient data to assess whether the proposed project has a negative effect, per TWDB guidelines? Yes No

Was the project recommended by the RFPG to be studied in order for it to provide more project details, such as a benefit cost ratio or the number of structures the project removes from the 100-year floodplain? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

An aerial photograph of a football stadium, likely at La Villa High School, which is completely inundated with floodwater. The stadium's red running track and blue football field are visible, with yard lines and yard numbers (10, 20, 30, 40, 50) clearly marked. The word "CARDINALS" is painted in large red letters on the left end zone, and "LA VILLA" is on the right. A large "LH" logo is in the center of the field. The surrounding area, including parking lots and nearby buildings, is also flooded. The background shows a vast expanse of green agricultural fields under a grey, overcast sky. The text "FLOOD MITIGATION PROJECTS (FMPs) FACT SHEETS" is overlaid in large, white, bold, sans-serif font across the center of the image.

**FLOOD MITIGATION
PROJECTS
(FMPs)
FACT SHEETS**

Alton MDP - West Mile 5 Road and Louisiana Street Alternative 2

FMP ID: 153000001

FMP Description

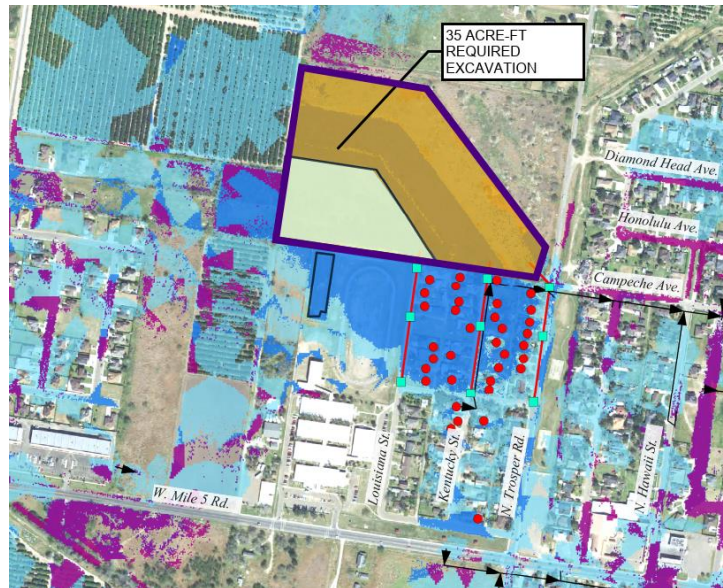
Alternative 2 is designed to remove structures from the 10-year floodplain. Approximately 35 acre-feet of volume is proposed to be excavated. construction consists of 1,940 LF of 36-inch diameter pipe sloped at 0.2% along Louisiana, Kentucky, and Trooper Road out falling directly into the retention pond, 3 headwalls and approximately 9 inlets. Additional inlets and smaller pipe may be needed to catch low lying areas that pond between the houses or regrading with swales to take runoff to the street.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110208
HUC 12	121102080200, 121102080300
Study Area (sq. mi.)	N/A



Emergency Need

Yes No

Known Flood Risk

- | | | | |
|------------------------------|---|----------------------------|--|
| History of Flooding? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Frequency of flooding: | |
| Population at Risk | | # of structures inundated | |
| Roadways flooded | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Miles inundated? | |
| Critical Facilities Impacted | Yes <input type="checkbox"/> No <input type="checkbox"/> | Agricultural Land impacted | Yes <input type="checkbox"/> No <input type="checkbox"/> |

Notes:

Project Costs

- | | | | |
|--|---|---|---|
| Total Cost: | \$2,152,656 | Study Sponsor: | City of Alton |
| Non-reoccurring Non-capital Cost (include in Total above): | | <i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i> | |
| Estimated year to start: | | Entity with Oversight | City of Alton |
| Time to complete? | | Included in a Hazard Mitigation Action Plan or other plan? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Funding Dedicated? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | (Potential) Source of Funding | FIF, local |

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

- Yes No

Alton MDP - FM 676 South Glasscock Road Alternative 3

FMP ID: 153000002

FMP Description

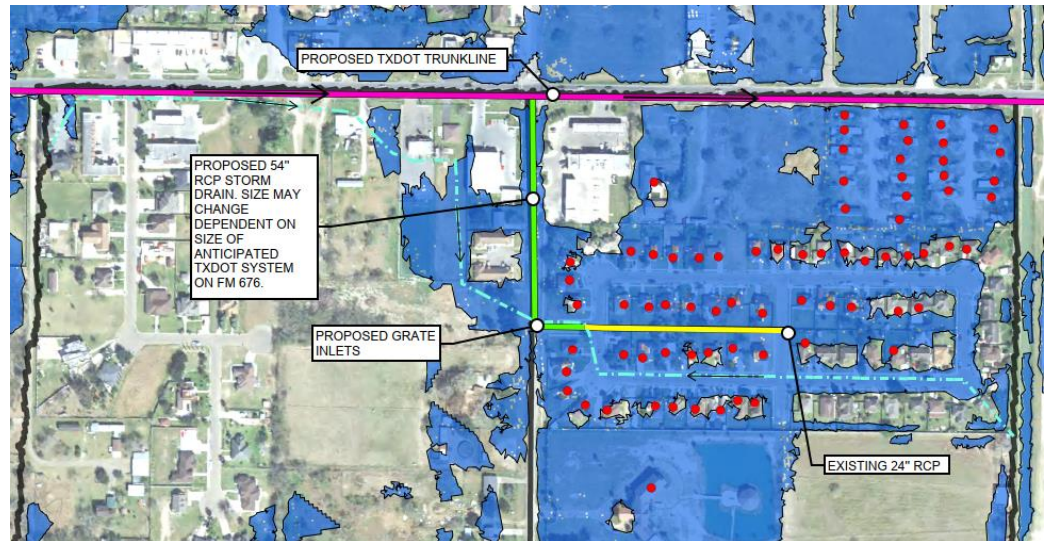
Widening of FM 676 with a proposed storm drain system containing 54" reinforced concrete pipe.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110209
HUC 12	121102080200, 121102080300
Study Area (sq. mi.)	N/A



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Project Costs

Total Cost:	\$387,288	Study Sponsor:	City of Alton
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	City of Alton
Time to complete?		Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Funding Dedicated? Yes No Action Plan or other plan? (Potential) Source of Funding FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
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- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
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- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Alton MDP - North Inspiration Road and West St. Jude Avenue Alternative 2

FMP ID: 153000003

FMP Description

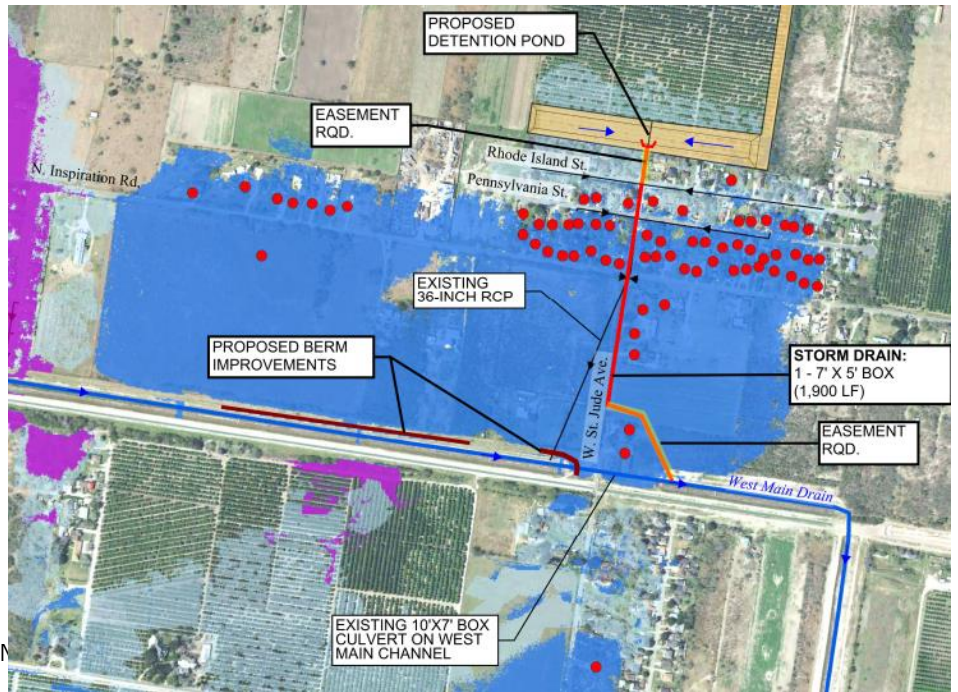
Alternative 2, is designed to remove structures from the 25-year floodplain and more frequent storms. This alternative consists of upsizing the storm drain under West St Jude Avenue. The trunk line will consist of 1,900 LF of a single 7' X 5' reinforced concrete box sloped at 0.5% from the area just west of the neighborhood on W. St. Jude Avenue to the West Main Drain Channel, downstream (north) of the existing 10' X 7' box culvert.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110210
HUC 12	121102080200, 121102080300
Study Area (sq. mi.)	N/A



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No

Population at Risk Roadways flooded Yes No

Critical Facilities Impacted Yes No

Miles inundated? Agricultural Land impacted Yes No

Notes:

Project Costs

Total Cost:	\$2,817,936	Study Sponsor:	City of Alton
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	City of Alton
Time to complete?		Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

- Yes No

FMP ID: 153000004

Alton MDP - North Stewart Boulevard Alternative 2

FMP Description

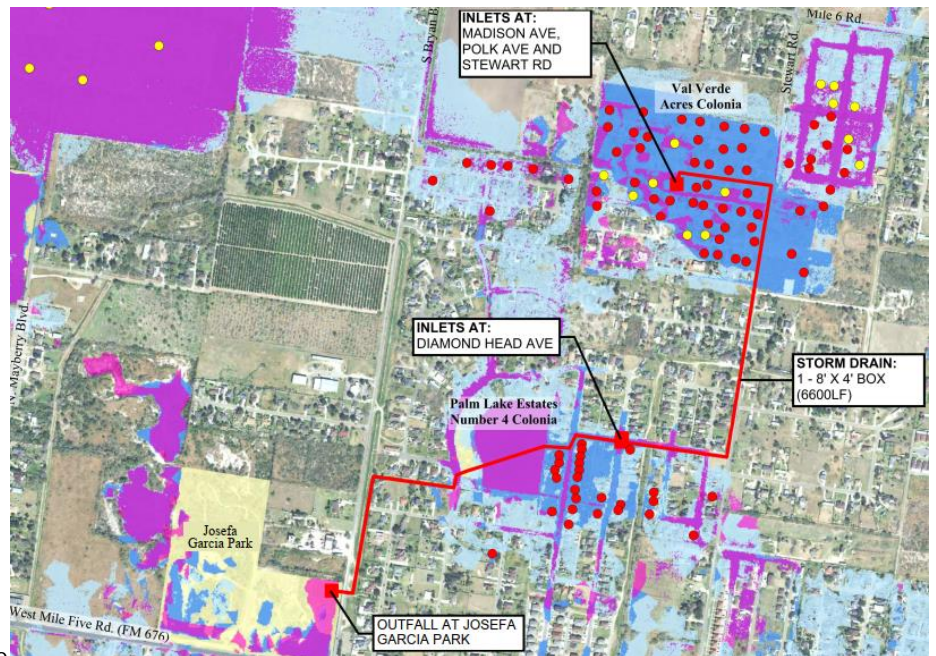
Alternative 2 is designed to remove structures from the 10-year floodplain and more frequent storms. This alternative consists of the construction of 6,600 LF of a single 8' X 4' reinforced concrete box sloped at 0.02% from the Val Verde Acres Subdivision to Josefa Garcia Park.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110211
HUC 12	121102080200, 121102080300
Study Area (sq. mi.)	0.38



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Project Costs

Total Cost:	\$8,338,572	Study Sponsor:	City of Alton
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2023	Entity with Oversight	City of Alton
Time to complete?	2025	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

- Yes No

Alton MDP - South Stewart Boulevard Alternative 2A

FMP ID: 153000005

FMP Description

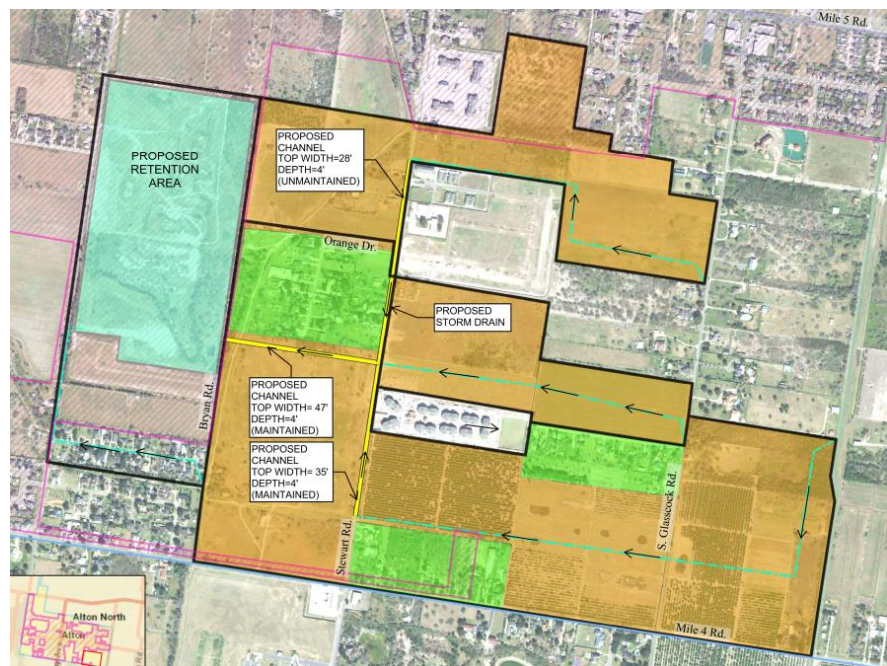
740 LF 6' X 4' Reinforced Concrete Box Culvert starting just south of Orange Dr. and Stewart Rd. 70 acres of land acquisition for regional retention. 3.1 Acres of land for channel conveyance.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110212
HUC 12	121102080200, 121102080300
Study Area (sq. mi.)	0.81



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Project Costs

Total Cost:	\$6,296,400	Study Sponsor:	City of Alton
Non-recurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2023	Entity with Oversight	City of Alton
Time to complete?	2025	Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Funding Dedicated? Yes No Action Plan or other plan? (Potential) Source of Funding FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Alton MDP - West Mile 5 and South Glasscock Road Alternative 3

FMP ID: 15300006

FMP Description

Alternative 3 is simply the buyout and removal of 23 properties on the north side of Buchanan from the 10-year floodplain. Once structures are removed, the vacant land can be excavated and used as a park/regional retention pond.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110213
HUC 12	121102080200, 121102080300
Study Area (sq. mi.)	N/A



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Project Costs

Total Cost:	\$1,663,200	Study Sponsor:	City of Alton
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	City of Alton
Time to complete?		Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Funding Dedicated? Yes No Action Plan or other plan? (Potential) Source of Funding FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Weslaco Stormwater Improvement Plan -South Texas Boulevard and East 18th Street

FMP ID: 153000007

FMP Description

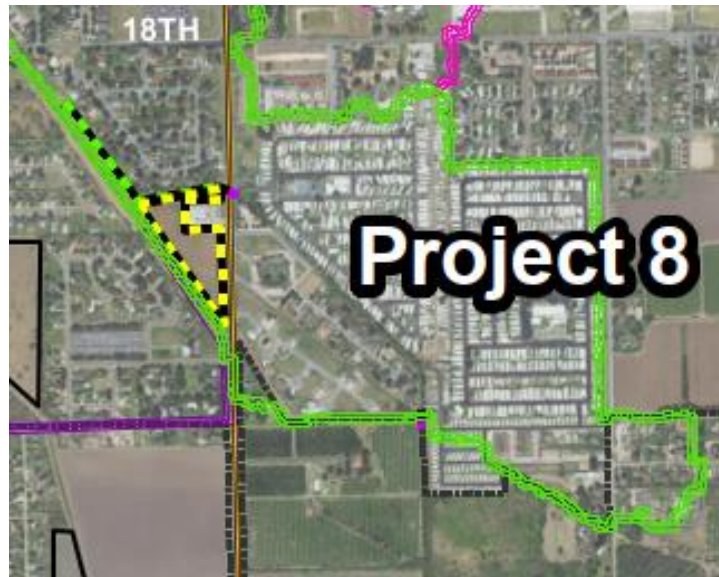
Construction of a 5 acre detention pond along Texas Boulevard, with approximately 1,400 LF of channel widening along the back of the neighborhood, the replacement of a 30 – inch culvert crossing the irrigation canal with an 8’ x 4’ RCB, and replacement of a 24 – inch culvert crossing FM 88 with an 8’ x 4’ RCB.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110214
HUC 12	130800020703, 130800020702
Study Area (sq. mi.)	N/A



Emergency Need

Yes No

Known Flood Risk

- | | | | |
|------------------------------|---|----------------------------|--|
| History of Flooding? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Frequency of flooding: | |
| Population at Risk | | # of structures inundated | |
| Roadways flooded | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Miles inundated? | |
| Critical Facilities Impacted | Yes <input type="checkbox"/> No <input type="checkbox"/> | Agricultural Land impacted | Yes <input type="checkbox"/> No <input type="checkbox"/> |

Notes:

Project Costs

- | | | | |
|--|---|---|---|
| Total Cost: | \$1,585,584 | Study Sponsor: | Weslaco |
| Non-reoccurring Non-capital Cost (include in Total above): | | <i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i> | |
| Estimated year to start: | | Entity with Oversight | Weslaco |
| Time to complete? | | Included in a Hazard Mitigation Action Plan or other plan? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Funding Dedicated? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | (Potential) Source of Funding | FIF, local |

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

- Yes No

Downtown Pharr Mitigation Project

FMP ID: 153000008

FMP Description

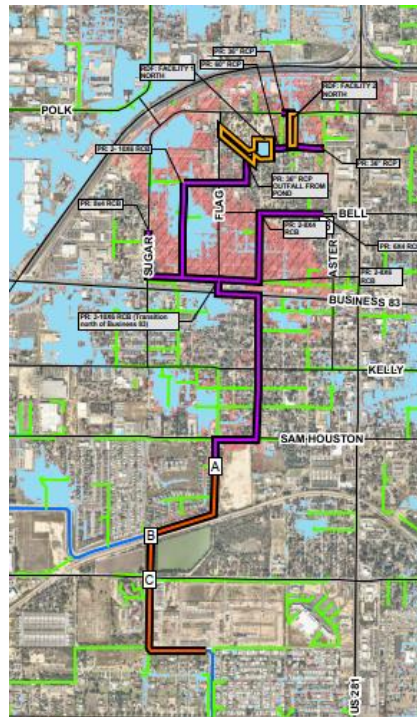
Construct 5500-linear feet of channel improvements on the Pharr South Drain downstream of Sam Houston Street to just north of Inspiration Street. Install 7280-linear feet of reinforced concrete box culvert improvements toward the Pharr South Drain from Egly and North Hibiscus Street. Install curb inlet capture systems approximately every 500-feet to capture local drainage across subdivisions and repave roadways. Construct two (2) Regional Detention Facilities. Facility 1 at North Camelia Street (Max Depth = 5.5-feet) will require 5.5 acre-feet of excavation and is owned by the City of Pharr. Facility 2 at Audrey Street (max Depth = 9.5-feet) will require 42 acre-feet of excavation and will require acquisition.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- Infrastructure, Regional Detention

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110217
HUC 12	121102080100, 121102080300, 130900020311
Study Area (sq. mi.)	N/A



of structures inundated
Miles inundated?
Agricultural Land impacted Yes No

Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No
 Population at Risk
 Roadways flooded Yes No
 Critical Facilities Impacted Yes No

Notes:

Project Costs

Total Cost:	\$45,241,092	Study Sponsor:	City of Pharr
Non-recurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2022	Entity with Oversight	City of Pharr
Time to complete?	2024	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Funding Dedicated? Yes No (Potential) Source of Funding FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

North Pharr Backwater Relief Project

FMP ID: 153000009

FMP Description

Construct 3400-linear feet of channel improvements on the ditch running from south to north along North Fir Street and 2800-linear feet of channel improvements on the Pharr-McAllen Lateral Ditch up to North I road. Install culvert improvements, 2-8' X 4' RCB, alongside the ditch running parallel to Fir Street at crossings of W. Sioux Road and at connection to outfall of maintained ditch to the Pharr-McAllen Lateral System. Extend existing culverts at crossings. Repave W. Sioux Road.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110220
HUC 12	121102080100, 121102080300, 130900020311
Study Area (sq. mi.)	N/A



Emergency Need

Yes No

Known Flood Risk

- History of Flooding? Yes No
- Population at Risk
- Roadways flooded Yes No
- Critical Facilities Impacted Yes No

of structures inundated
Miles inundated?
Agricultural Land impacted Yes No

Notes:

Project Costs

Total Cost:	\$1,628,000	Study Sponsor:	City of Pharr
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2022	Entity with Oversight	City of Pharr
Time to complete?	2024	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

- Yes No

North Pharr Culvert Improvements

FMP ID: 153000010

FMP Description

Install culvert improvements, 2-10X10 RCB, alongside the ditch running parallel to N. Erika Street at crossings of W. Sioux Road and at connection to outfall of maintained ditch to the Pharr-McAllen Lateral System. Repave W. Sioux Road.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110221
HUC 12	121102080100, 121102080300, 130900020311
Study Area (sq. mi.)	N/A



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Project Costs

Total Cost:	\$869,000	Study Sponsor:	City of Pharr
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2022	Entity with Oversight	City of Pharr
Time to complete?	2024	Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Funding Dedicated? Yes No Action Plan or other plan? (Potential) Source of Funding FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

North Pharr Mitigation Project

FMP ID: 153000011

FMP Description

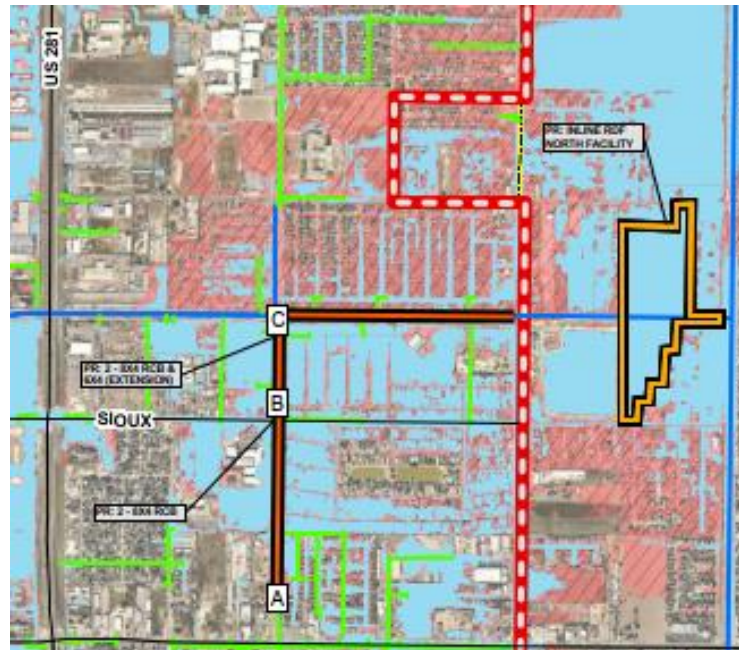
Construct 3400-linear feet of channel improvements on the ditch running from south to north along North Fir Street and 2800-linear feet of channel improvements on the Pharr-McAllen Lateral Ditch up to North I road. Install culvert improvements, 2 – 8' X 4' RCB, alongside the ditch running parallel to Fir Street at crossings of W. Sioux Road and at connection to outfall of maintained ditch to the Pharr-McAllen Lateral System. Construct an inline Regional Detention Facility (RDF) along the Pharr-McAllen drain within the City Limits of San Juan. The pond will require a footprint of 35-acres.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110222
HUC 12	121102080100, 121102080300, 130900020311
Study Area (sq. mi.)	N/A



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Project Costs

Total Cost:	\$8,195,000	Study Sponsor:	City of Pharr
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2022	Entity with Oversight	City of Pharr
Time to complete?	2024	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Funding Dedicated? Yes No (Potential) Source of Funding FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Southwest Pharr Drainage Mitigation Project

FMP ID: 153000012

FMP Description

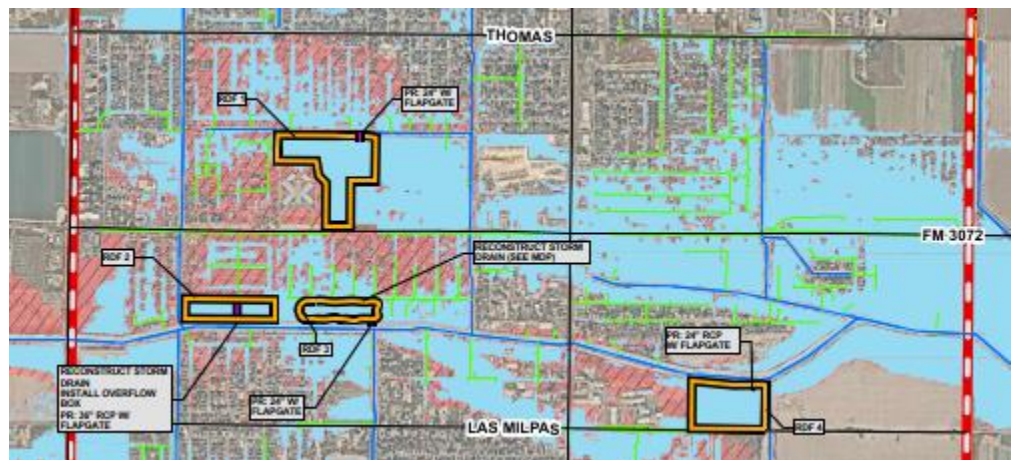
Construct four regional detention facilities (RDF). RDF 1 has a footprint of 19.75-acres and is a lateral detention facility located between Dicker and Thomas Road west of Highway 281 and near Carmen Anaya Elementary. RDF 2 has a footprint of 7.4-acres and located in the western section of Jones Box Park. RDF 3 has a footprint of 5.5-acres and located in the central section of Jones Box Park. Redirect flow from the Los Ranchitos Subdivisions via a reconfigured 36" RCP into a pilot channel located in the deepest section of the pond. Install 36" RCP and flap gate at the outfall to prevent backflow from the South Floodwater Channel into the subdivisions north of Jones Box Park. RDF 4 is located between Dicker and Las Milpas Road east of Highway 281, south of the South Floodwater Channel, and will require a footprint of 13.8-acres.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- Infrastructure, Regional Detention

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110227
HUC 12	121102080100, 121102080300, 130900020311
Study Area (sq. mi.)	0.07



Emergency Need

Yes No

Known Flood Risk

- | | | | |
|------------------------------|---|----------------------------|--|
| History of Flooding? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Frequency of flooding: | |
| Population at Risk | | # of structures inundated | |
| Roadways flooded | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Miles inundated? | |
| Critical Facilities Impacted | Yes <input type="checkbox"/> No <input type="checkbox"/> | Agricultural Land impacted | Yes <input type="checkbox"/> No <input type="checkbox"/> |

Notes:

Project Costs

Total Cost:	\$5,587,275	Study Sponsor:	City of Pharr
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2022	Entity with Oversight	City of Pharr
Time to complete?	2024	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Funding Dedicated? Yes No (Potential) Source of Funding FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Pharr - San Juan Regional Detention Facility

FMP ID: 153000013

FMP Description

Construct an inline Regional Detention Facility (RDF) along the Pharr-McAllen drain within the City Limits of San Juan. The pond will require a footprint of 35 acres, 300 acre-feet of storage volume, have a maximum depth of approximately of 14 feet, and require some property acquisition.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- Regional Detention

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110224
HUC 12	121102080100, 121102080300, 130900020311
Study Area (sq. mi.)	N/A



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Project Costs

Total Cost:	\$5,148,000	Study Sponsor:	City of Pharr
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2022	Entity with Oversight	City of Pharr
Time to complete?	2024	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

- Yes No

Weslaco Stormwater Improvement Plan - Pleasantview Drive and 11th Street

FMP ID: 153000014

FMP Description

Installation of 3,220 LF of new storm drain system consisting of two – 8’ x 4’ RCBs along Mile 3 ½.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Infrastructure, Regional Detention

Project Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110207,
12110228
HUC 12 121102080100,
121102080300
Study Area (sq. mi.) N/A



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Project Costs

Total Cost:	\$4,775,000	Study Sponsor:	City of Weslaco
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	City of Weslaco
Time to complete?		Included in a Hazard Mitigation	Yes <input type="checkbox"/> No <input type="checkbox"/>

Funding Dedicated? Yes No Action Plan or other plan? (Potential) Source of Funding FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Weslaco Stormwater Improvement Plan - Mile 10 N and Mile 5 1/2 W

FMP ID: 153000015

FMP Description

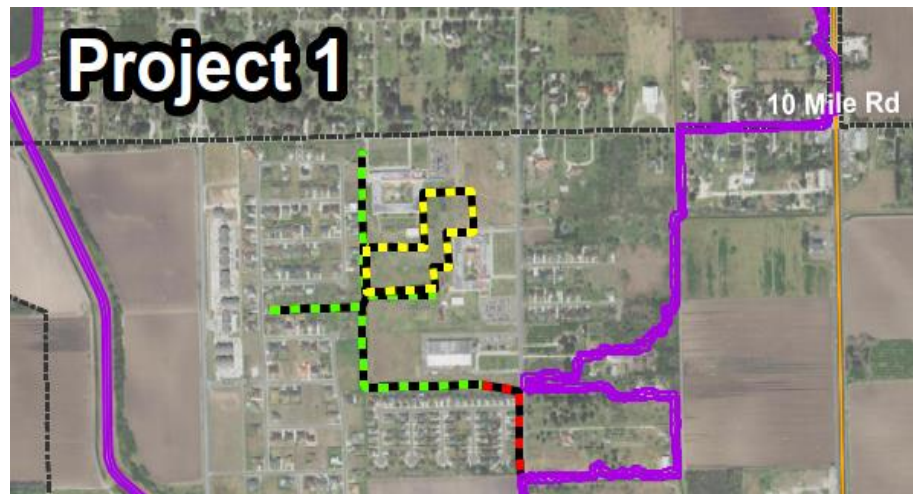
Construction of an 8 acre detention pond, with approximately 4,000 LF of channel widening along the back of the neighborhoods and between the Justice Raul A. Gonzalez Elementary School and Joe Calvillo Jr Career & Technology Education Complex; replacement of existing undersized channel culvert with two – 8' x 5' reinforced concrete boxes (RCBs), and adding two – 8' x 5' RCBs to connect the existing drainage ditches to the drain channel system on the east.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110230
HUC 12	121102080100, 121102080300
Study Area (sq. mi.)	N/A



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Project Costs

Total Cost:	\$4,441,008	Study Sponsor:	City of Weslaco
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	City of Weslaco
Time to complete?		Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- | | |
|---|--|
| Have the flood risk and flood reduction impacts been evaluated? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Does the project have any negative effects, per TWDB guidelines? | Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> |
| Does the project have a Benefit Cost Ratio greater than 1? | Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> |
| Does the project reduce flood risk for the 100-Yr flood event? | Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> |
| Does the Project provide a Water Supply Benefit? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Has all the ROW been acquired? | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Will permits or interlocal agreements be needed for this project? | Yes <input type="checkbox"/> No <input type="checkbox"/> |

Related Goals

- | | |
|--|--|
| <input type="checkbox"/> Increase community access routes to critical facilities, evacuation routes, during and after a flooding event | <input type="checkbox"/> Increase the # of entities that adopt higher than NFIP-minimum standards |
| <input type="checkbox"/> Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain | <input type="checkbox"/> Develop and maintain an operational stormwater asset management plan |
| <input type="checkbox"/> Increase the # of communities participating in the National Flood Insurance Program | <input type="checkbox"/> Increase the # of flood gauges (rainfall/stream) in the region |
| <input type="checkbox"/> Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs | <input type="checkbox"/> Increase the # of entities that have multi-year drainage CIP list |
| <input type="checkbox"/> Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards | <input type="checkbox"/> Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings |
| <input type="checkbox"/> Increase participation in the regional flood planning process | <input type="checkbox"/> Increase use of nature-based flood risk reduction projects |
| <input checked="" type="checkbox"/> Provide regional detention that could be used for water reuse applications or as part of a floodplain management program | <input type="checkbox"/> Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger |
| <input type="checkbox"/> Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use | <input type="checkbox"/> Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure |
| <input type="checkbox"/> Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website | <input type="checkbox"/> Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association |
| <input type="checkbox"/> Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations | <input type="checkbox"/> Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain |
| <input type="checkbox"/> Reduce the # of structures that have been subject to repeated flooding events through property buyouts | |

RFPG Recommended

- Yes No

Weslaco Stormwater Improvement Plan - South International Boulevard and Business 83

FMP ID: 153000016

FMP Description

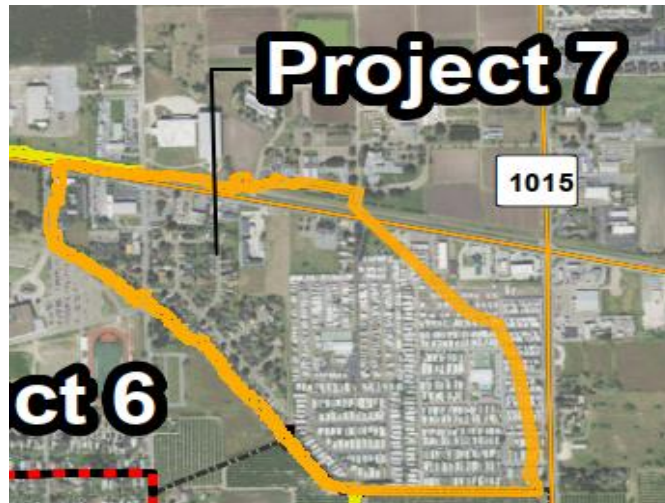
Replacement of 48 – inch culverts at two roadway crossings with 6’ x 4’ RCBs.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Infrastructure

Project Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110207,
12110231
HUC 12 121102080100,
121102080300
Study Area (sq. mi.) N/A



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Project Costs

Total Cost:	\$93,808	Study Sponsor:	City of Weslaco
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	City of Weslaco
Time to complete?		Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Funding Dedicated? Yes No Action Plan or other plan? (Potential) Source of Funding FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Weslaco Stormwater Improvement Plan - Texas Boulevard to Airport Drive, South of Business 83

FMP ID: 153000017

FMP Description

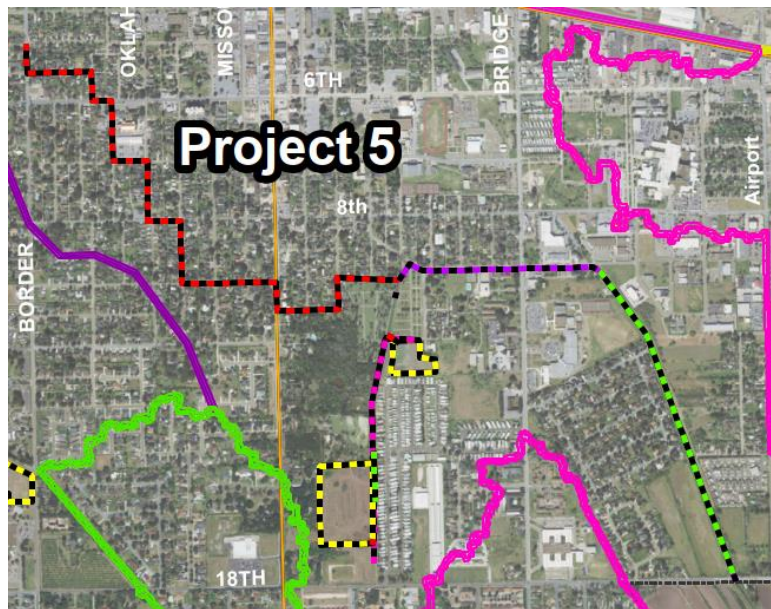
Replacement of 48 – inch culverts at two roadway crossings with 6’ x 4’ RCBs.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110232
HUC 12	121102080100, 121102080300
Study Area (sq. mi.)	N/A



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Project Costs

Total Cost:	\$43,984,512	Study Sponsor:	City of Weslaco
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	City of Weslaco
Time to complete?		Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

- Yes No

Weslaco Stormwater Improvement Plan - West Weslaco

FMP ID: 153000018

FMP Description

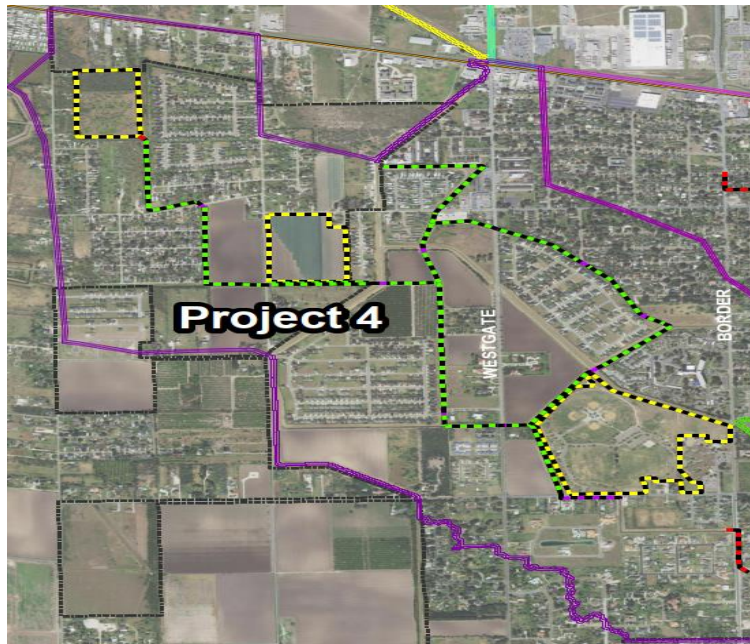
The project is located just west of Border Avenue, between US 83 and Zelma Street. Construction of three detention ponds, 18 acres east of Vaughn Road and Midway Road, 26 acres near West 6th Street and Milano Road and 60 acres at Harlon Block Sports Complex, approximately 17,000 LF of channel widening connecting the ponds, and installation of approximately 4500 LF of large (8' x 4', 8' x 5', 8' x 6') RCB storm drain system to improve conveyance along the channels to the ponds.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110233
HUC 12	121102080100, 121102080300
Study Area (sq. mi.)	N/A



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Project Costs

Total Cost:	\$37,305,840	Study Sponsor:	City of Weslaco
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	City of Weslaco
Time to complete?		Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

- Yes No

Weslaco Stormwater Improvement Plan - Westgate Drive and Sugar Cane Drive

FMP Description

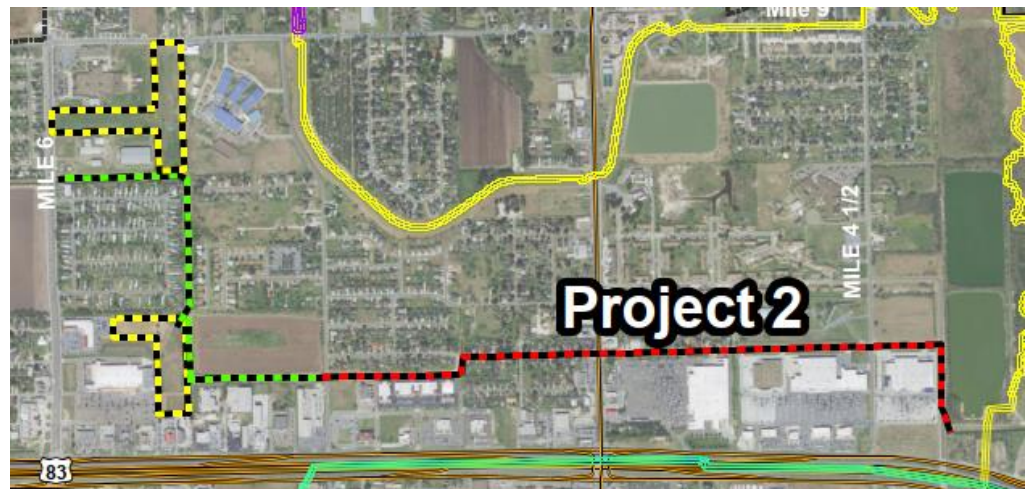
Construction of two detention ponds, 11 acres near Clecker-Heald Elementary School and 8 acres behind the commercial properties north of Interstate 2, approximately 4,500 LF of channel widening connecting the two ponds, addition of a new 42-inch reinforced concrete pipe (RCP) culvert east of Border Avenue, and installation of approximately 5,600 LF of an 8' x 4' RCB storm drain system along West Paisano Lane and East Ballard Street.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110234
HUC 12	121102080100, 121102080300
Study Area (sq. mi.)	N/A



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Project Costs

Total Cost:	\$11,099,088	Study Sponsor:	City of Weslaco
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	City of Weslaco
Time to complete?		Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

- Yes No

Precinct 4 MDP - Risk Area A at Mile 8.5 Rd. & Ware Rd.

FMP ID: 153000020

FMP Description

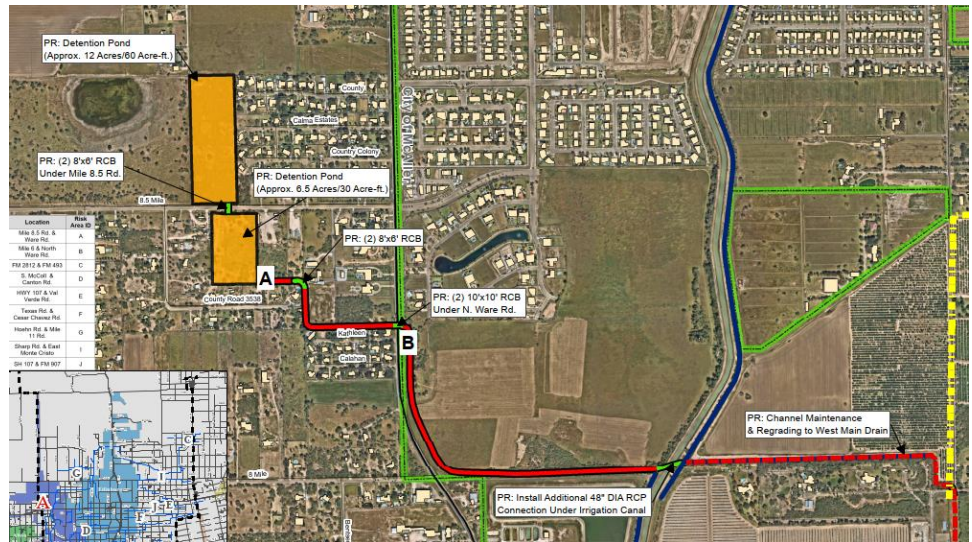
Approximately 1 mile of proposed channel improvements. Proposed culverts. Proposed Detention Ponds with pond north of Mile 8.5 Rd. to collect runoff from the west and has an approximate footprint of 12 acres and storage capacity of 60 acre-ft and will outfall south towards the pond south of Mile 8.5 Rd.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110279
HUC 12	121102080400, 121102070100, 121102080200
Study Area (sq. mi.)	N/A



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Project Costs

Total Cost:	\$19,899,000	Study Sponsor:	Hidalgo County Precinct 4
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	Hidalgo County Precinct 4
Time to complete?		Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

- Yes No

Precinct 4 MDP - Risk Area B at Mile 6 & North Ware Rd.

FMP ID: 153000021

FMP Description

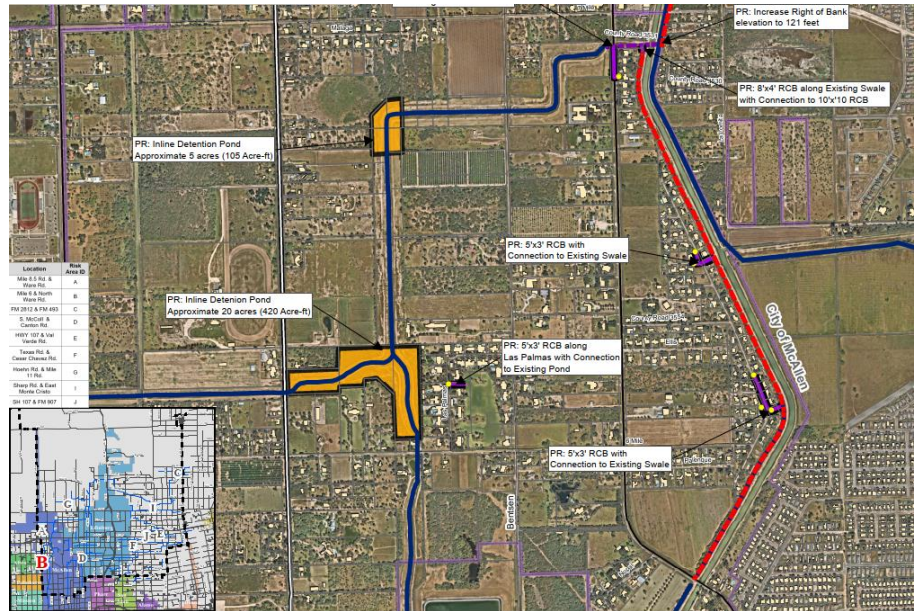
Regional Detention Facilities with a pond footprint of 25 acres along the Existing HCDD1 West Main Drain. Storm Drain and Local Drainage Improvements. Channel maintenance.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110280
HUC 12	121102080400, 121102070100, 121102080200, 121102080200
Study Area (sq. mi.)	N/A



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Project Costs

Total Cost:	\$27,175,500	Study Sponsor:	Hidalgo County Precinct 4
Non-recurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	Hidalgo County Precinct 4
Time to complete?		Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Funding Dedicated? Yes No (Potential) Source of Funding FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Precinct 4 MDP - Risk Area C at FM 2812 & FM 493

FMP ID: 153000022

FMP Description

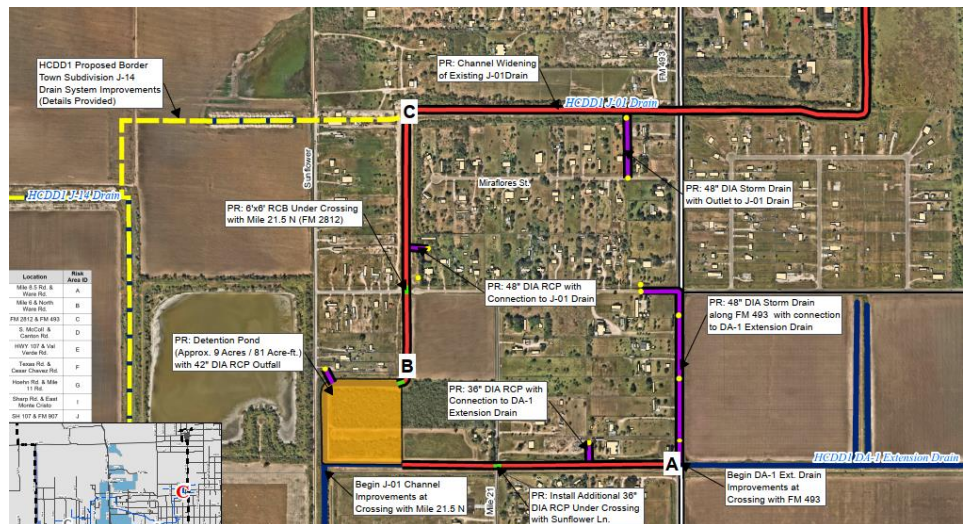
Channel Improvements (Widening & Regrading) to Existing J-01 Drain with approximately 1.5 miles of proposed improvements. Channel Improvements (Channel Maintenance & Flowline Regrading) to Existing DA-1 Ext. Drain with approximately 0.4 miles of proposed improvements. Proposed detention pond will have an approximate footprint of 9 acres and storage capacity of 90 acre-ft. Grate inlets & proposed storm drain channel maintenance & debris removal.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110281
HUC 12	121102080400, 121102070100, 121102080200, 121102080200
Study Area (sq. mi.)	N/A



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding: # of structures inundated	
Population at Risk		Miles inundated?	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>		

Notes:

Project Costs

Total Cost:	\$7,887,000	Study Sponsor:	Hidalgo County Precinct 4
Non-recurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	Hidalgo County Precinct 4

Time to complete? Included in a Hazard Mitigation Action Plan or other plan? (Potential) Source of Funding Yes No
 Funding Dedicated? Yes No FIF, local

Have the flood risk and flood reduction impacts been evaluated?

Have the flood risk and flood reduction impacts been evaluated? Yes No
 Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
 Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
 Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
 Does the Project provide a Water Supply Benefit? Yes No
 Has all the ROW been acquired? Yes No
 Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Precinct 4 MDP - Risk Area D at S. McColl & Canton Rd.

FMP ID: 153000023

FMP Description

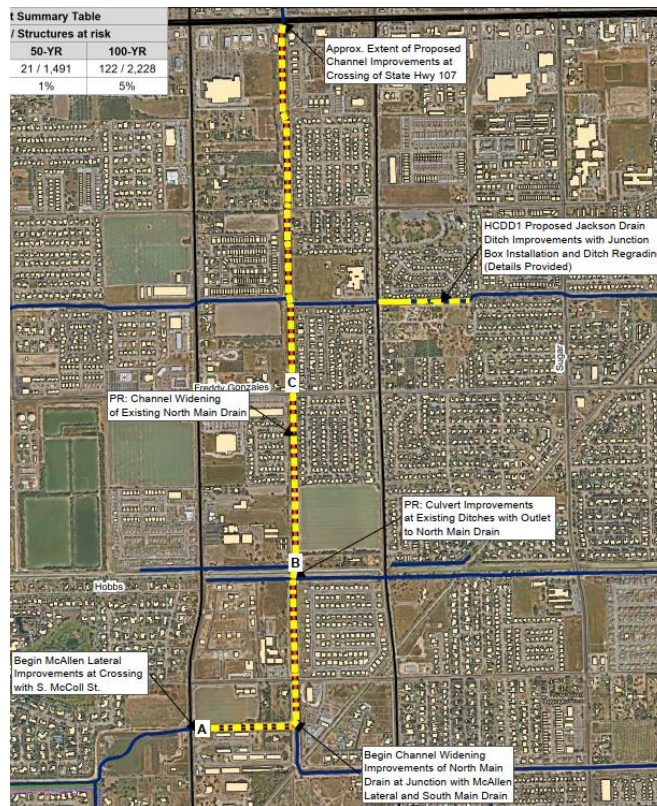
Channel Improvements (Widening & Regrading) to Existing McAllen Lateral & North Main Drain with approximately 2.25 miles of proposed improvements from S McColl St. to State Highway 107. Crossings at W Canton Rd., W Freddy Gonzalez Dr., and W Sprague St. were all evaluated up to the 25-year design storm criteria for upsizing evaluation.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110282
HUC 12	121102080400, 121102070100, 121102080200, 121102080200
Study Area (sq. mi.)	N/A



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No
 Population at Risk
 Roadways flooded Yes No
 Critical Facilities Impacted Yes No
 Notes:

Miles inundated? Agricultural Land impacted Yes No

Project Costs

Total Cost: \$6,358,000
 Non-recurring Non-capital Cost (include in Total above):
 Estimated year to start:
 Time to complete?

Study Sponsor: Hidalgo County Precinct 4
These are one-time costs for program development, education campaign, and non-engineering study costs.
 Entity with Oversight: Hidalgo County Precinct 4
 Included in a Hazard Mitigation: Yes No

Funding Dedicated? Yes No Action Plan or other plan? (Potential) Source of Funding FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Precinct 4 MDP - Risk Area E at Hwy 107 & Val Verde Rd.

FMP ID: 153000024

FMP Description

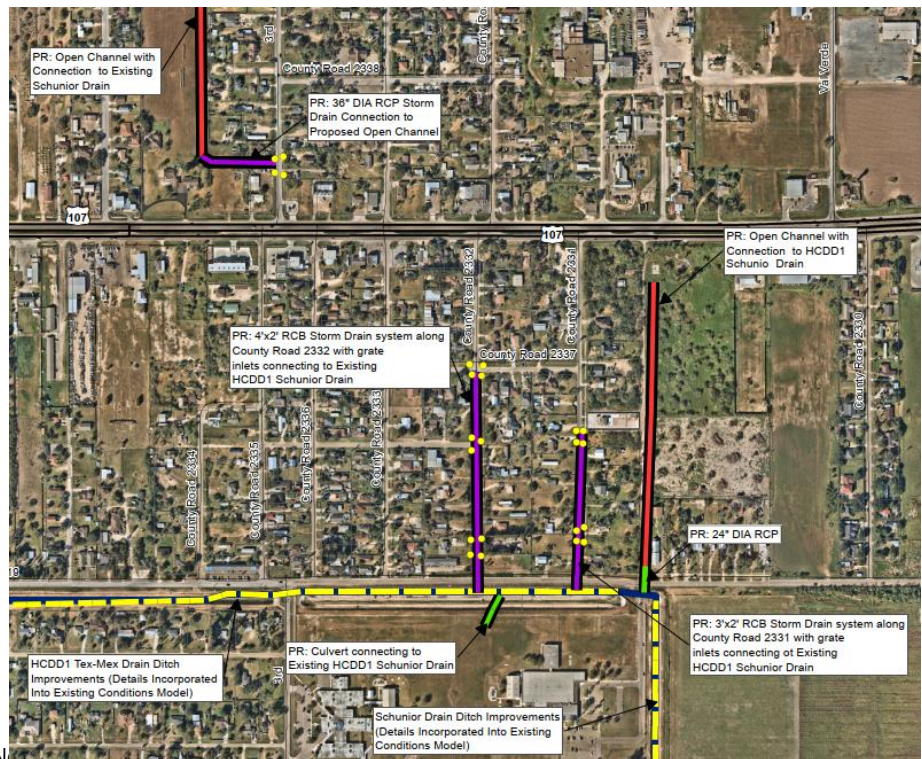
Channel Improvements with approximately 0.3 miles of proposed improvements. Proposed detention pond north of Tex-Mex Rd. and east of S 87th St. has an approximate footprint of 4.25 acres and capacity of 20 acre-ft. Grate Inlets and Proposed Storm Drain 5'x5' grate inlets spaced along every 500' of storm drain with a 4'x2' RCB along S 85th St.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110283
HUC 12	121102080400, 121102070100, 121102080200, 121102080200
Study Area (sq. mi.)	N/A



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	# of structures inundated	
Population at Risk		Miles inundated?	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>		

Notes:

Project Costs

Total Cost:	\$4,983,000	Study Sponsor:	Hidalgo County Precinct 4
Non-recurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	Hidalgo County Precinct 4
Time to complete?		Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Funding Dedicated? Yes No Action Plan or other plan? (Potential) Source of Funding FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Precinct 4 MDP - Risk Area F at Texas Rd. & Cesar Chavez Rd.

FMP ID: 153000025

FMP Description

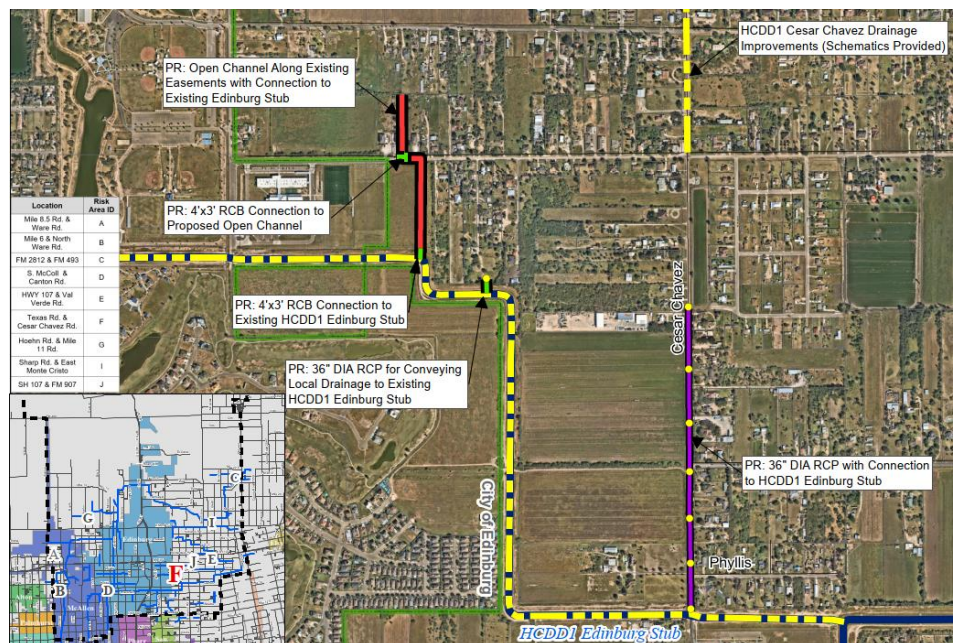
Channel Improvements with approximately 0.6 miles of proposed improvements. Grate Inlets and Proposed Storm Drain with grate inlets in sag spaced along every 500' tying into a 42" RCP along Cesar Chavez Road starting at just south of Texas Rd to the Curry Drain. Culvert Improvements with connections between the proposed open channels and existing HCDD1 Edinburg Stub will require the installation of 4'x3' RCBs.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110284
HUC 12	121102080400, 121102070100, 121102080200, 121102080200
Study Area (sq. mi.)	N/A



Location	Risk Area ID
Mile 8.5 Rd. & Ware Rd.	A
Mile 6 & North Ware Rd.	B
FM 2012 & FM 493	C
S. McCab & Canton Rd.	D
Hwy 107 & Val Verde Rd.	E
Texas Rd. & Cesar Chavez Rd.	F
Healin Rd. & Mile 11 Rd.	G
Sharp Rd. & East Monte Cristo	I
SH 107 & FM 907	J

Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Project Costs

Total Cost:	\$7,920,000	Study Sponsor:	Hidalgo County Precinct 4
Non-recurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	Hidalgo County Precinct 4

Time to complete? Included in a Hazard Mitigation Action Plan or other plan? (Potential) Source of Funding Yes No
 Funding Dedicated? Yes No FIF, local

Have the flood risk and flood reduction impacts been evaluated?

Have the flood risk and flood reduction impacts been evaluated? Yes No
 Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
 Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
 Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
 Does the Project provide a Water Supply Benefit? Yes No
 Has all the ROW been acquired? Yes No
 Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Precinct 4 MDP - Risk Area G at Hoehn Rd. & Mile 11 Rd.

FMP ID: 153000026

FMP Description

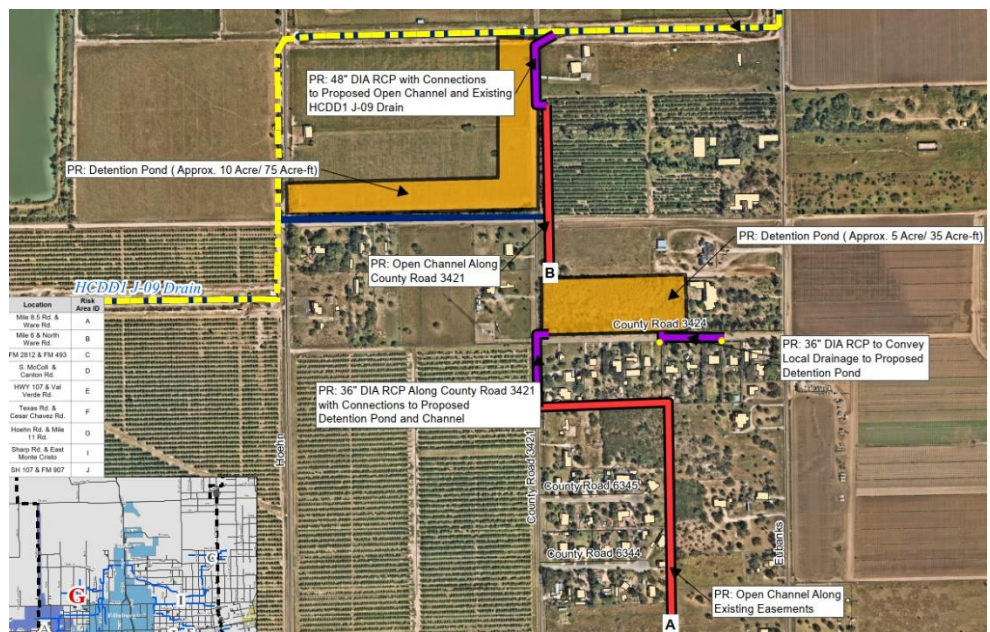
Channel Improvements with approximately 0.75 miles of proposed improvements. Proposed Pond north of County Road 3424 and west of County Road 3421 has an approximate footprint of 5 acres and capacity of 35 acre-ft. Gate Inlets and Proposed Storm Drain 5'x5' gate inlets will be located at the southwest corner of Eubanks and County Road 3424 with a connection to a 42" DIA RCP storm drain. Proposed culverts

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110285
HUC 12	121102080400, 121102070100, 121102080200, 121102080200
Study Area (sq. mi.)	N/A



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Project Costs

Total Cost:	\$6,061,000	Study Sponsor:	Hidalgo County Precinct 4
Non-recurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	Hidalgo County Precinct 4
Time to complete?		Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Funding Dedicated? Yes No Action Plan or other plan? (Potential) Source of Funding FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Precinct 4 MDP - Risk Area I at Sharp Rd. & E Monte Cristo Rd

FMP ID: 153000027

FMP Description

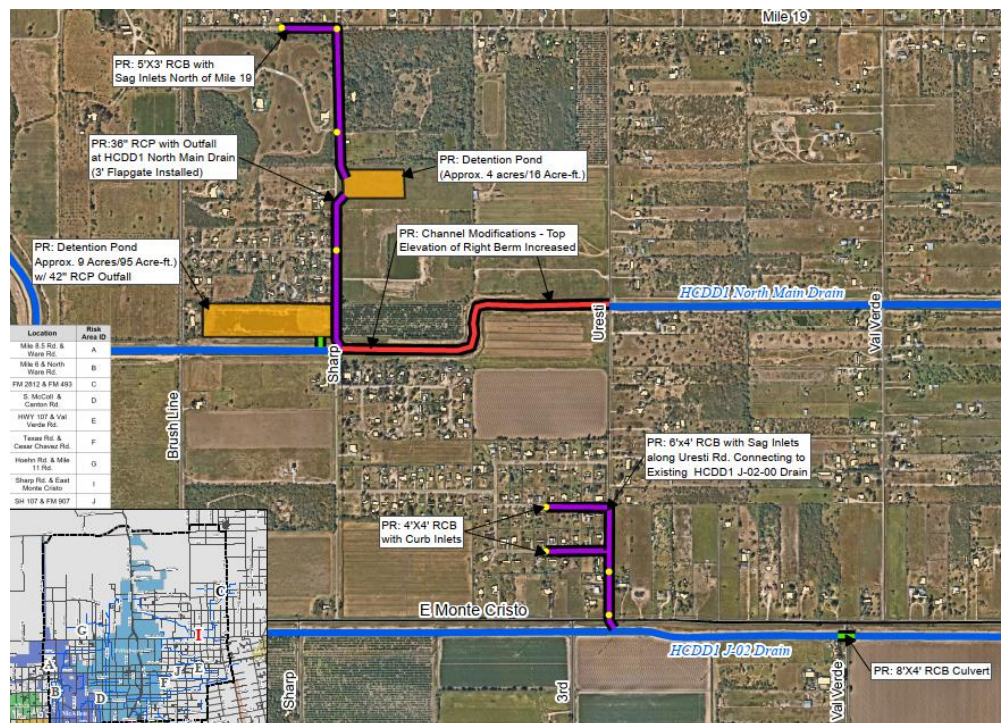
Inlets and proposed storm drain with Approximately 1,100' of 4'x4' RCB storm drain with curb inlets to be installed along Hendrix Dr. and Gaston Cr. with approximately 1,200' of 6'x4' RCB storm with grate and sag inlets along Uresti Rd. with connection to the HCDD1 J-02 Drain. Proposed installation of grate and sag inlets along Mile 19 Rd. (Phase Two) and proposed installation of grate and sag inlets along Sharp Rd. (Phase Two). Proposed Culverts Improvements (Phase One). Proposed detention pond with 9 acre footprint. Channel maintenance.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110286
HUC 12	121102080400, 121102070100, 121102080200, 121102080200
Study Area (sq. mi.)	N/A



Emergency Need

Yes No

Known Flood Risk

- | | | | |
|------------------------------|---|----------------------------|--|
| History of Flooding? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Frequency of flooding: | |
| Population at Risk | | # of structures inundated | |
| Roadways flooded | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Miles inundated? | |
| Critical Facilities Impacted | Yes <input type="checkbox"/> No <input type="checkbox"/> | Agricultural Land impacted | Yes <input type="checkbox"/> No <input type="checkbox"/> |
- Notes:

Project Costs

Total Cost:	\$5,995,000	Study Sponsor:	Hidalgo County Precinct 4
Non-recurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	Hidalgo County Precinct 4

Time to complete? Included in a Hazard Mitigation Action Plan or other plan? (Potential) Source of Funding Yes No
 Funding Dedicated? Yes No FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Precinct 4 MDP - Risk Area J at SH 107 & FM 907

FMP ID: 153000028

FMP Description

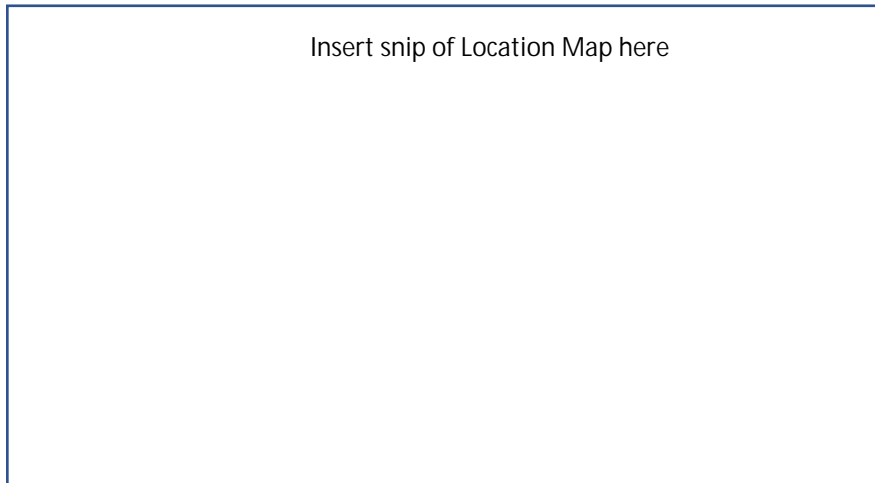
Channel Improvements (Widening & Regrading) to Existing HCDD1 "Y" drain with approximately 0.75 miles of proposed channel improvements beginning at Fresno Dr. and ending at E Curry Rd. Proposed Drainage Grate Inlets approximately 3,800' of storm drain to provide local drainage improvements north and west of existing HCDD1 "Y" Drain in two separate systems. Proposed culverts improvements. Proposed detention pond with a 2.7 acre footprint.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- Infrastructure

Project Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110207,
12110287
HUC 12 121102080400,
121102070100,
121102080200,
121102080200
Study Area (sq. mi.) N/A



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Project Costs

Total Cost: \$3,608,000 Study Sponsor: Hidalgo County Precinct 4
Non-reoccurring Non-capital Cost (include in Total above): *These are one-time costs for program development, education campaign, and non-engineering study costs.*
Estimated year to start: Entity with Oversight Hidalgo County Precinct 4

Time to complete? Included in a Hazard Mitigation Action Plan or other plan? (Potential) Source of Funding Yes No
 Funding Dedicated? Yes No FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Risk Area 11 Rancho Escondido

FMP ID: 153000029

FMP Description

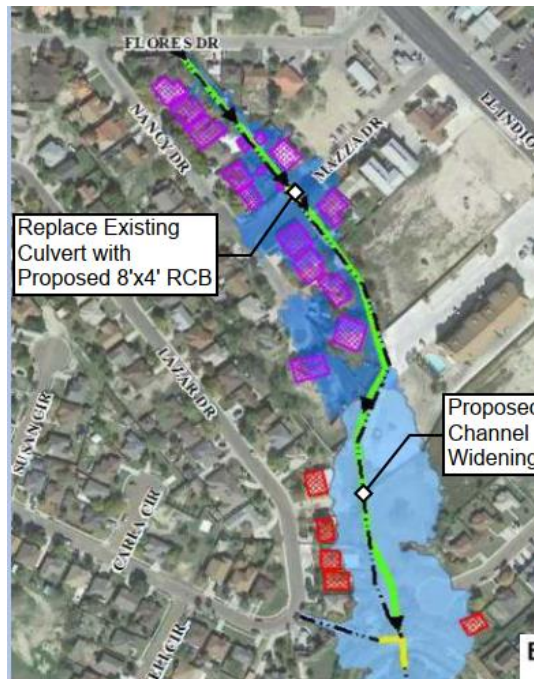
Project includes constructing 10'x2' U-shaped channel from Flores Drive to just south of Microtel Inn Suites, replacing existing culvert under Maza Drive with 1-8'x4' RCB, and installing curb inlet at cul-de-sac on Nancy Drive.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Maverick
HUC 8	13080001, 13080002
HUC 12	130800020703, 130800020702
Study Area (sq. mi.)	0.03



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Project Costs

Total Cost:	\$911,900	Study Sponsor:	City of Eagle Pass
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	City of Eagle Pass
Time to complete?		Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Funding Dedicated? Yes No Action Plan or other plan? (Potential) Source of Funding FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Risk Area 12 Fox Borough Drive

FMP ID: 153000030

FMP Description

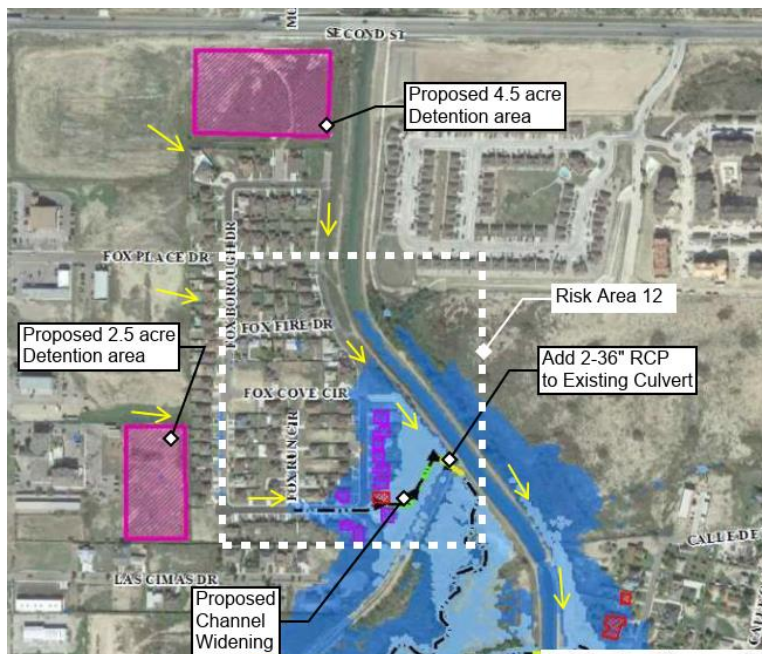
Project includes bypassing flow from inlet at PointLoma Drive and North Point Drive to the detention pond with 1 - 8'x4' RCB and Installing additional curb inlets on N. Point Drive and Silver Oak Circle.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Maverick
HUC 8	13080001, 13080002
HUC 12	130800020703, 130800020702
Study Area (sq. mi.)	0.05



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Project Costs

Total Cost:	\$1,185,800	Study Sponsor:	City of Eagle Pass
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	City of Eagle Pass
Time to complete?		Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Funding Dedicated? Yes No Action Plan or other plan? (Potential) Source of Funding FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Risk Area 13 Celle De Los Santos neighborhood. Additional culvert under irrigation canal.

FMP ID: 153000031

FMP Description

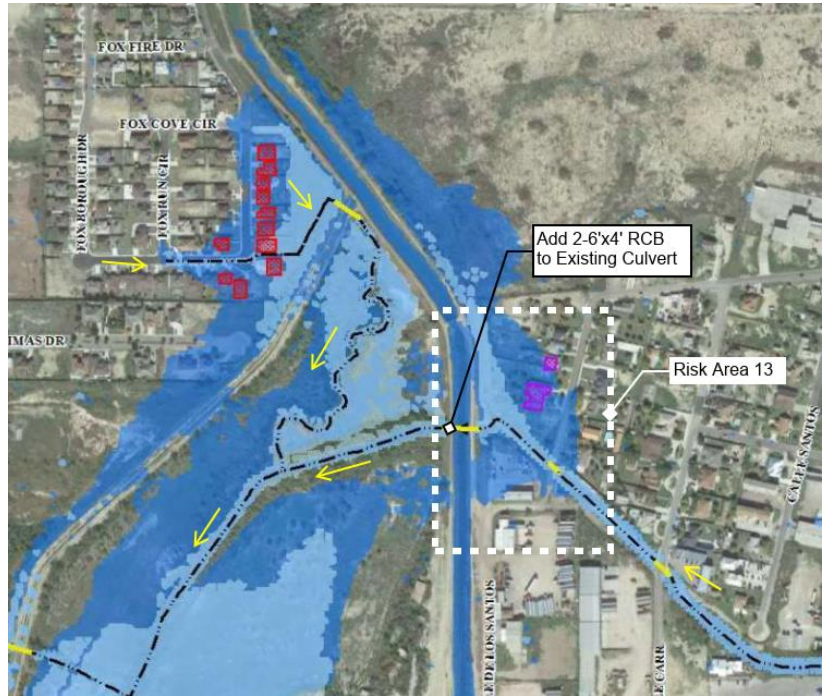
Project includes upgrading existing culvert crossing irrigation canal from 2-6'x4' RCB to 4-6'x4' RCB.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Maverick
HUC 8	13080001, 13080002
HUC 12	130800020703, 130800020702
Study Area (sq. mi.)	0.03



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Project Costs

Total Cost:	\$181,500	Study Sponsor:	City of Eagle Pass
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	City of Eagle Pass
Time to complete?		Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Funding Dedicated? Yes No Action Plan or other plan? (Potential) Source of Funding FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Risk Area 15 Trib 3 Detention at Main Street

FMP ID: 153000032

FMP Description

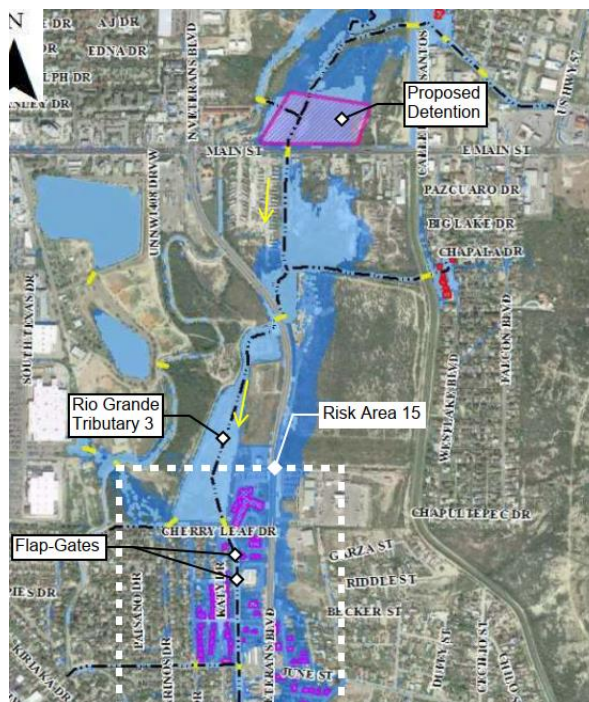
Project includes constructing 10 acre detention pond (29 ac-ft volume) along East Channel north of Highway 277 and installing flap-gates at flume outfalls on Omar Drive and Jana Drive, to prevent more frequent stormwater from backing up into the neighborhood on the west side of the channel.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Maverick
HUC 8	13080001, 13080002
HUC 12	130800020703, 130800020702
Study Area (sq. mi.)	0.05



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Project Costs

Total Cost:	\$828,300	Study Sponsor:	City of Eagle Pass
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	City of Eagle Pass
Time to complete?		Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Funding Dedicated? Yes No (Potential) Source of Funding FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

FMP ID: 153000033

Risk Area 2 Treasure Hills

FMP Description

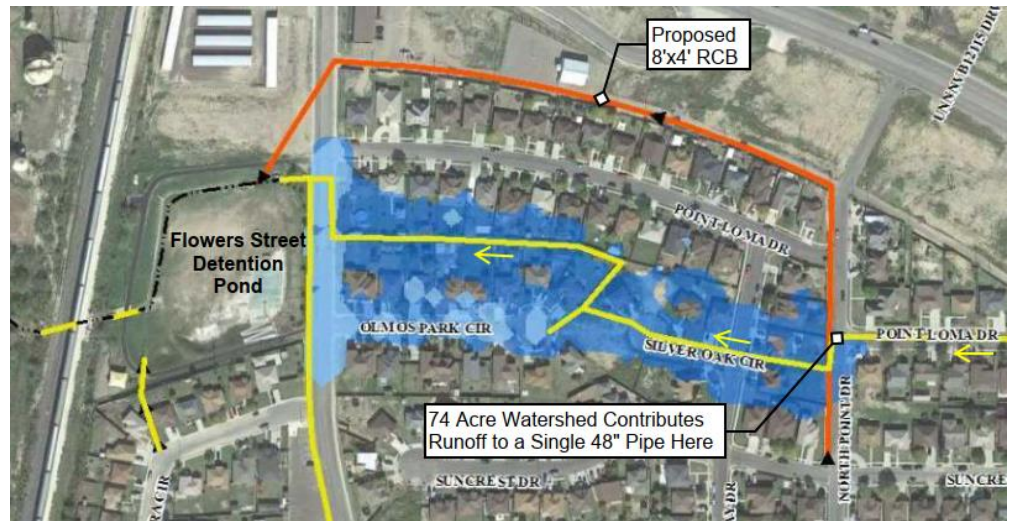
Project includes constructing a 4' deep trapezoidal concrete channel with 8' bottom width and 2:1 side slopes, from detention pond outfall to existing culverts.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Maverick
HUC 8	13080001, 13080002
HUC 12	130800020703, 130800020702
Study Area (sq. mi.)	0.06



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Project Costs

Total Cost:	\$597,300	Study Sponsor:	City of Eagle Pass
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	City of Eagle Pass
Time to complete?		Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Funding Dedicated? Yes No Action Plan or other plan? (Potential) Source of Funding FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Risk Area 3 Arrow Point Boulevard

FMP ID: 153000034

FMP Description

Project includes constructing small retaining wall at downstream of flume outfall to force flow towards Stone Way and constructing a 2' wide and 6" deep concrete flume from existing flume outfall to Stone Way.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Infrastructure

Project Are

City/ Cities
County/ Counties: Maverick
HUC 8: 13080001, 13080002
HUC 12: 130800020703, 130800020702
Study Area (sq. mi.): 0.02



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Project Costs

Total Cost:	\$52,800	Study Sponsor:	City of Eagle Pass
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	City of Eagle Pass
Time to complete?		Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Funding Dedicated? Yes No Action Plan or other plan? (Potential) Source of Funding FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Risk Area 4 Bibb & Misty Willow storm drain

FMP ID: 153000035

FMP Description

Project includes installing 6'x4' RCB along Misty Willow Drive from N Bibb Avenue to existing channel between N Bibb Avenue and Timber Valley and installing curb inlets on N Bibb Avenue and Misty Willow Drive.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Maverick
HUC 8	13080001, 13080002
HUC 12	130800020703, 130800020702
Study Area (sq. mi.)	0.02



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Project Costs

Total Cost:	\$316,800	Study Sponsor:	City of Eagle Pass
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	City of Eagle Pass
Time to complete?		Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Funding Dedicated? Yes No Action Plan or other plan? (Potential) Source of Funding FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Risk Area 5 Debona Drive

FMP ID: 153000036

FMP Description

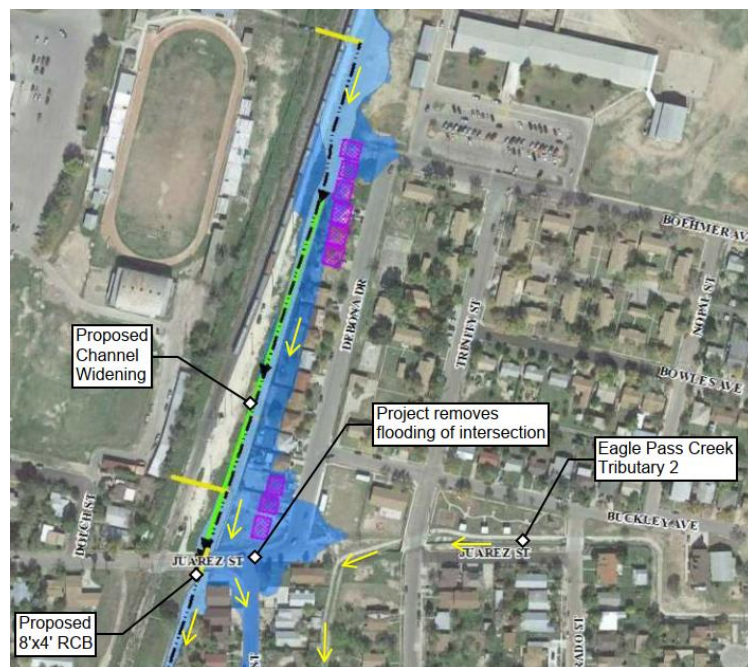
Project includes constructing a 5' deep trapezoidal channel approximately 30 feet wide with 3:1 side slopes and a 5' concrete pilot channel, replacing Juarez Street culvert with 8'x4' box culvert, and realigning existing channel to provide additional distance from homes.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Maverick
HUC 8	13080001, 13080002
HUC 12	130800020703, 130800020702
Study Area (sq. mi.)	0.02



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Project Costs

Total Cost:	\$359,700	Study Sponsor:	City of Eagle Pass
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	City of Eagle Pass
Time to complete?		Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Funding Dedicated? Yes No (Potential) Source of Funding FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Risk Area 6 Trib 2 bypass & detention at Eagle Pass High School fields

FMP ID: 153000037

FMP Description

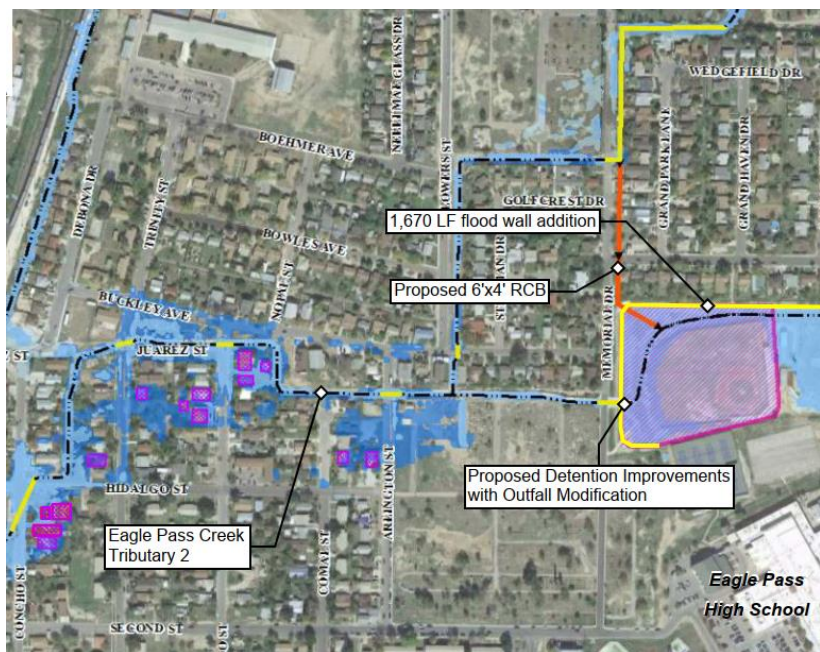
Project includes bypassing flow from Golfcrest Drive to the detention pond with 1-6'x4', RCB Modifying outfall structure from 2-5'x3' RCB to 1-5'x3' RCB, and Lowering existing baseball field by 3 ft to provide an additional 30 ac-ft of storage.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Maverick
HUC 8	13080001, 13080002
HUC 12	130800020703, 130800020702
Study Area (sq. mi.)	0.10



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Project Costs

Total Cost:	\$957,000	Study Sponsor:	City of Eagle Pass
Non-recurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	City of Eagle Pass
Time to complete?		Included in a Hazard Mitigation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Funding Dedicated? Yes No Action Plan or other plan? (Potential) Source of Funding FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Risk Area 8 Tributary 2 channel widening near Alexander Drive

FMP ID: 153000038

FMP Description

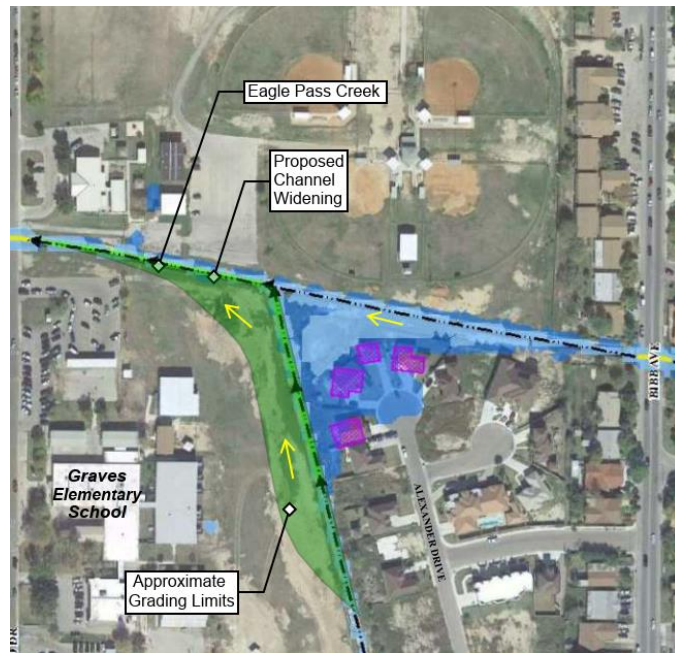
Project includes constructing a 3' deep trapezoidal channel with a 76' bottom width with 4:1 side slopes from Graves Elementary School to the confluence of existing channels and constructing a 4' deep trapezoidal channel with a 11' bottom width with 4:1 side slopes from confluence of existing channels to existing culvert at Kelso Drive.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Maverick
HUC 8	13080001, 13080002
HUC 12	130800020703, 130800020702
Study Area (sq. mi.)	0.04



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>

Notes:

Project Costs

Total Cost:	\$80,300	Study Sponsor:	City of Eagle Pass
Non-recurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	City of Eagle Pass
Time to complete?		Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

- Yes No

Alton MDP - North Inspiration Road and West St. Jude Avenue

FMP ID: 153000039

FMP Description

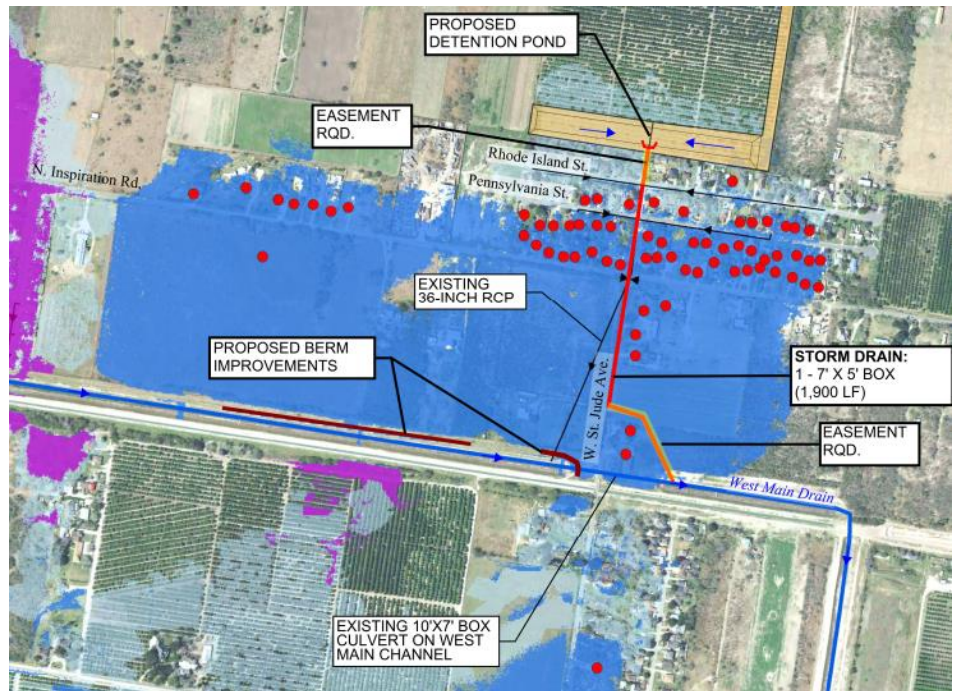
Upsize The Storm Drain Under West St. Jude Avenue. Trunk Line Will Consist Of 1900 Lf Of A Single 7'X5' Rcb Sloped At 0.5% From The Area Just West Of The Neighborhood On W. St. Jude Avenue To The West Main Drain Channel, Downstream (North) Of The Existing 10'X7' Box Culvert. Discharging At An Angle On The Northside Of St. Jude Avenue Will Improve Efficiency Where The Tailwater Of West Main Drain Is Much Lower. Small Detention Pond Will Be Required On The Westside Of The Houses On Rhode Island St To Capture Runoff From The 700 Acres Mentioned Earlier. Berm Improvements Are Recommended Along The West Main Drain Bank. Overall, 72 Existing Structures Will Be Removed From The 25 Yr. Floodplain.

Project Type

- Structural Project (retention/ detention, levees, channelization, dams, low water crossing, flow structures, reservoirs, storm drainage improvements, etc.)
- Nature Based (Structural) Projects (wetlands, bioswales, river restorations, etc.)
- No Structural Projects (Property easement acquisitions, elevation of structures, flood-proofing, early warn systems)
- Infrastructure

Project Area

City/ Cities	
County/ Counties	Hidalgo
HUC 8	12110207, 12110258
HUC 12	121102080100, 121102080300, 130900020311
Study Area (sq. mi.)	N/A



Emergency Need

Yes No

Known Flood Risk

History of Flooding?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
Population at Risk		# of structures inundated	
Roadways flooded	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Miles inundated?	
Critical Facilities Impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>	Agricultural Land impacted	Yes <input type="checkbox"/> No <input type="checkbox"/>
Notes:			

Project Costs

Total Cost:	\$2,609,200	Study Sponsor:	City of Alton
Non-recurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	City of Alton

Time to complete? Included in a Hazard Mitigation Action Plan or other plan? (Potential) Source of Funding Yes No
 Funding Dedicated? Yes No FIF, local

Have the flood risk and flood reduction impacts been evaluated?

- Have the flood risk and flood reduction impacts been evaluated? Yes No
- Does the project have any negative effects, per TWDB guidelines? Yes No Unknown
- Does the project have a Benefit Cost Ratio greater than 1? Yes No Unknown
- Does the project reduce flood risk for the 100-Yr flood event? Yes No Unknown
- Does the Project provide a Water Supply Benefit? Yes No
- Has all the ROW been acquired? Yes No
- Will permits or interlocal agreements be needed for this project? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

An aerial photograph of a football stadium, likely La Villa High School, which is completely inundated with floodwater. The stadium's red running track and blue football field are visible, with yard lines and yard numbers (10, 20, 30, 40, 50) clearly marked. The field features the word "CARDINALS" at the top end zone and "LA VILLA" at the bottom end zone, along with a large "LV" logo in the center. The surrounding area, including residential houses and green fields, is also flooded. The sky is overcast and grey.

FLOOD MANAGEMENT STRATEGIES (FMSs) FACT SHEETS

Bayview Action #19

FMS ID: 152000001

FMS Description

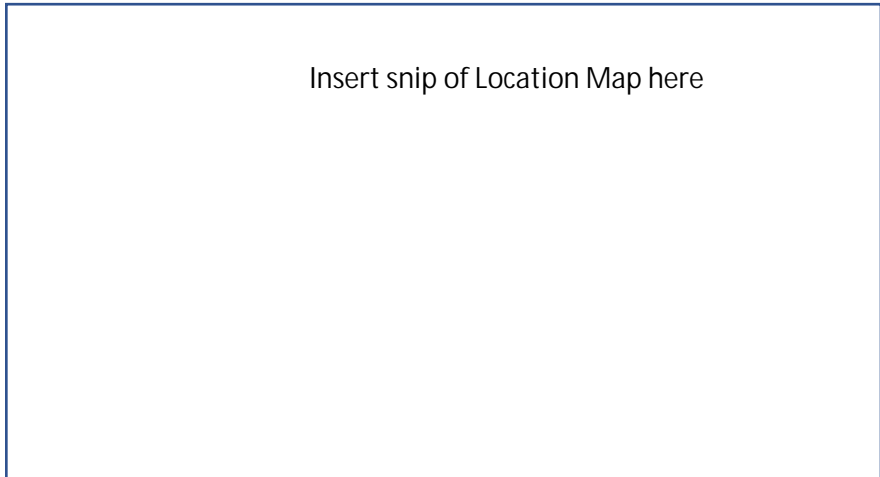
Upgrade the Town's website to include local information on hazards, risks, mitigation, protective actions, and applicable ordinances

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities Bayview
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$10,000	Study Sponsor:	Bayview
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2018	Entity with Oversight	Bayview
Time to complete?	2020	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	HMGP: Local Funding

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines?

Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Bayview Action #7

FMS ID: 152000002

FMS Description

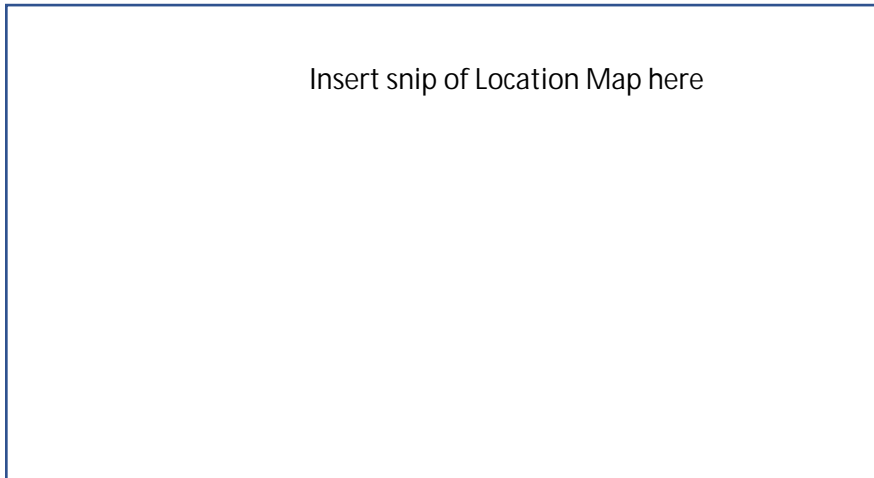
Approve and Adopt FEMA Flood Insurance Rate Maps

Strategy Type

- Education and Outreach Activities
 Regulatory and Guidance
 Flood Preparedness Programs
 Protected Areas
 Development Standards
 Other:

Strategy Area

City/ Cities Bayview
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$1,000	Study Sponsor:	Bayview
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2019	Entity with Oversight	Bayview
Time to complete?	2021	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Local Funding

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Bayview Action #8

FMS ID: 152000003

FMS Description

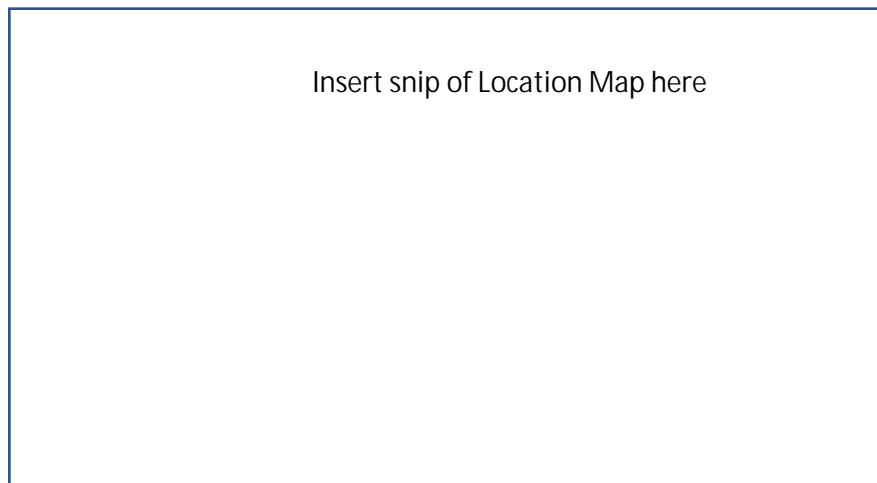
Develop cooperative agreement with state and county to address flood risk to roadways leading in and out of town – outside of jurisdictional boundaries

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities Bayview
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$1,000	Study Sponsor:	Bayview
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2018	Entity with Oversight	Bayview
Time to complete?	2020	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Local Funding

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Bayview Action #9

FMS ID: 152000004

FMS Description

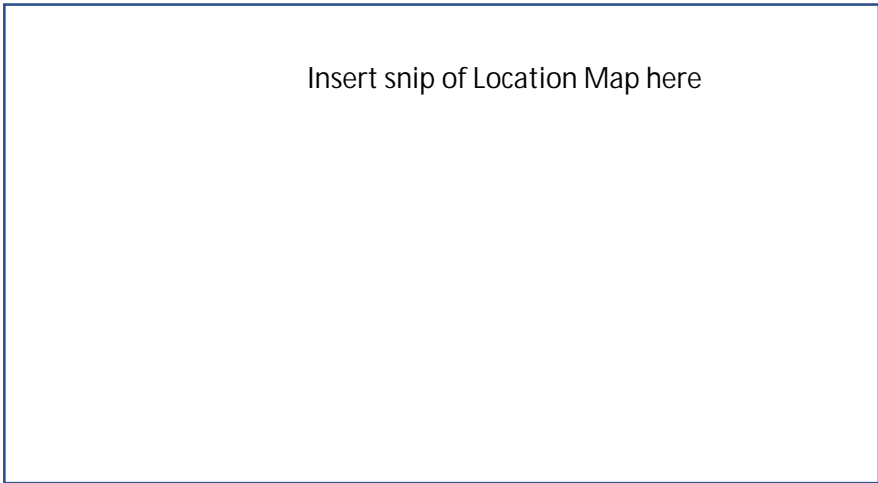
Participate in the National Flood Insurance Program

Strategy Type

- Education and Outreach Activities
- Regulatory and Guidance
- Flood Preparedness Programs
- Protected Areas
- Development Standards
- Other:

Strategy Area

City/ Cities Bayview
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$1,000	Study Sponsor:	Bayview
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2018	Entity with Oversight	Bayview
Time to complete?	2020	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Local Funding

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Indian Lake Action #2

FMS ID: 152000005

FMS Description

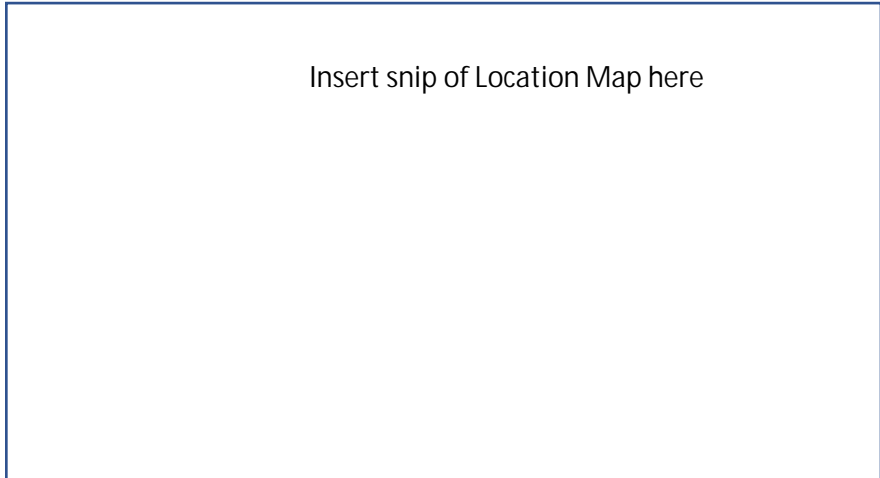
Educate property owners about residential mitigation measures for all natural hazards such as the need to elevate structures, implementing residential mitigation measures, install retaining walls, and avoid building in high hazard areas

Strategy Type

- Education and Outreach Activities
 Regulatory and Guidance
 Flood Preparedness Programs
 Protected Areas
 Development Standards
 Other:

Strategy Area

City/ Cities Indian Lake
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$500	Study Sponsor:	Indian Lake
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2020	Entity with Oversight	Indian Lake
Time to complete?	2022	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	General Fund; HMGP

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines?

Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
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- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

City Of Brownsville Action #2

FMS ID: 152000007

FMS Description

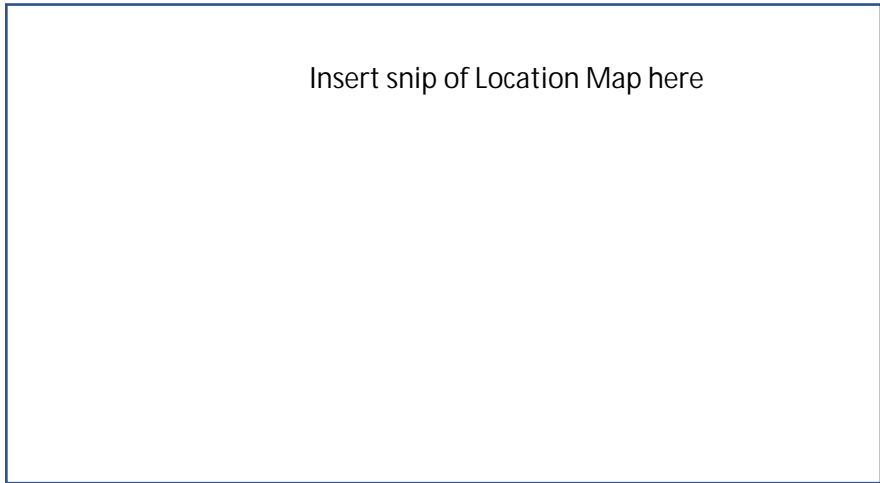
Join the Community Rating System program to reduce risk and flood insurance premiums to residents

Strategy Type

- Education and Outreach Activities
- Regulatory and Guidance
- Flood Preparedness Programs
- Protected Areas
- Development Standards
- Other:

Strategy Area

City/ Cities Brownsville
County/ Counties Cameron
HUC 8 12110208
HUC 12
Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Strategy Costs

Total Cost:	\$100,000	Study Sponsor:	Brownsville
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2015	Entity with Oversight	Brownsville
Time to complete?	2017	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Local Revenue, Storm Water Fee

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Indian Lake Action #11

FMS ID: 152000008

FMS Description

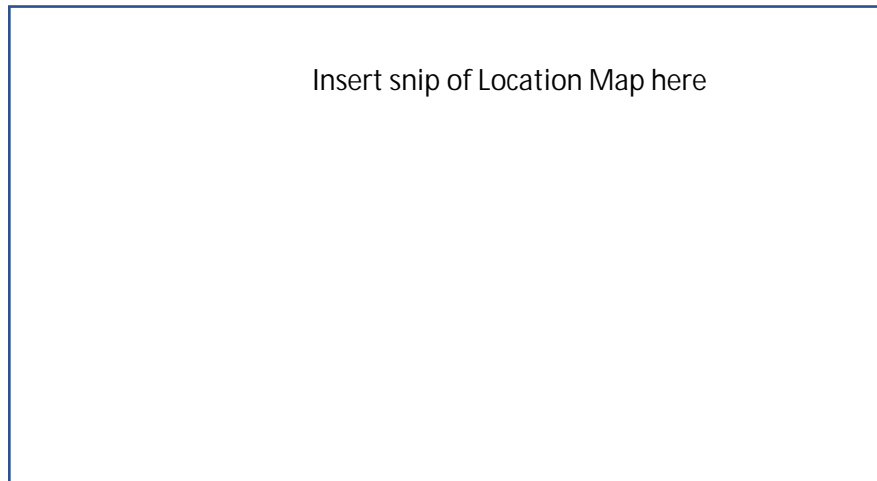
Adopt revised floodplain ordinance to include model ordinance language and higher NFIP standards such as freeboard

Strategy Type

- Education and Outreach Activities
- Regulatory and Guidance
- Flood Preparedness Programs
- Protected Areas
- Development Standards
- Other:

Strategy Area

City/ Cities Indian Lake
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$500	Study Sponsor:	Indian Lake
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2018	Entity with Oversight	Indian Lake
Time to complete?	2020	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	General Fund; HMGP

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Indian Lake Action #9

FMS ID: 152000009

FMS Description

Prepare and advertise local evacuation plan and procedures

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities Indian Lake
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)

Insert snip of Location Map here

Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$500	Study Sponsor:	Indian Lake
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2019	Entity with Oversight	Indian Lake
Time to complete?	2021	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	General Fund; HMGP; FEMA AFG

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Port Isabel Action #10

FMS ID: 152000010

FMS Description

Prepare and advertise local evacuation plan

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities Port Isabel
County/ Counties Cameron
HUC 8 12110208
HUC 12
Study Area (sq. mi.)

Insert snip of Location Map here

Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Strategy Costs

Total Cost:	\$500	Study Sponsor:	Port Isabel
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2019	Entity with Oversight	Port Isabel
Time to complete?	2021	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	HMGP; General Funds; AFG

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Port Isabel Action #11

FMS ID: 152000011

FMS Description

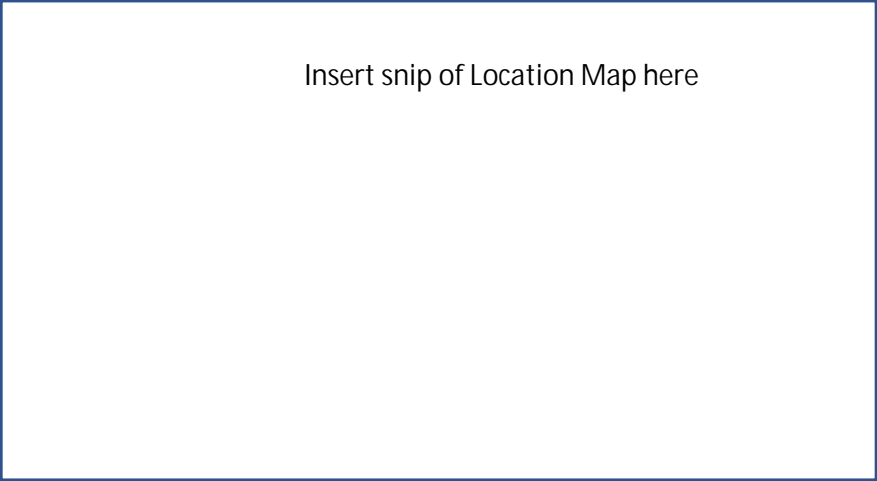
Update floodplain management ordinances to include higher standards required to join the CRS program; Join the CRS program upon adoption of ordinance

Strategy Type

- Education and Outreach Activities
- Regulatory and Guidance
- Flood Preparedness Programs
- Protected Areas
- Development Standards
- Other:

Strategy Area

City/ Cities Port Isabel
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$500	Study Sponsor:	Port Isabel
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2018	Entity with Oversight	Port Isabel
Time to complete?	2020	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	HMGP; General Funds

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Port Isabel Action #12

FMS ID: 152000012

FMS Description

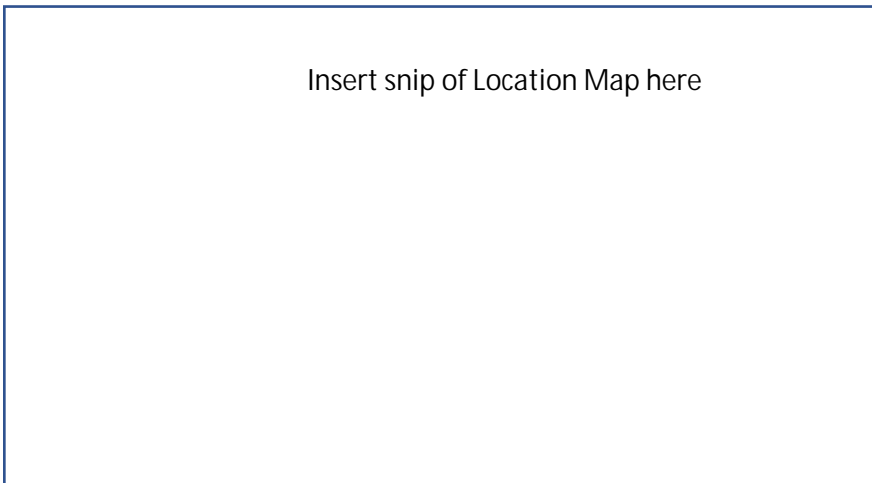
Adopt NFIP model ordinance with higher floodplain standards

Strategy Type

- Education and Outreach Activities
- Regulatory and Guidance
- Flood Preparedness Programs
- Protected Areas
- Development Standards
- Other:

Strategy Area

City/ Cities Port Isabel
County/ Counties Cameron
HUC 8 12110208
HUC 12
Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Strategy Costs

Total Cost:	\$500	Study Sponsor:	Port Isabel
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2018	Entity with Oversight	Port Isabel
Time to complete?	2020	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	HMGP; General Funds

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Port Isabel Action #21

FMS ID: 152000013

FMS Description

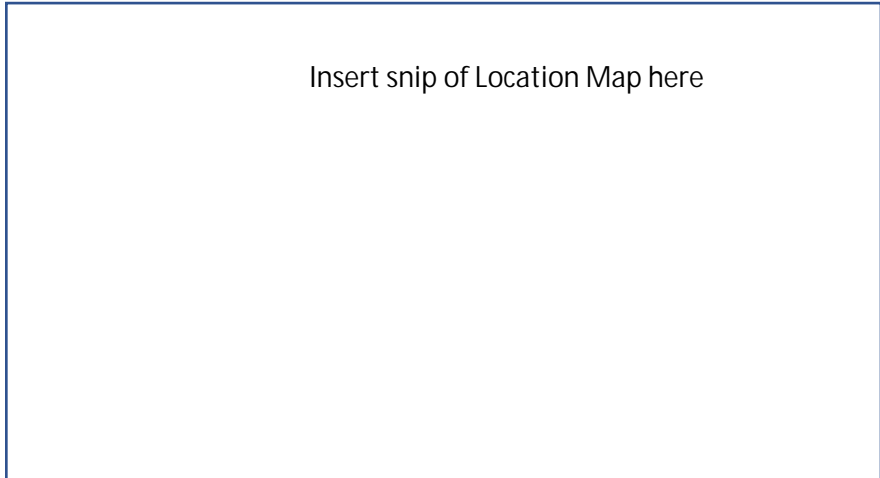
Use the internet and social media to warn citizens of disasters and extreme weather on a regular basis as well as how to prepare for such events and mitigate damages

Strategy Type

- Education and Outreach Activities
 Regulatory and Guidance
 Flood Preparedness Programs
 Protected Areas
 Development Standards
 Other:

Strategy Area

City/ Cities Port Isabel
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$500	Study Sponsor:	Port Isabel
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2018	Entity with Oversight	Port Isabel
Time to complete?	2020	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	HMGP; General Funds

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Primera Action #10

FMS ID: 152000016

FMS Description

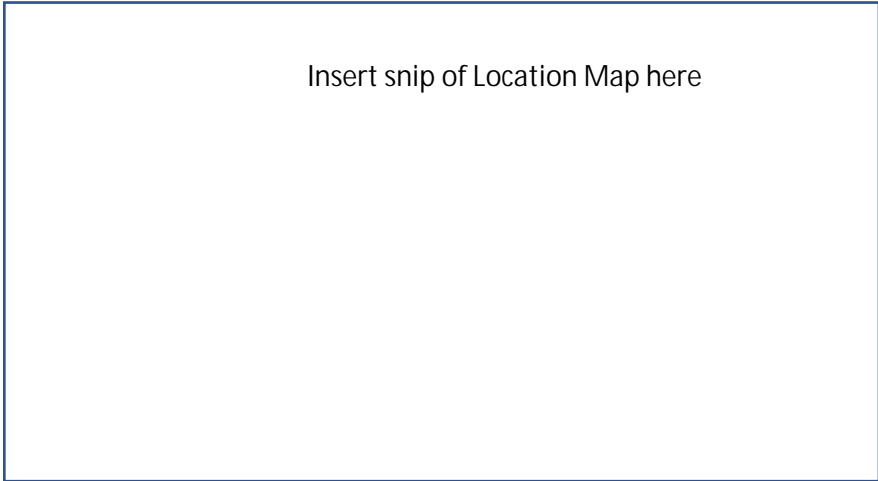
Adopt higher floodplain standards such as freeboard and cumulative substantial damage

Strategy Type

- Education and Outreach Activities
- Regulatory and Guidance
- Flood Preparedness Programs
- Protected Areas
- Development Standards
- Other:

Strategy Area

City/ Cities Primera
County/ Counties Cameron
HUC 8 12110208
HUC 12
Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Strategy Costs

Total Cost:	\$5,000	Study Sponsor:	Primera
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2019	Entity with Oversight	Primera
Time to complete?	2021	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Local Funds; HMGP

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Primera Action #8

FMS ID: 152000017

FMS Description

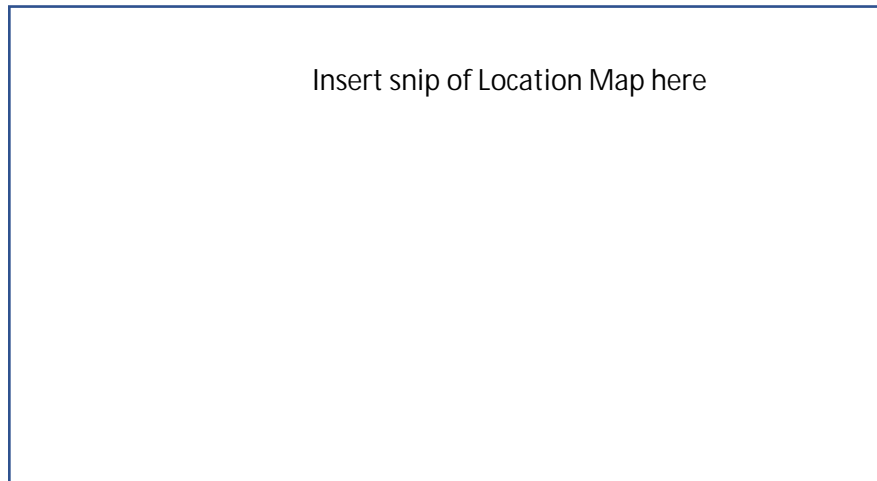
Implement early warning system to new areas of the jurisdiction to alert residents of impending severe weather

Strategy Type

- Education and Outreach Activities
 Regulatory and Guidance
 Flood Preparedness Programs
 Protected Areas
 Development Standards
 Other:

Strategy Area

City/ Cities Primera
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$75,000	Study Sponsor:	Primera
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2018	Entity with Oversight	Primera
Time to complete?	2020	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Local Funds; HMGP

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Rancho Viejo Action #3

FMS ID: 152000018

FMS Description

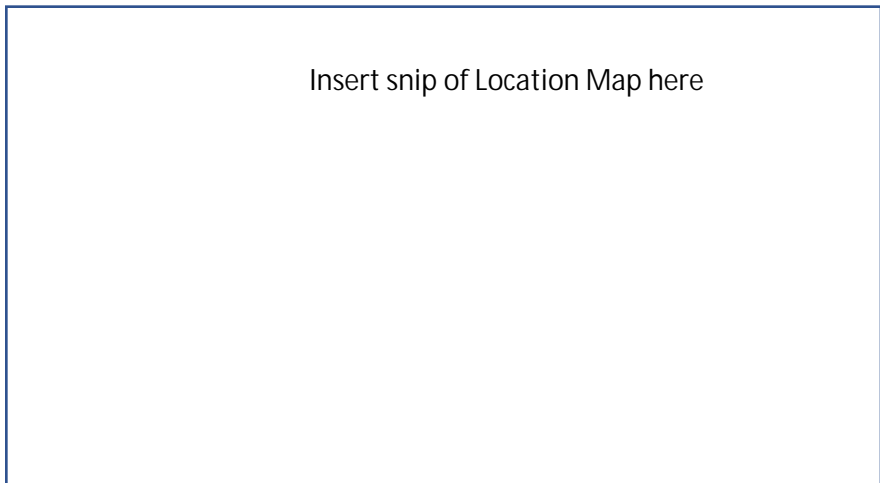
Adopt the International Building Code (IBC) and International Residential Code (IRC); revise and update regulatory floodplain maps; adopt higher standards in floodplain ordinances including freeboard, no-rise in the floodplain, cumulative substantial damage, etc.

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities Rancho Viejo
County/ Counties Cameron
HUC 8 12110208
HUC 12
Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Strategy Costs

Total Cost:	\$5,000	Study Sponsor:	Rancho Viejo
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2018	Entity with Oversight	Rancho Viejo
Time to complete?	2020	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Local Funds; HMGP

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Rancho Viejo Action #11

FMS ID: 152000019

FMS Description

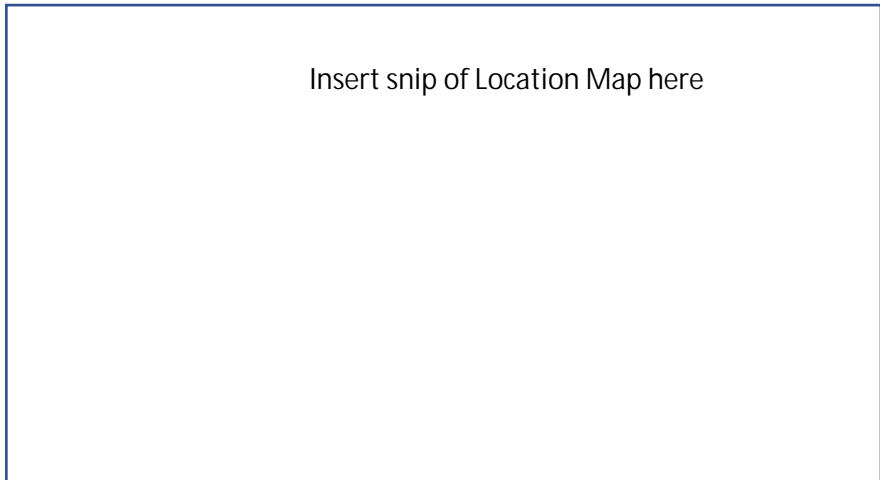
Update website with maps and information including StormReady data and links; Mail educational brochures to residents in hazard-prone areas on mitigation measures to reduce damages

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities Rancho Viejo
County/ Counties Cameron
HUC 8 12110208
HUC 12
Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Strategy Costs

Total Cost:	\$5,000	Study Sponsor:	Rancho Viejo
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2018	Entity with Oversight	Rancho Viejo
Time to complete?	2020	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Local Funds; HMGP

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Rio Hondo Action #4

FMS ID: 152000020

FMS Description

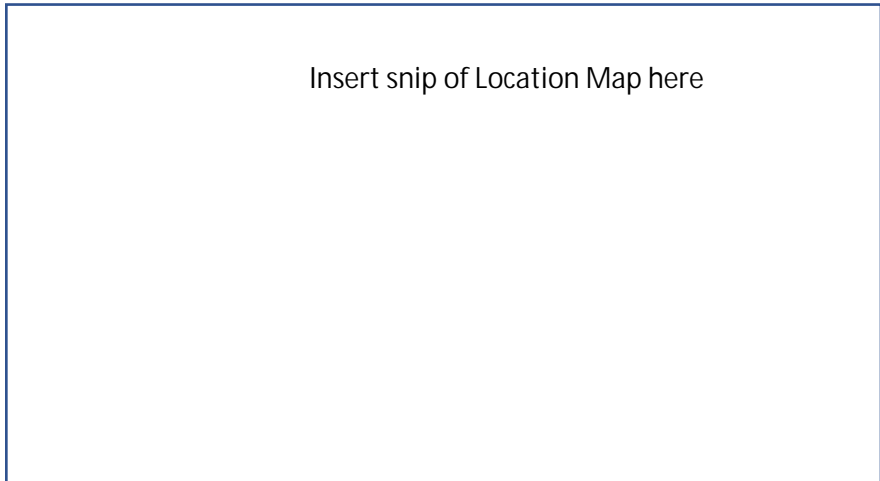
Adopt ASCE24-05 Flood Resistant Design and Construction to reduce flooding caused by Storm Surge

Strategy Type

- Education and Outreach Activities
 Regulatory and Guidance
 Flood Preparedness Programs
 Protected Areas
 Development Standards
 Other:

Strategy Area

City/ Cities Rio Hondo
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$2,000,000	Study Sponsor:	Rio Hondo
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2021	Entity with Oversight	Rio Hondo
Time to complete?	2023	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	USDA; City Funds; HMGP

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

San Benito Action #13

FMS ID: 152000021

FMS Description

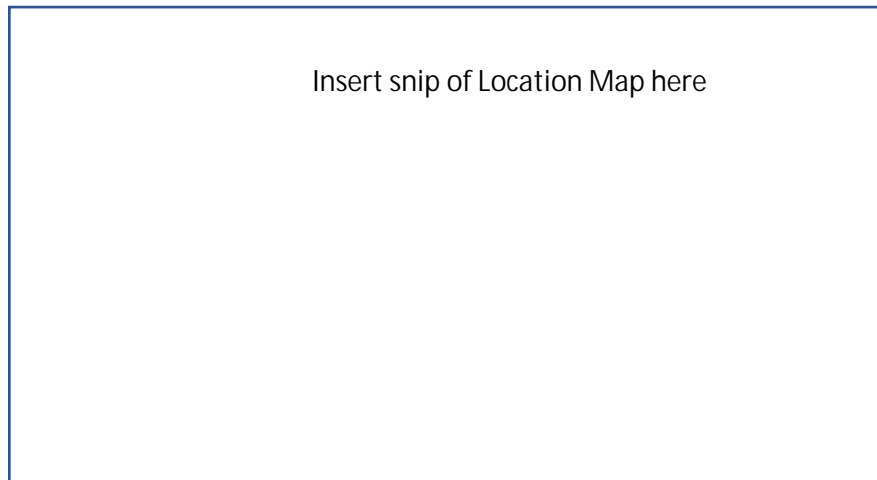
Adopt higher standards into the flood damage prevention ordinance to limit floodplain development and provide higher protection to structures in the floodplain

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities San Benito
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$10,000	Study Sponsor:	San Benito
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2020	Entity with Oversight	San Benito
Time to complete?	2022	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	CDBG; EDC; Pre-Disaster Mitigation Grant Program

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

South Padre Island Action #3

FMS ID: 152000023

FMS Description

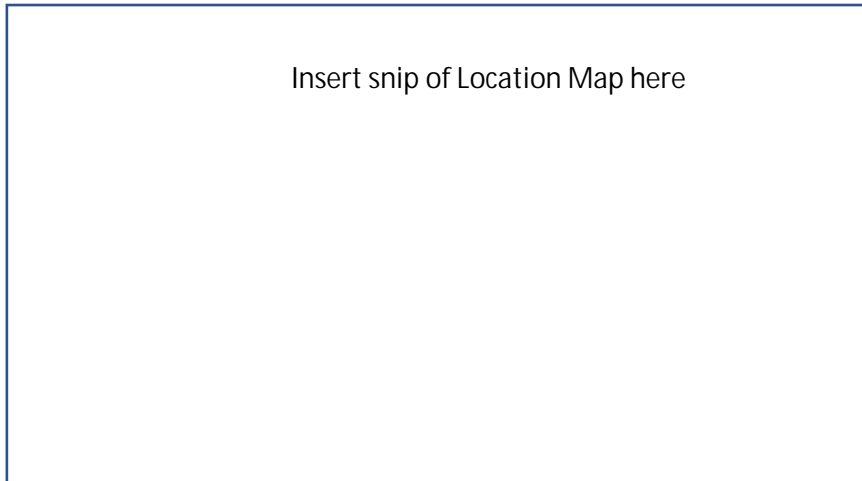
Adoption erosion control ordinance and prohibit development in high-hazard areas

Strategy Type

- Education and Outreach Activities
- Regulatory and Guidance
- Flood Preparedness Programs
- Protected Areas
- Development Standards
- Other:

Strategy Area

City/ Cities South Padre Island
 County/ Counties Cameron
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$5,000	Study Sponsor:	South Padre Island
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2018	Entity with Oversight	South Padre Island
Time to complete?	2020	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	HMGP; Local Funds

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

South Padre Island Action #13

FMS ID: 152000022

FMS Description

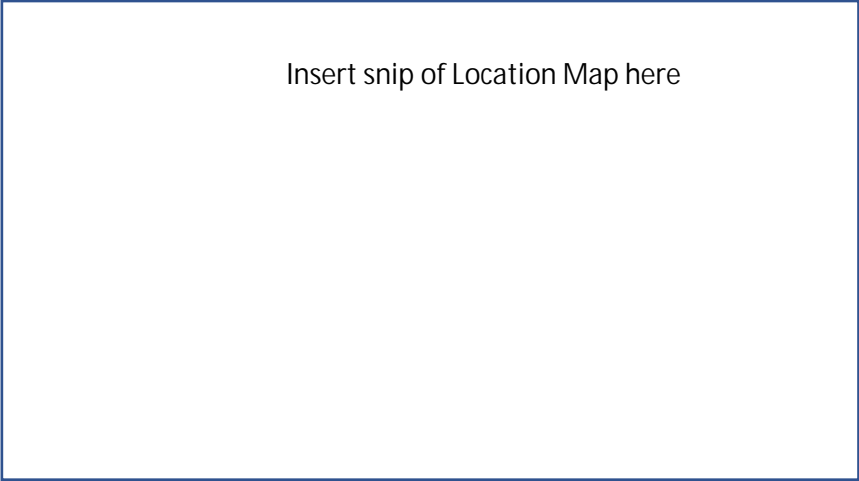
Adopt higher floodplain standards in local floodplain ordinance

Strategy Type

- Education and Outreach Activities
- Regulatory and Guidance
- Flood Preparedness Programs
- Protected Areas
- Development Standards
- Other:

Strategy Area

City/ Cities South Padre Island
County/ Counties Cameron
HUC 8 12110208
HUC 12
Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Strategy Costs

Total Cost:	\$5,000	Study Sponsor:	South Padre Island
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2021	Entity with Oversight	South Padre Island
Time to complete?	2023	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	HMGP; Local Funds

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Alamo #4-1.1

FMS ID: 152000024

FMS Description

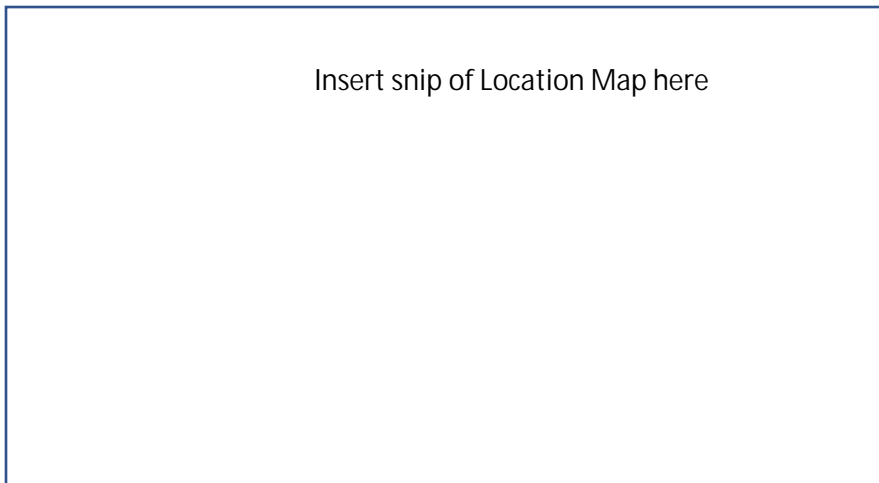
Alamo Pd Will Create A Working Evacuation List For Emergency Situations. Prioritize Flood Prone Areas

Strategy Type

- Education and Outreach Activities
- Regulatory and Guidance
- Flood Preparedness Programs
- Protected Areas
- Development Standards
- Other:

Strategy Area

City/ Cities Alamo
 County/ Counties Hidalgo
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$1,000	Study Sponsor:	Alamo
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2024	Entity with Oversight	Alamo
Time to complete?	2026	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Identify Grants; Police Department Budget

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Alamo #5-1.1

FMS ID: 152000025

FMS Description

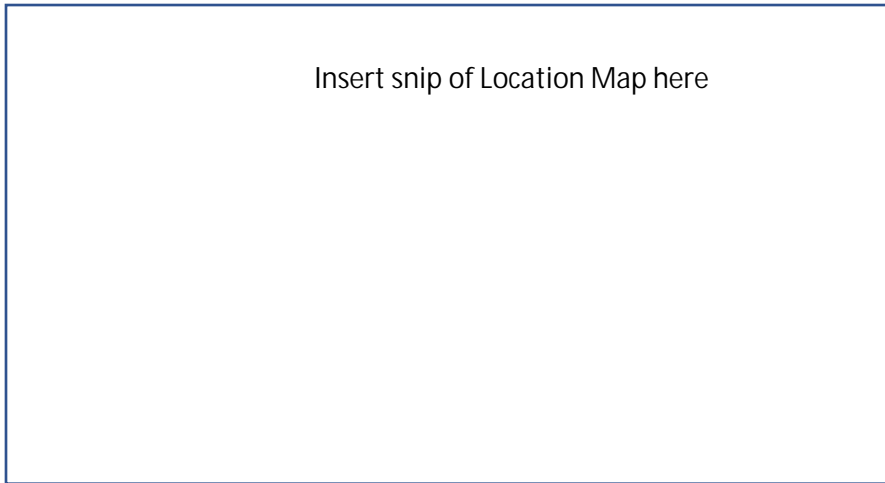
Implement Program To Provide Links To Weather Alerts And Departmental Phone Listings With Contact Personnel For Residents.

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities Alamo
 County/ Counties Hidalgo
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$2,000	Study Sponsor:	Alamo
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2023	Entity with Oversight	Alamo
Time to complete?	2025	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Jurisdiction Budget

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Edcouch #3-1.1

FMS ID: 152000026

FMS Description

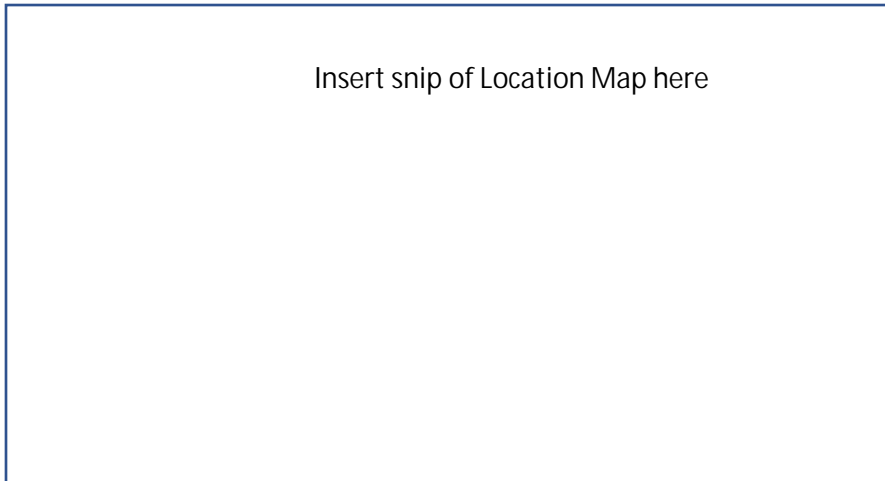
Complete Activities Required To Be A Nfip Participating Community

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities Edcouch
 County/ Counties Hidalgo
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$5,000	Study Sponsor:	Edcouch
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2021	Entity with Oversight	Edcouch
Time to complete?	2022	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FEMA

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Edcouch #5-1.1

FMS ID: 152000027

FMS Description

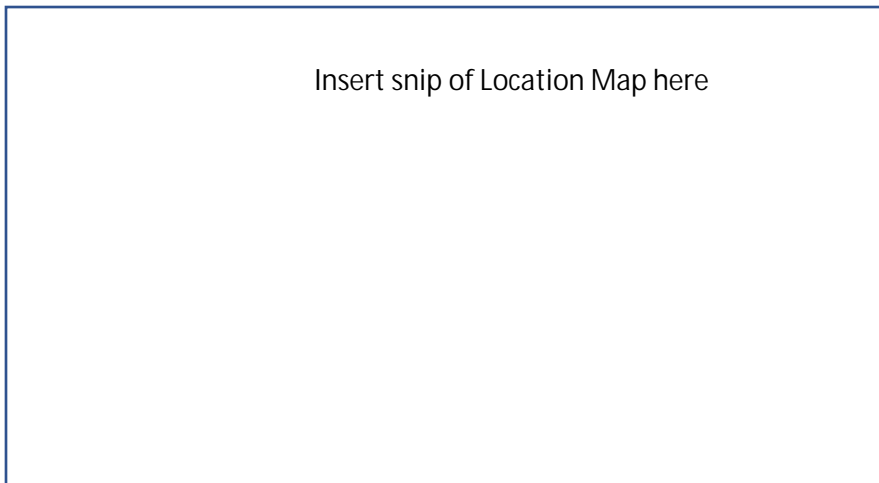
Implement Program To Provide Links To Weather Alerts And Departmental Phone Listings With Contact Personnel For Residents.

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities Edcouch
 County/ Counties Hidalgo
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$2,000	Study Sponsor:	Edcouch
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2021	Entity with Oversight	Edcouch
Time to complete?	2021	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Jurisdiction Budget

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Edcouch #7-1.1

FMS ID: 152000028

FMS Description

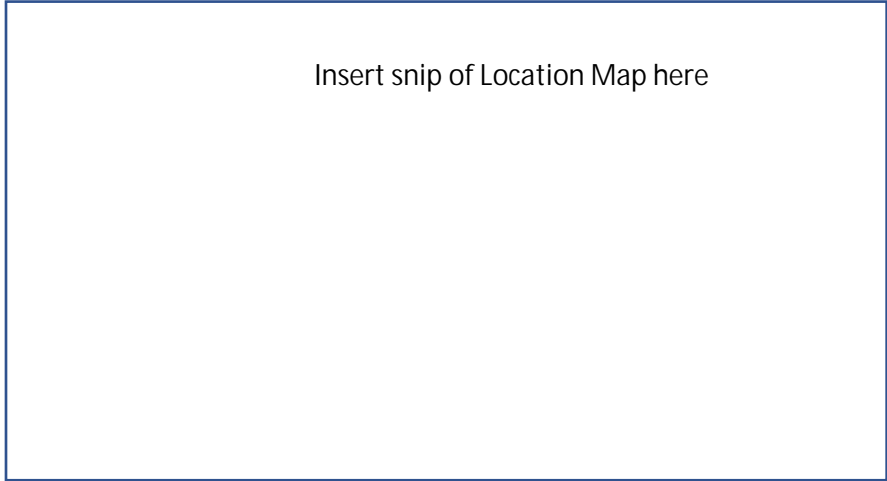
Develop Procedures For Mass Notifications To Citizens And Merchants During Natural Hazard Incident. Solicit Bids For System. Purchase Emergency Notification System And Install Distribute Information On New System And Conduct Training

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities Edcouch
 County/ Counties Hidalgo
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk Yes No # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$25,000	Study Sponsor:	Edcouch
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2021	Entity with Oversight	Edcouch
Time to complete?	2023	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Jurisdiction Budget

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Edinburg #1-1.2

FMS ID: 152000029

FMS Description

Implement Reverse 9-1-1 System

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities Edinburg
County/ Counties Hidalgo
HUC 8 12110208
HUC 12
Study Area (sq. mi.)

Insert snip of Location Map here

Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Strategy Costs

Total Cost:	\$250,000	Study Sponsor:	Edinburg
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2021	Entity with Oversight	Edinburg
Time to complete?	2022	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Federal, State, & Local

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Edinburg #7-1.1

FMS ID: 152000030

FMS Description

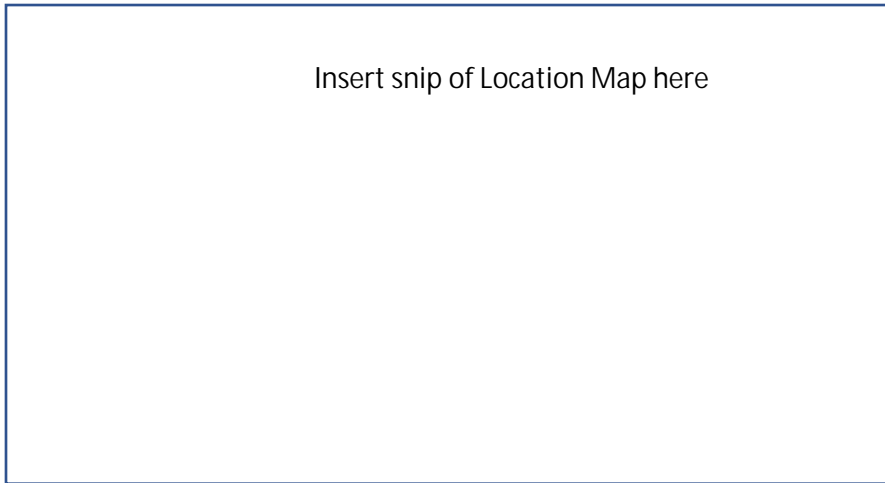
Implement Program To Provide Links To Weather Alerts And Departmental Phone Listings With Contact Personnel For Residents.

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities Edinburg
 County/ Counties Hidalgo
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$1,000	Study Sponsor:	Edinburg
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	Edinburg
Time to complete?	Completed	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Jurisdiction Budget

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Edinburg #9-1.2

FMS ID: 152000031

FMS Description

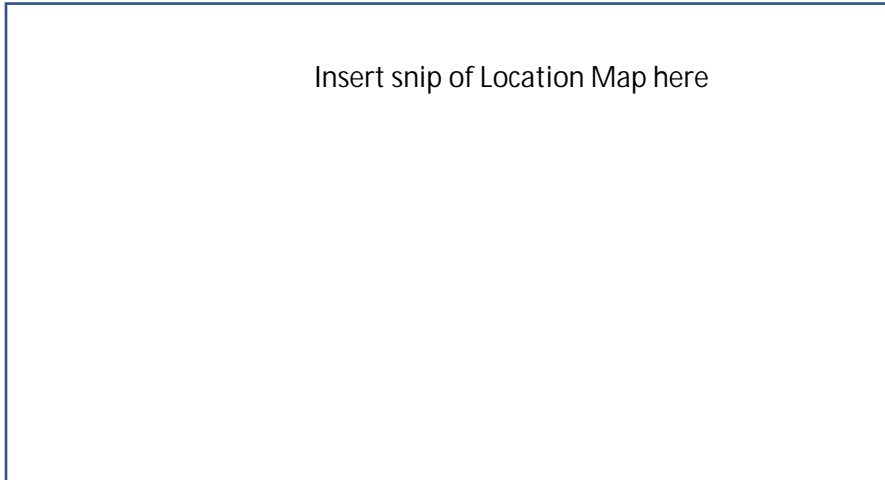
Develop Procedures For Mass Notifications To Citizens And Merchants During Natural Hazard Incident. Solicit Bids For System. Purchase Emergency Notification System And Install Distribute Information On New System And Conduct Training

Strategy Type

- Education and Outreach Activities
 Regulatory and Guidance
 Flood Preparedness Programs
 Protected Areas
 Development Standards
 Other:

Strategy Area

City/ Cities Edinburg
 County/ Counties Hidalgo
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk Yes No # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$31,000	Study Sponsor:	Edinburg
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	Edinburg
Time to complete?	Completed	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Jurisdiction Budget

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Hidalgo #5-1.1

FMS ID: 152000032

FMS Description

Implement Program To Provide Links To Weather Alerts And Departmental Phone Listings With Contact Personnel For Residents.

Strategy Type

- Education and Outreach Activities
 Regulatory and Guidance
 Flood Preparedness Programs
 Protected Areas
 Development Standards
 Other:

Strategy Area

City/ Cities Hidalgo
 County/ Counties Hidalgo
 HUC 8 12110207
 12110213
 HUC 12
 Study Area (sq. mi.)

Insert snip of Location Map here

Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No
 Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$5,000	Study Sponsor:	Hidalgo
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2022	Entity with Oversight	Hidalgo
Time to complete?	2023	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	N/A

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines?

Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Hidalgo County #11-1.2

FMS ID: 152000033

FMS Description

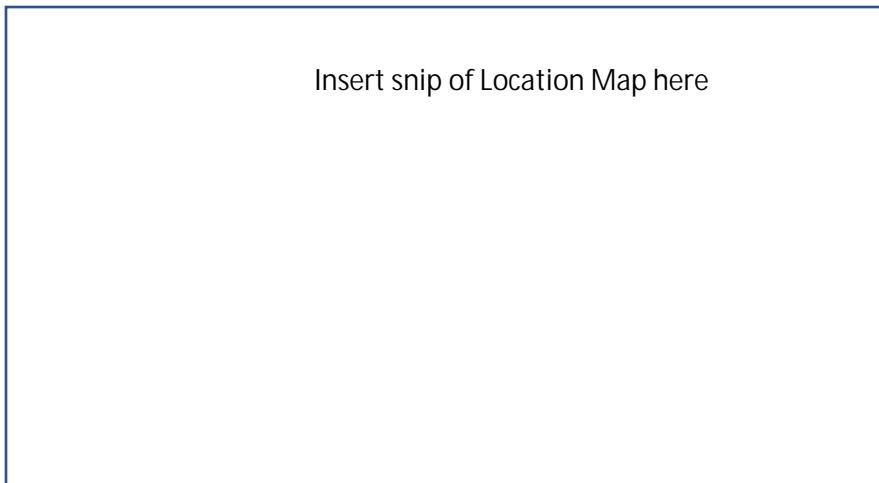
Implement An Inspection, Maintenance, And Enforcement Program To Ensure Continued Structural Integrity of Dams And Levees.

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110207
12110231
HUC 12
Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Strategy Costs

Total Cost:	\$10,000	Study Sponsor:	Hidalgo County
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2023	Entity with Oversight	Hidalgo County
Time to complete?	2025	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Jurisdiction Budget, Grants

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Hidalgo County #12-1.1

FMS ID: 152000034

FMS Description

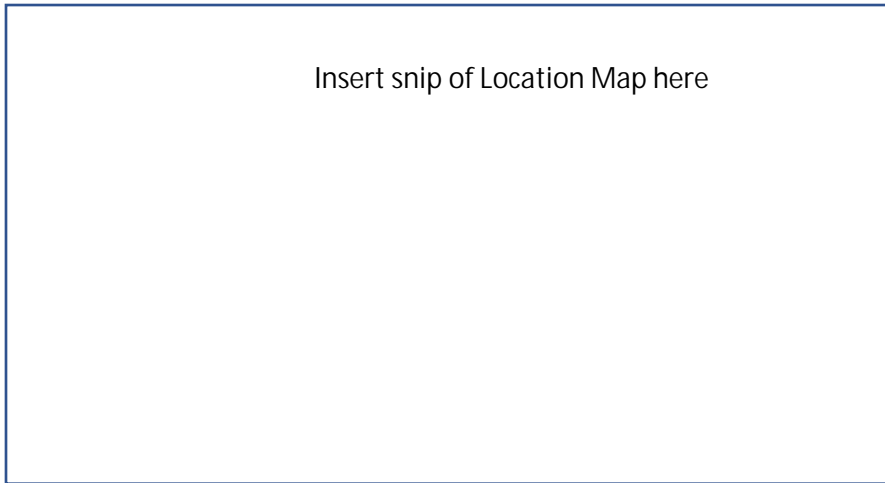
Implement Program To Provide Links To Weather Alerts And Departmental Phone Listings With Contact Personnel For Residents.

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110207
12110233
HUC 12
Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Strategy Costs

Total Cost:	\$100,000	Study Sponsor:	Hidalgo County
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2023	Entity with Oversight	Hidalgo County
Time to complete?	2025	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	FEMA, Department Budget

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Hidalgo County #14-1.1

FMS ID: 152000035

FMS Description

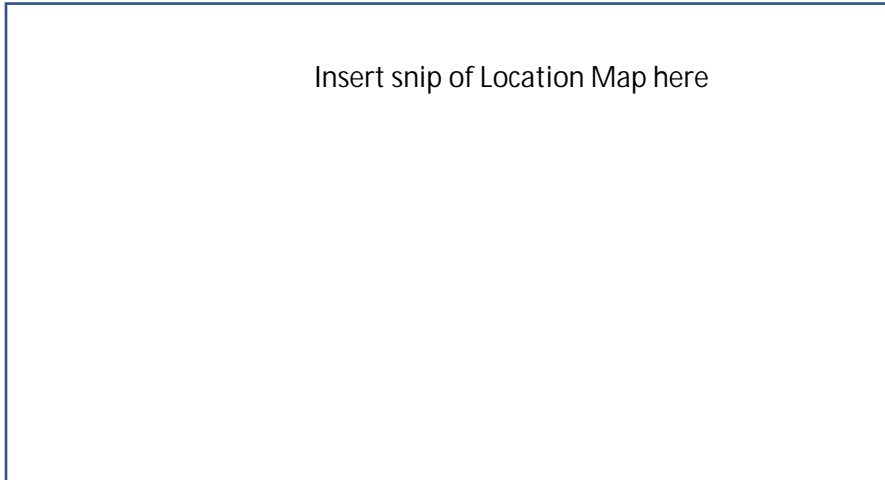
Develop Procedures For Mass Notifications To Citizens And Merchants During Natural Hazard Incident. Solicit Bids For System. Purchase Emergency Notification System And Install Distribute Information On New System And Conduct Training

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110207
12110236
HUC 12
Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Strategy Costs

Total Cost:	\$100,000	Study Sponsor:	Hidalgo County
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2023	Entity with Oversight	Hidalgo County
Time to complete?	2025	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Department Budget

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Hidalgo County #2-2.1

FMS ID: 152000036

FMS Description

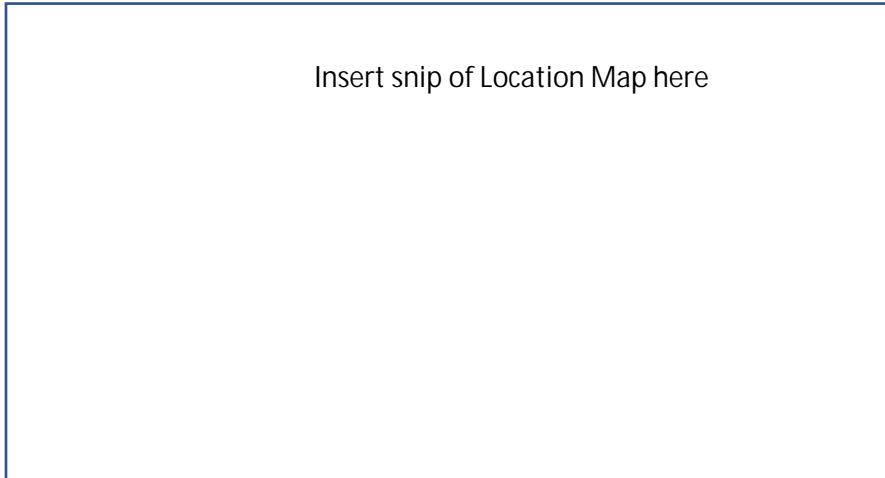
Incorporate Assessments of Hazards, Including Hurricane, Flood, Wild Land Fires, And Severe Storms, Into Site Selection And Design For New Buildings And When Siting Or Leasing County Facilities

Strategy Type

- Education and Outreach Activities
- Regulatory and Guidance
- Flood Preparedness Programs
- Protected Areas
- Development Standards
- Other:

Strategy Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110207
12110213
HUC 12
Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Strategy Costs

Total Cost:	\$25,000	Study Sponsor:	Hidalgo County
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2023	Entity with Oversight	Hidalgo County
Time to complete?	2025	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Annual Department Budget

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Hidalgo County #3-1.2

FMS ID: 152000037

FMS Description

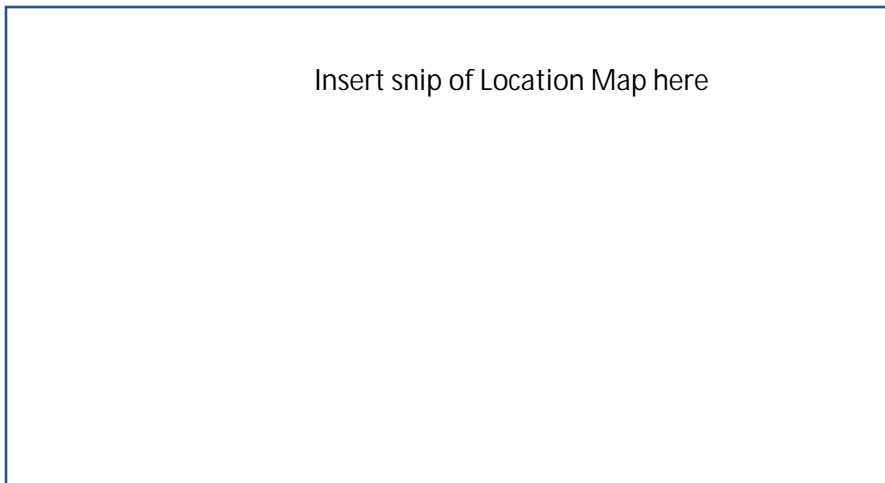
Enhance The Appropriate Websites To Provide Convenient Access To Most Current Hazard Maps.

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110207
12110217
HUC 12
Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Strategy Costs

Total Cost:	\$50,000	Study Sponsor:	Hidalgo County
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2023	Entity with Oversight	Hidalgo County
Time to complete?	2025	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Annual Department Budget and External Funding

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

La Villa #6-1.1

FMS ID: 152000038

FMS Description

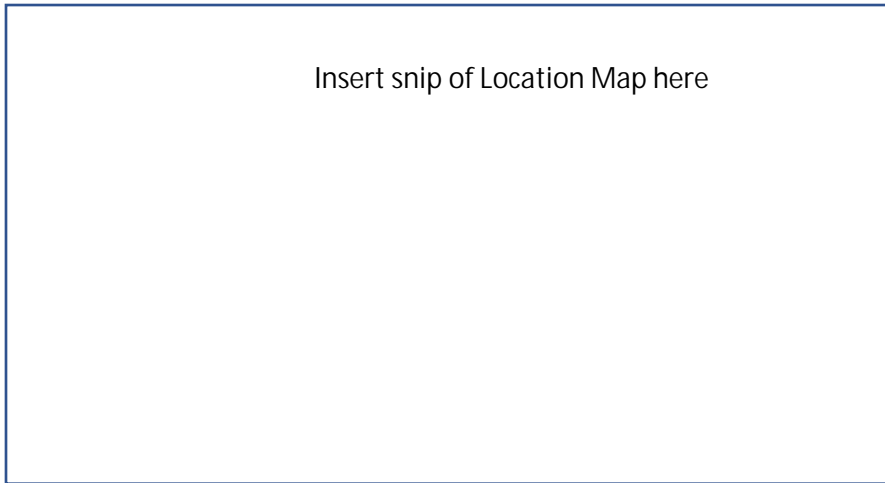
Implement Program To Provide Links To Weather Alerts And Departmental Phone Listings With Contact Personnel For Residents.

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities La Villa
 County/ Counties Hidalgo
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$1,000	Study Sponsor:	La Villa
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	La Villa
Time to complete?	Completed	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input type="checkbox"/>	(Potential) Source of Funding	N/A

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

La Villa #8-1.1

FMS ID: 152000039

FMS Description

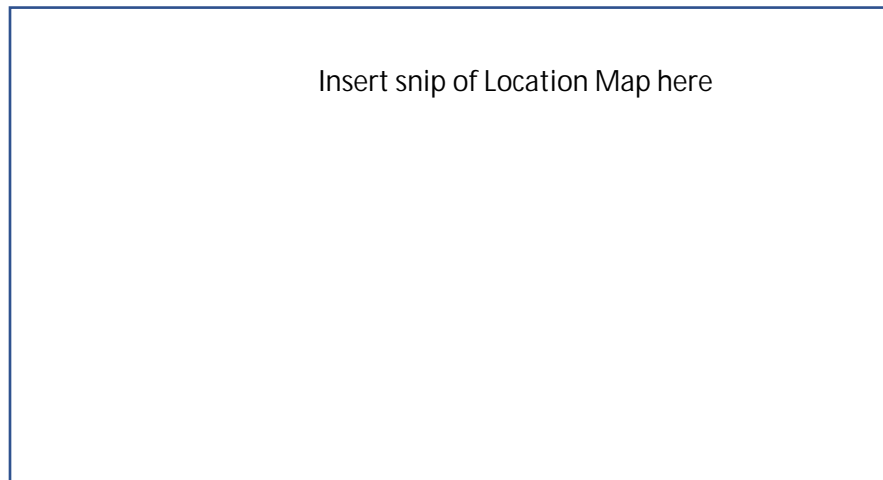
Develop Procedures For Mass Notifications To Citizens And Merchants During Natural Hazard Incident. Solicit Bids For System. Purchase Emergency Notification System And Install Distribute Information On New System And Conduct Training

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities La Villa
County/ Counties Hidalgo
HUC 8 12110208
HUC 12
Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Strategy Costs

Total Cost:	\$31,000	Study Sponsor:	La Villa
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2021	Entity with Oversight	La Villa
Time to complete?	2023	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Jurisdiction Budget

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

McAllen #11-1.1

FMS ID: 152000040

FMS Description

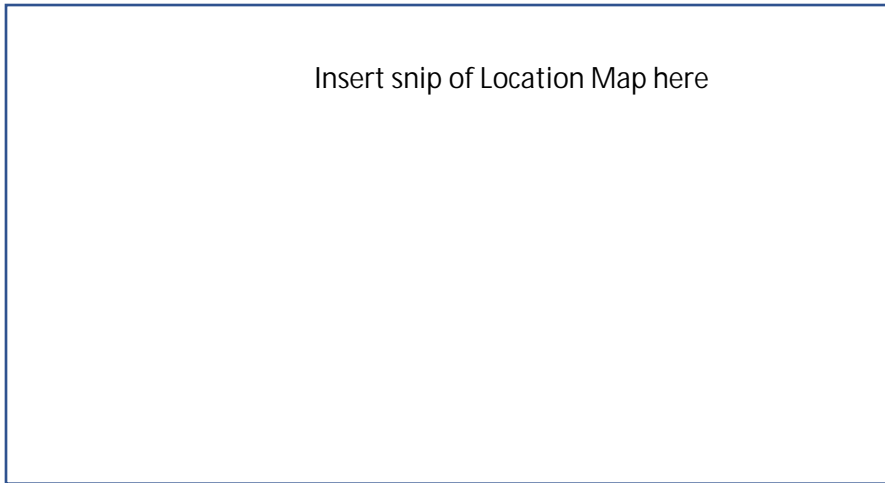
Implement Program To Provide Links To Weather Alerts And Departmental Phone Listings With Contact Personnel For Residents.

Strategy Type

- Education and Outreach Activities
 Regulatory and Guidance
 Flood Preparedness Programs
 Protected Areas
 Development Standards
 Other:

Strategy Area

City/ Cities McAllen
 County/ Counties Hidalgo
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$1,000	Study Sponsor:	McAllen
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	McAllen
Time to complete?	Completed	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Jurisdiction Budget

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

McAllen #1-2.1

FMS ID: 152000041

FMS Description

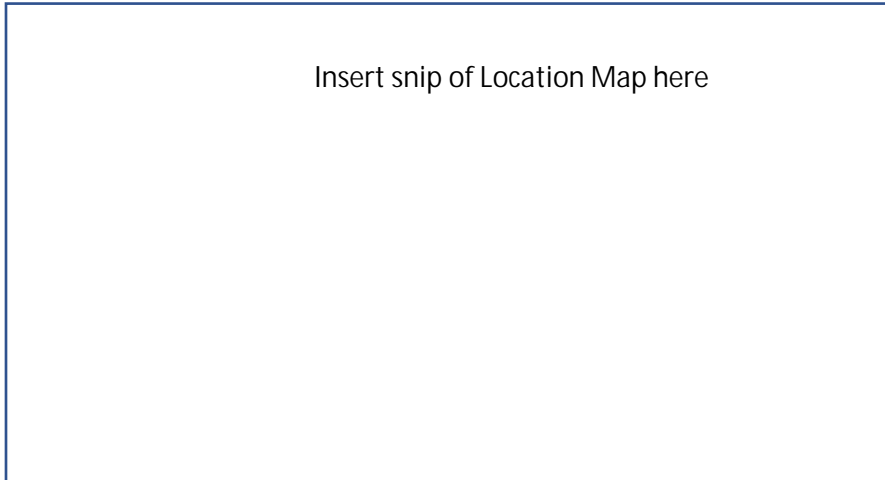
Develop Emergency Notification Awareness System For Traveling Public Via Transportation System In The Event of Severe Weather In McAllen

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities McAllen
 County/ Counties Hidalgo
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$500,000	Study Sponsor:	McAllen
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2021	Entity with Oversight	McAllen
Time to complete?	2024	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Grants, Matching City Funds

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

McAllen #1-2.1

FMS ID: 152000042

FMS Description

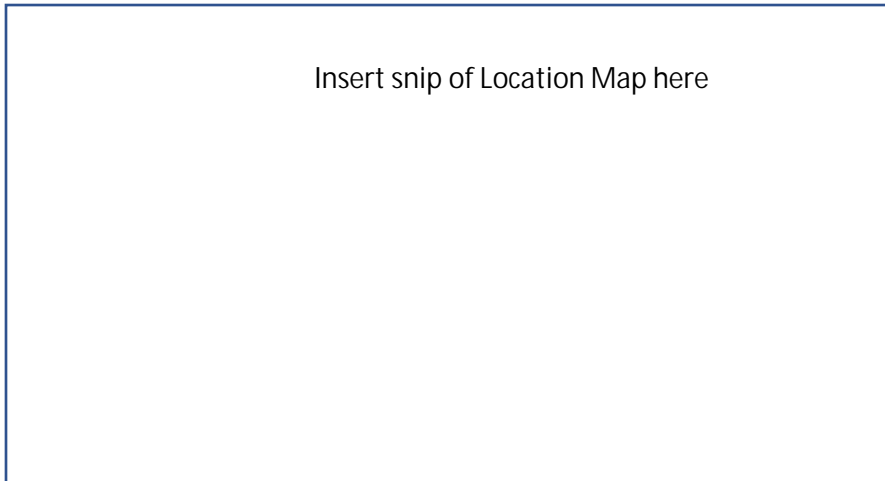
Provide A Means of Disseminating Emergency Information To The Citizens of McAllen

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities McAllen
County/ Counties Hidalgo
HUC 8 12110208
HUC 12
Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Strategy Costs

Total Cost:	\$500,000	Study Sponsor:	McAllen
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2021	Entity with Oversight	McAllen
Time to complete?	2022	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Grants, Matching City Funds

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Mercedes #11-1.1

FMS ID: 152000043

FMS Description

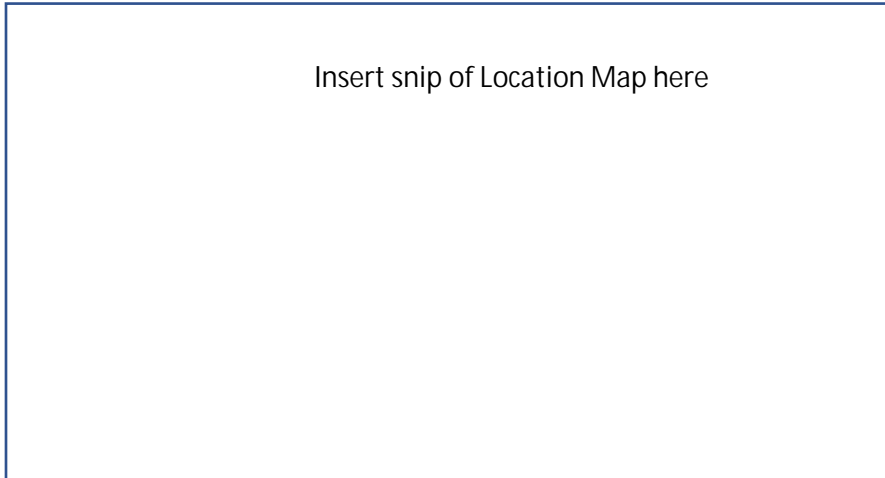
Develop Procedures For Mass Notifications To Citizens And Merchants During Natural Hazard Incident. Solicit Bids For System. Purchase Emergency Notification System And Install Distribute Information On New System And Conduct Training

Strategy Type

- Education and Outreach Activities
 Regulatory and Guidance
 Flood Preparedness Programs
 Protected Areas
 Development Standards
 Other:

Strategy Area

City/ Cities Mercedes
 County/ Counties Hidalgo
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$25,000	Study Sponsor:	Mercedes
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2021	Entity with Oversight	Mercedes
Time to complete?	2023	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Jurisdiction Budget

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Mercedes #9-1.1

FMS ID: 152000044

FMS Description

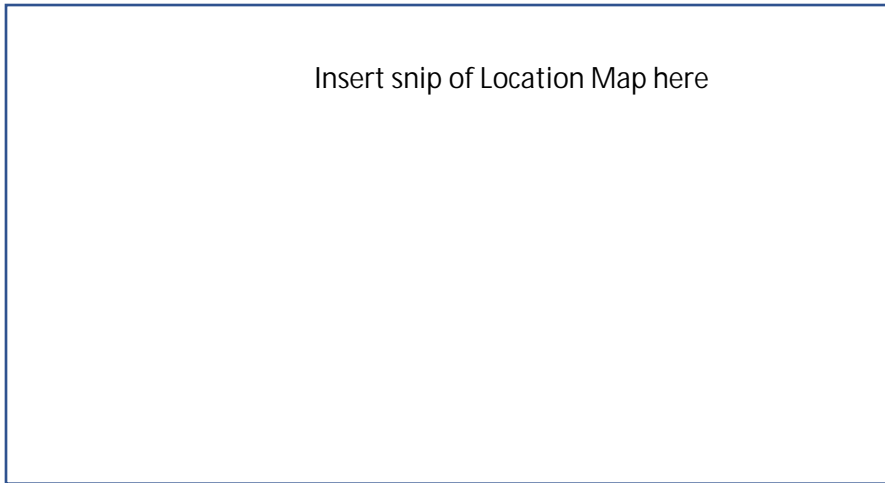
Implement Program To Provide Links To Weather Alerts And Departmental Phone Listings With Contact Personnel For Residents.

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities Mercedes
 County/ Counties Hidalgo
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$1,000	Study Sponsor:	Mercedes
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2022	Entity with Oversight	Mercedes
Time to complete?	2024	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Jurisdiction Budget

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Mission #1-1.1

FMS ID: 152000045

FMS Description

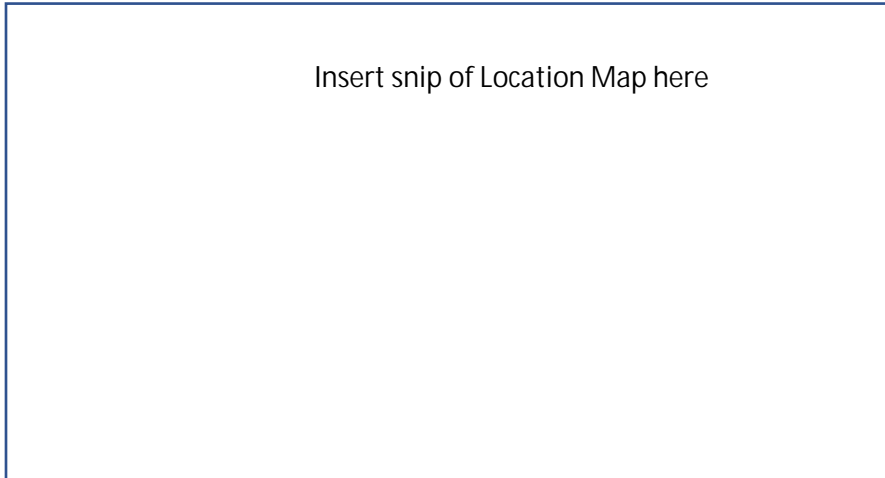
Develop Procedures For Mass Notifications To Citizens And Merchants During Natural Hazard Incident. Solicit Bids For System. Purchase Emergency Notification System And Install Distribute Information On New System And Conduct Training

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities Mission
 County/ Counties Hidalgo
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$31,000	Study Sponsor:	Mission
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	Mission
Time to complete?	Completed	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	City Of Mission

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
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- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
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- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
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- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes ✓ No

Palmview #5-1.1

FMS ID: 152000047

FMS Description

Implement Program To Provide Links To Weather Alerts And Departmental Phone Listings With Contact Personnel For Residents.

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

Strategy Area

City/ Cities Palmview
County/ Counties Hidalgo
HUC 8 12110208
HUC 12
Study Area (sq. mi.)

Insert snip of Location Map here

Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Strategy Costs

Total Cost:	\$1,000	Study Sponsor:	Palmview
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	Palmview
Time to complete?	Completed	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	N/A

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
- Increase the coverage of available flood hazard data by completing studies with identified construction projects to address flooding hazards
- Increase participation in the regional flood planning process
- Provide regional detention that could be used for water reuse applications or as part of a floodplain management program
- Increase acreage of publicly protected open space in critical flood risk areas that is reused for a beneficial public use
- Increase outreach and education activities, specifically targeting municipal floodplain managers, hosted by Region 15 RFPG and available on the website
- Increase the use reverse 911, TV, radio, social media, and billboards to communicate flood warnings, evacuation routes, and shelter locations
- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
- Increase use of nature-based flood risk reduction projects
- Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger
- Increase the amount of publicly owned land in the region that can be utilized for future regional stormwater infrastructure
- Increase the proficiency of floodplain managers by increasing the # of them that are certified as Certified Floodplain Managers (CFM) with the Texas Floodplain Management Association
- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Palmview #7-1.1

FMS ID: 152000048

FMS Description

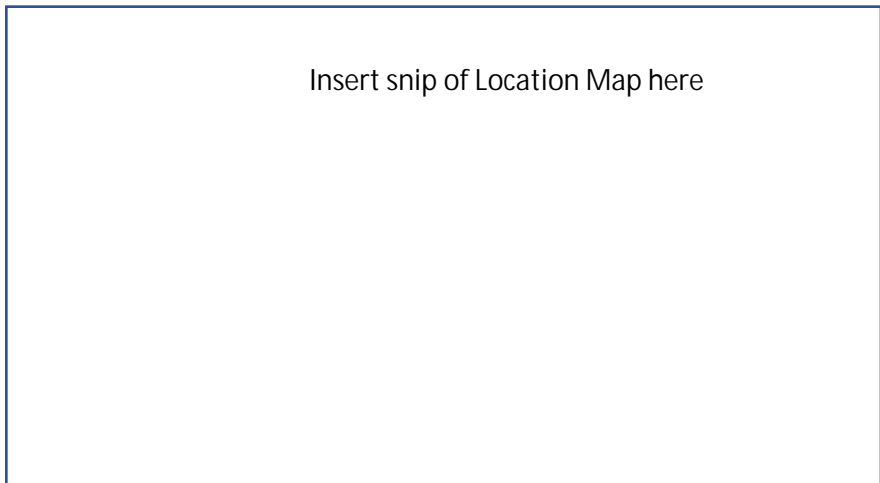
Develop Procedures For Mass Notifications To Citizens And Merchants During Natural Hazard Incident. Solicit Bids For System. Purchase Emergency Notification System And Install Distribute Information On New System And Conduct Training.

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Flood Measurement and Warning

Strategy Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110208
HUC 12
Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Strategy Costs

Total Cost:	\$31,000	Study Sponsor:	Palmview
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	Palmview
Time to complete?	Completed	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Jurisdiction Budget

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines?

Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
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- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
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- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Pharr #10-1.1

FMS ID: 152000049

FMS Description

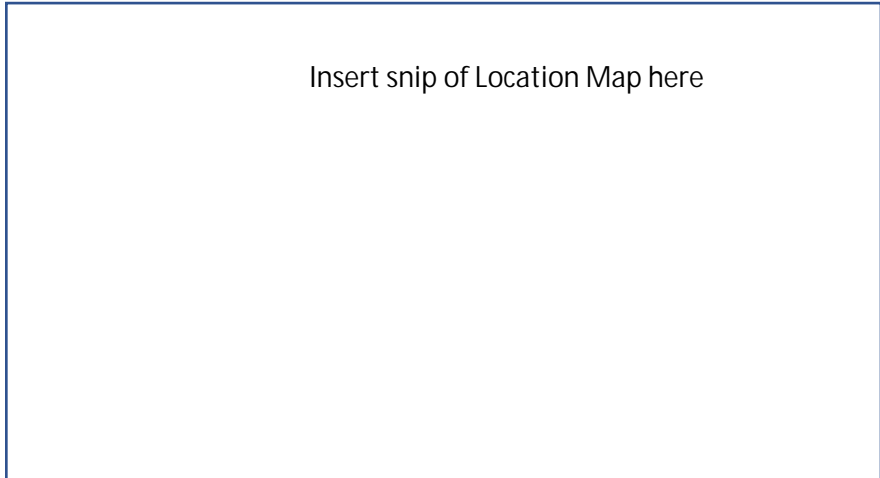
Develop Procedures For Mass Notifications To Citizens And Merchants During Natural Hazard Incident. Solicit Bids For System. Purchase Emergency Notification System And Install Distribute Information On New System And Conduct Training.

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Flood Measurement and Warning

Strategy Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110208
HUC 12
Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Strategy Costs

Total Cost:	\$5,000	Study Sponsor:	Pharr
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	Pharr
Time to complete?	Completed	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Jurisdiction Budget

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
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- Increase the # of entities that have multi-year drainage CIP list
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- Increase participation in the Community Rating System by encouraging Region 15 floodplain management programs to incorporate dedicated drainage fees to implement future FMEs and FMPs; incorporate noncompliance penalties; and who regulate development in the future conditions floodplain

RFPG Recommended

Yes No

Pharr #8-1.1

FMS ID: 152000050

FMS Description

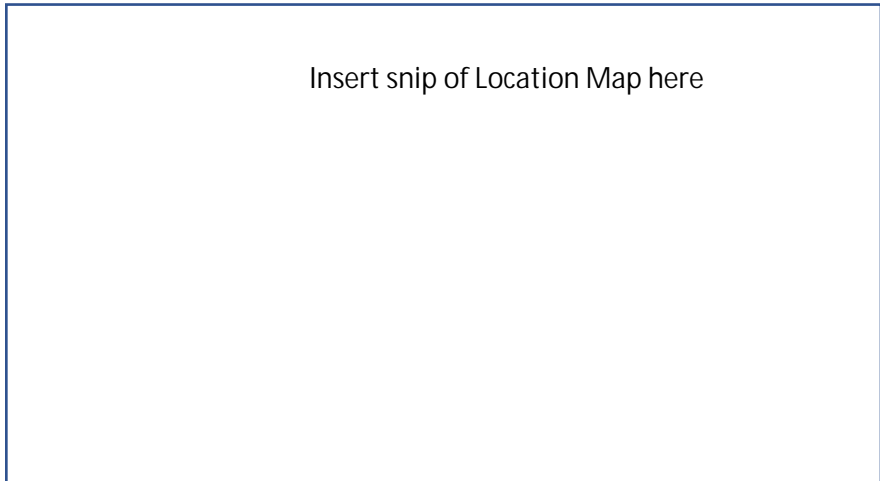
Implement Program To Provide Links To Weather Alerts And Departmental Phone Listings With Contact Personnel For Residents.

Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Flood Measurement and Warning

Strategy Area

City/ Cities
County/ Counties Hidalgo
HUC 8 12110208
HUC 12
Study Area (sq. mi.)



Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
Population at Risk # of structures inundated
Roadways flooded Yes No Miles inundated?
Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
Notes:

Strategy Costs

Total Cost:	\$1,000	Study Sponsor:	Pharr
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:		Entity with Oversight	Pharr
Time to complete?	Completed	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Jurisdiction Budget

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs
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- Reduce the # of structures that have been subject to repeated flooding events through property buyouts
- Increase the # of entities that adopt higher than NFIP-minimum standards
- Develop and maintain an operational stormwater asset management plan
- Increase the # of flood gauges (rainfall/stream) in the region
- Increase the # of entities that have multi-year drainage CIP list
- Increase the # of entities that integrate National Weather Service and USGS Texas Water Science Center (TXWSC) flood warning system information into their local capabilities to disseminate warnings
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RFPG Recommended

Yes No

Alamo #4-1.2

FMS ID: 152000051

FMS Description

Provide Traffic Control And Evacuation Assistance During Emergency Situations

Strategy Type

- Education and Outreach Activities
- Regulatory and Guidance
- Flood Preparedness Programs
- Protected Areas
- Development Standards
- Other:

Strategy Area

City/ Cities Alamo
 County/ Counties Hidalgo
 HUC 8 12110208
 HUC 12
 Study Area (sq. mi.)

Insert snip of Location Map here

Emergency Need

Yes No

Known Flood Risk

History of Flooding? Yes No Frequency of flooding:
 Population at Risk # of structures inundated
 Roadways flooded Yes No Miles inundated?
 Critical Facilities Impacted Yes No Agricultural Land impacted Yes No
 Notes:

Strategy Costs

Total Cost:	\$10,000	Study Sponsor:	Alamo
Non-reoccurring Non-capital Cost (include in Total above):		<i>These are one-time costs for program development, education campaign, and non-engineering study costs.</i>	
Estimated year to start:	2024	Entity with Oversight	Alamo
Time to complete?	2026	Included in a Hazard Mitigation Action Plan or other plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Funding Dedicated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(Potential) Source of Funding	Identify Grants; Police Department Budget

Have the flood risk and flood reduction impacts been evaluated?

Yes No

Was the strategy missing sufficient data to assess whether the proposed strategy has a negative effect, per TWDB guidelines? Yes No

Related Goals

- Increase community access routes to critical facilities, evacuation routes, during and after a flooding event
- Reduce the # of newly constructed vulnerable critical facilities within the existing and future 100-YR floodplain
- Increase the # of communities participating in the National Flood Insurance Program
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RFPG Recommended

Yes No

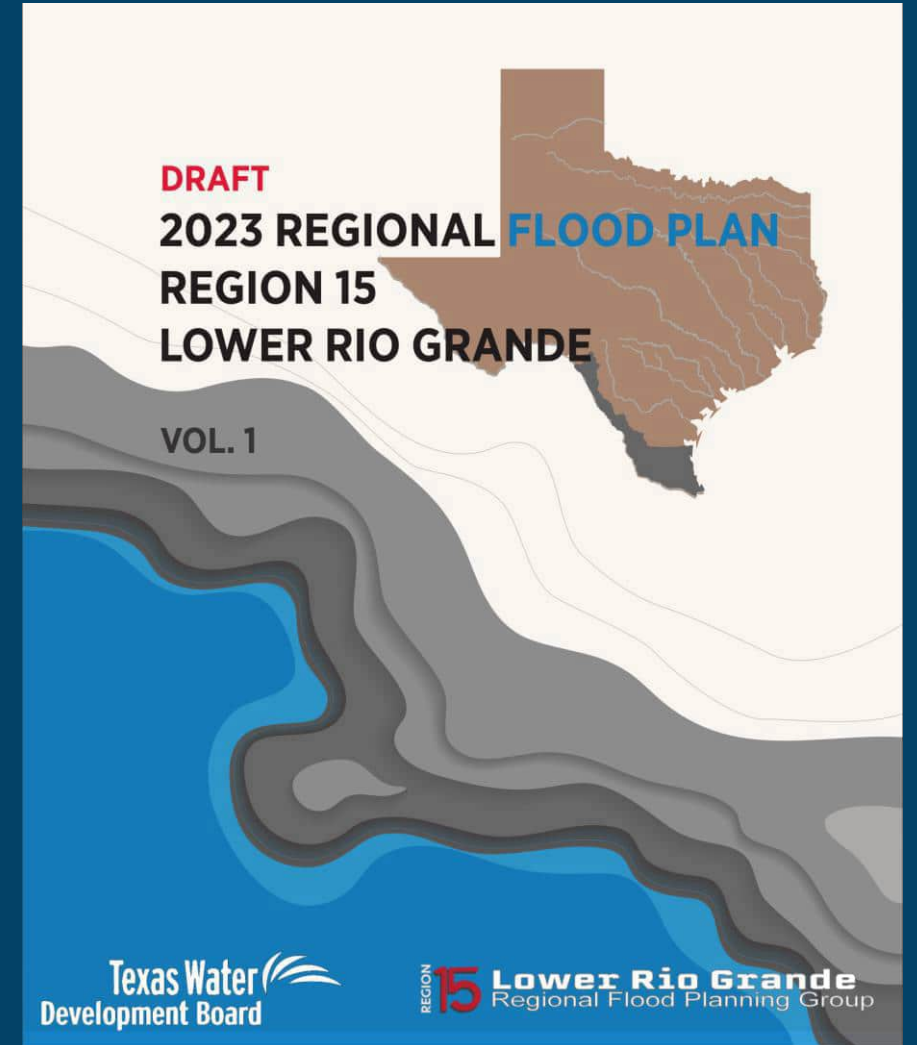
A photograph of a residential street completely flooded with murky water. In the foreground, two men are wading through the water towards the camera. The man on the left is wearing a white t-shirt and khaki shorts, while the man on the right is wearing a dark t-shirt and jeans. In the background, a dark sedan is partially submerged on the left, and a white car is visible further down the street. Houses and trees line the street under a cloudy, overcast sky. The text 'APPENDIX D - PUBLIC HEARING MATERIAL & SIGN IN SHEET' is overlaid in large, white, bold, sans-serif font across the center of the image.

**APPENDIX D -
PUBLIC HEARING
MATERIAL & SIGN IN
SHEET**

LOWER RIO GRANDE REGIONAL FLOOD PLANNING GROUP

*Public Meeting – Review of
Draft Region 15 Regional Flood Plan*

October 19, 2022



AGENDA

- Define Region 15
- Regional Flood Planning Group Members and Planning Team
- Overview of Regional Flood Planning Process
- Overview of Draft Regional Flood Plan for the Lower Rio Grande, Region 15
- Comments



REGION 15 – LOWER RIO GRANDE FLOOD PLANNING REGION



REGION 15 – LOWER RIO GRANDE

Counties Represented:

Brooks*

Cameron

Dimmit*

Edwards*

Hidalgo

Jim Hogg*

Kenedy*

Kinney*

Maverick*

Starr

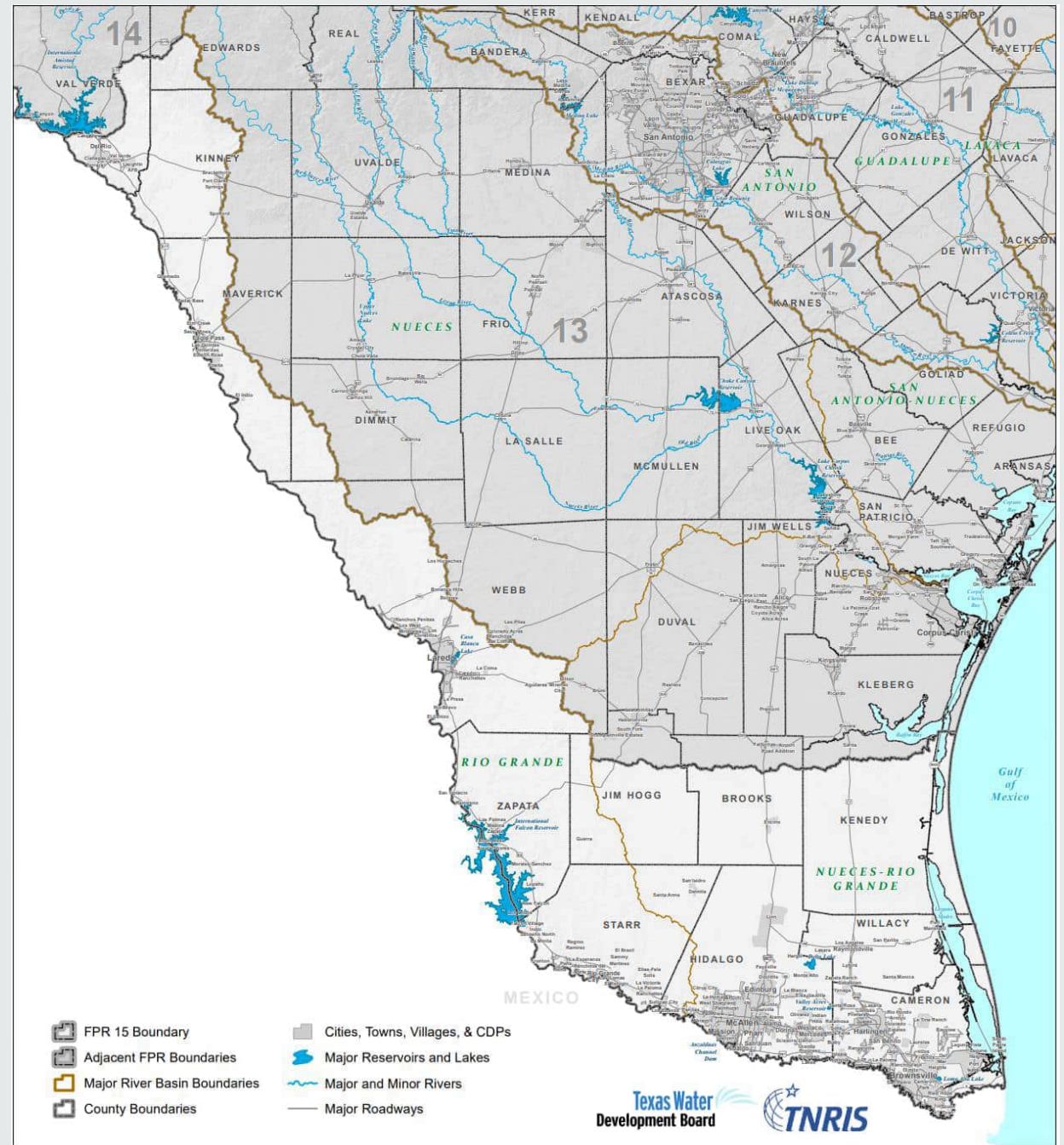
Val Verde

Webb*

Willacy

Zapata

** denotes partially included*





REGION 15 – LOWER RIO GRANDE

Population Estimate (2020):

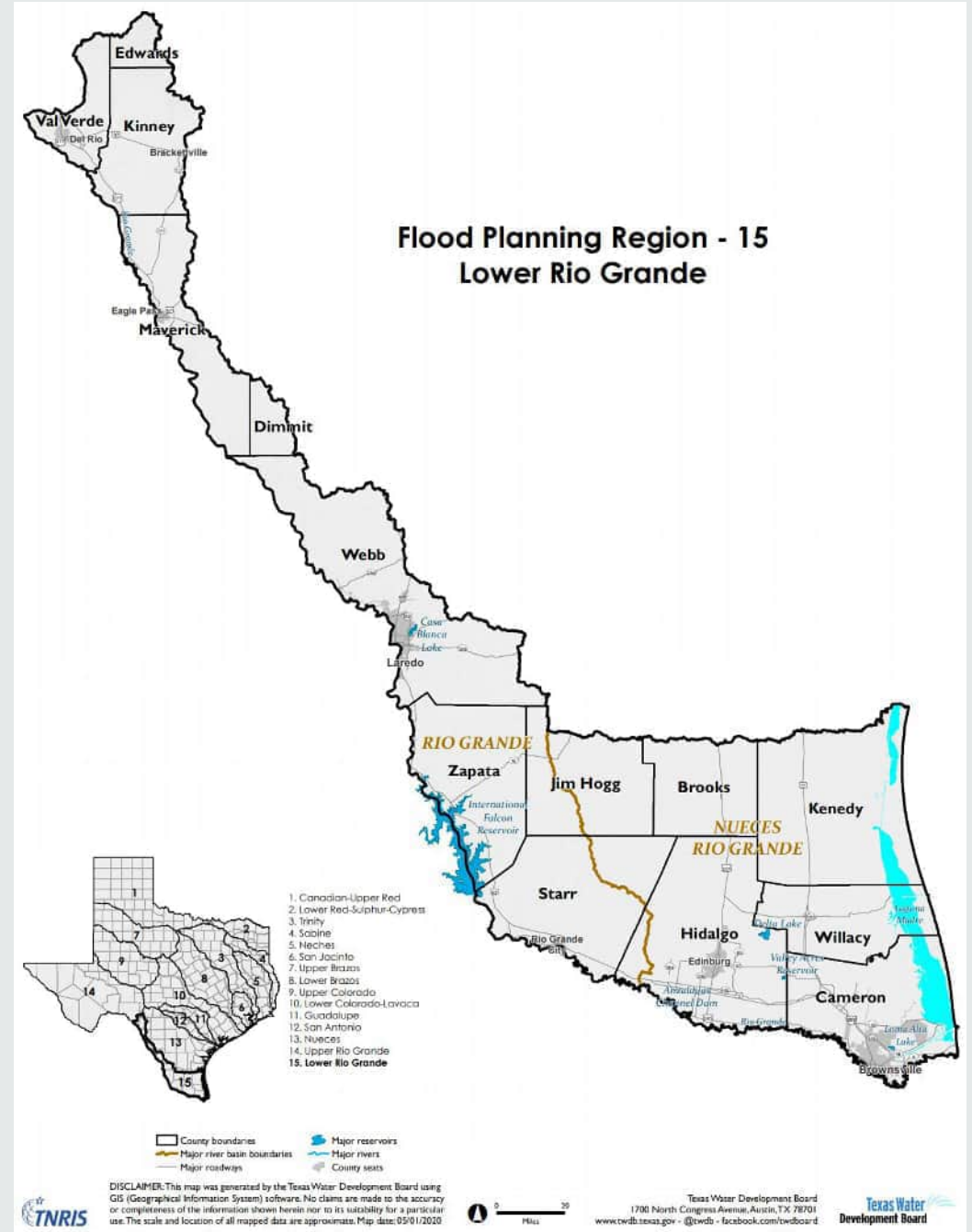
2,040,371

Approx. Area:

43,204 Sq. Miles

Approx. Stream Miles:

29,878,170





**REGIONAL FLOOD
PLANNING GROUP
(RFPG)
MEMBERS &
PLANNING TEAM**



REGIONAL FLOOD PLANNING GROUP MEMBERS (Voting)

Name	Interest Category	Entity
Jose Hinojosa	Agricultural	Santa Cruz Irrigation District No. 15
David A. Garza	Counties	Cameron County
Raul Pena Jr.	Counties	Starr County
Eduardo Gonzalez	Counties	Willacy County
Daniel Lucio	Electric Generating Utilities	AEP Texas
Hudson DeYoe	Environmental	University of Texas Rio Grande Valley
Alan Moore	Flood Districts	Cameron County Drainage District No. 5
David L. Fuentes	Flood Districts	Hidalgo County Drainage District No. 1
Joey Trevino	Industries	Rio Grande Valley Chapter of Associated General Contractors of America
Rene Estrada	Municipalities	City of Combes
Joe Califa	Public	Self
Jose Caso	Small Business	Caso Law Firm, PLLC
Sonia Lambert	Water Districts	Cameron County Irrigation District #2
Riazul Mia	Water Utilities	City of Laredo



REGIONAL FLOOD PLANNING GROUP MEMBERS (Non-voting)

Name	Title	Entity
Megan Ingram	Regional Flood Planner	Texas Water Development Board
Ramon Macias III	Principal Engineer	IBWC, US Section
Shonda Mace	Planner	General Land Office
Willy Cupit	Natural Resources Specialist	Texas Parks and Wildlife Department
Lupita Trinidad- Ramos	Homeland Security Planner III	South Texas Development Council
Brian Hurtuk	Hazard Mitigation Planner	Texas Department of Emergency Management
Nelda Barrera	Field Representative	Texas Department of Agriculture
Adrian Perez	Field Representative	Texas State Soil and Water Conservation Board
Manny Cruz	Executive Director	Lower Rio Grande Development Council
David Ramirez	Area Director – Border & Permian Basin	Texas Commission on Environmental Quality
Nick Gallegos	Executive Director	Middle Rio Grande Development Council



REGIONAL FLOOD PLANNING GROUP SPONSORS



Hidalgo County
Drainage District
No. 1

Texas Water 
Development Board



TECHNICAL CONSULTANT





STAKEHOLDERS

- Counties
- Cities
- Flood Control Districts
- Drainage Districts
- Irrigation Districts

Anyone with flood mitigation authority and responsibilities

OVERVIEW OF REGIONAL FLOOD PLANNING PROCESS





REGIONAL FLOOD PLANNING PROCESS

Overview

- ❑ 2019: 86th Texas Legislature passed Senate Bill 8, providing a new process for statewide flood planning
- ❑ Texas Water Development Board (TWDB) charged with implementation
- ❑ 15 regional flood planning groups (RFPGs) created by TWDB, based on drainage basins
- ❑ First planning cycle started late 2020
- ❑ Regional Plans to become part of State Flood Plan in Sept. 2024
- ❑ Updated every 5 years





REGIONAL FLOOD PLANNING PROCESS

Goal

The goal of this effort is to better manage future flood risk to reduce loss of life and property from flooding.

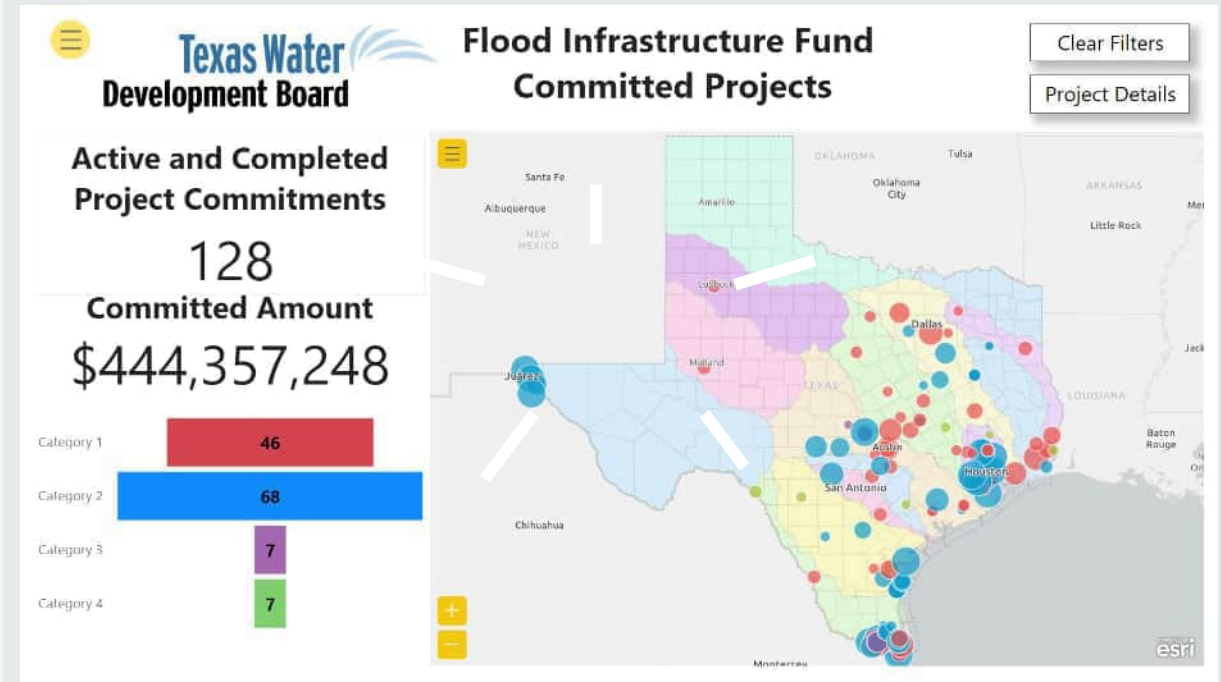




REGIONAL FLOOD PLANNING PROCESS

Overview

- ❑ Regional Flood Plans will identify flood risk and recommend
 - ❑ Flood Management Evaluations (FMEs)
 - ❑ Flood Mitigation Projects (FMPs)
 - ❑ Flood Management Strategies (FMSs)
- ❑ State Flood Plan will rank the recommended FMEs, FMPs, and FMSs at a state level
- ❑ Inclusion in the State Flood Plan will be needed for future state funding for flood related activities





REGIONAL FLOOD PLANNING PROCESS

Schedule





OVERVIEW OF DRAFT REGION 15 LOWER RIO GRANDE REGIONAL FLOOD PLAN

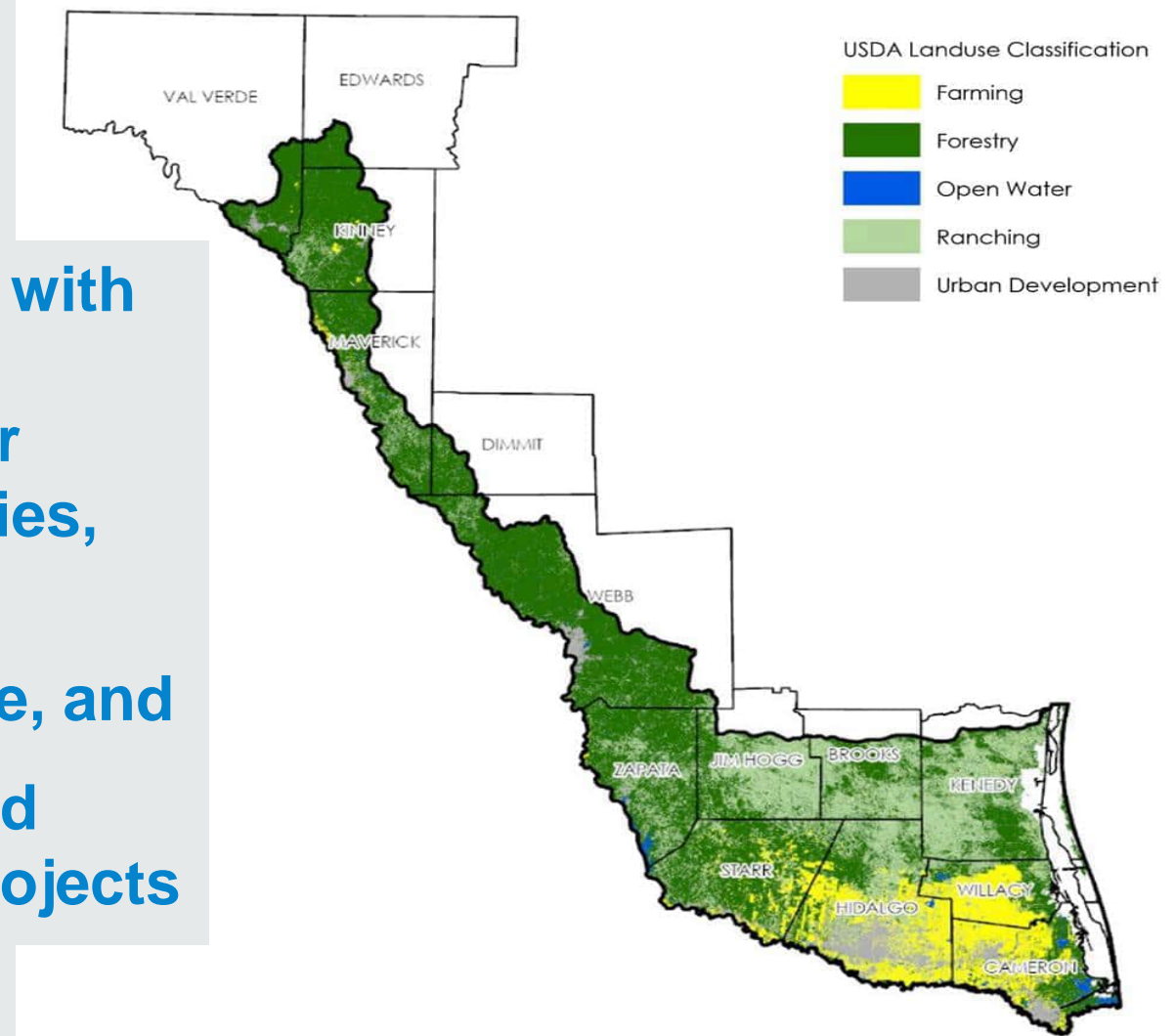


CH. 1 – PLANNING AREA DESCRIPTION

Overview of Region 15

Descriptions of:

- location,
- economics,
- agricultural information,
- social vulnerability,
- flood-prone areas,
- historical floods and associated damages,
- jurisdictions with flood-related authorities or responsibilities,
- existing infrastructure, and
- ongoing flood mitigation projects





CH. 1 – PLANNING AREA DESCRIPTION

Overview of Region 15

62.7% Pop. increase

Year	Population
2020	2,040,371
2050	3,311,860

54

local communities

Over 70% of population live in Cameron and Hidalgo County

MAJOR INDUSTRIES

- ❖ Retail Trade
- ❖ Health Care
- ❖ Other Services

Region MHI - \$37,595

State MHI - \$63,500

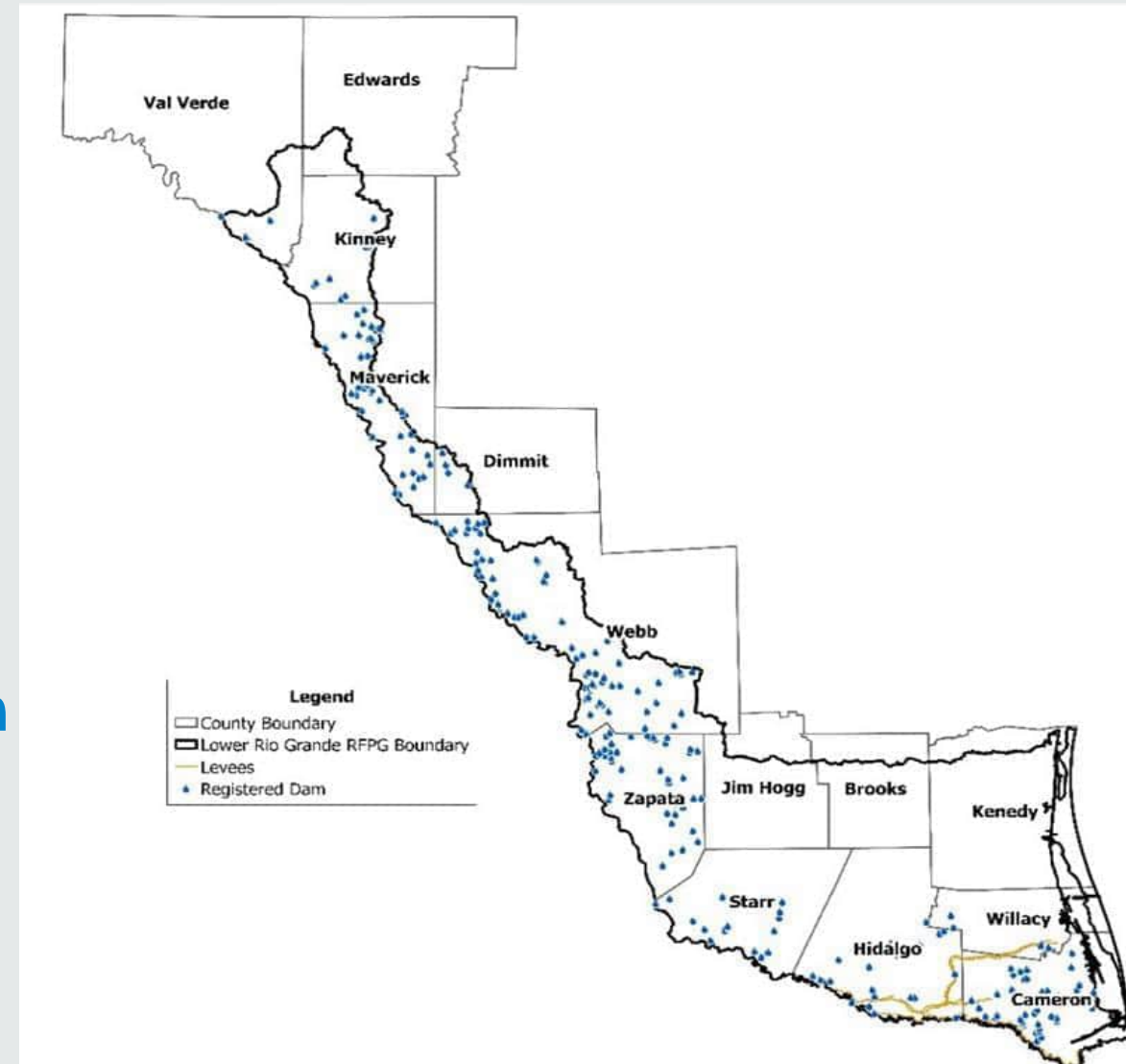
SVI for most of Region is 0.5 – 1.0



CH. 1 – PLANNING AREA DESCRIPTION

Overview of Region 15

- ❑ 15% of total area is in 1% ACE
- ❑ 41 of 54 communities have 20%+ area in 1% ACE
- ❑ 86 entities with flood control authority
- ❑ 91% of entities participate in NFIP
- ❑ 57% of counties have Hazard Mitigation Plans
- ❑ 85 on-going flood mitigation projects



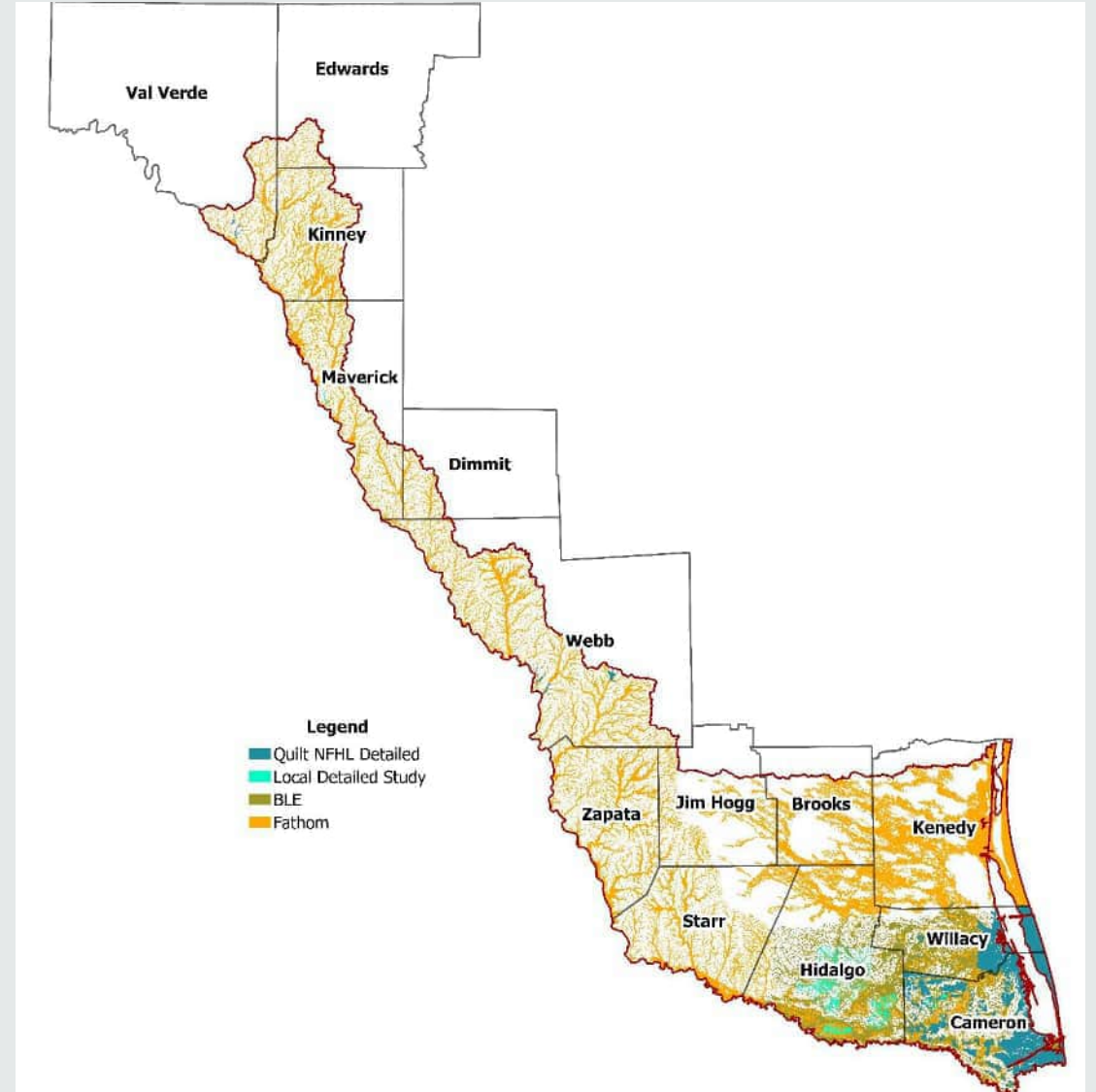


CH. 2 FLOOD RISK ANALYSES

1% & 0.2% Annual Chance Event – Existing & Future Conditions

□ Floodplain Quilt Sources

- Local Studies (from Cities, Counties, River Authorities, etc.)
- FEMA National Flood Hazard Layer
 - Effective Date for Detailed Study Areas (Zone AE, AO, AH and VE)
 - Pending & Preliminary Data
 - Effective Data for Approximate Study Areas (Zone A and V)
- Base Level Engineering
- Fathom – approximate 10-meter resolution nationwide floodplains



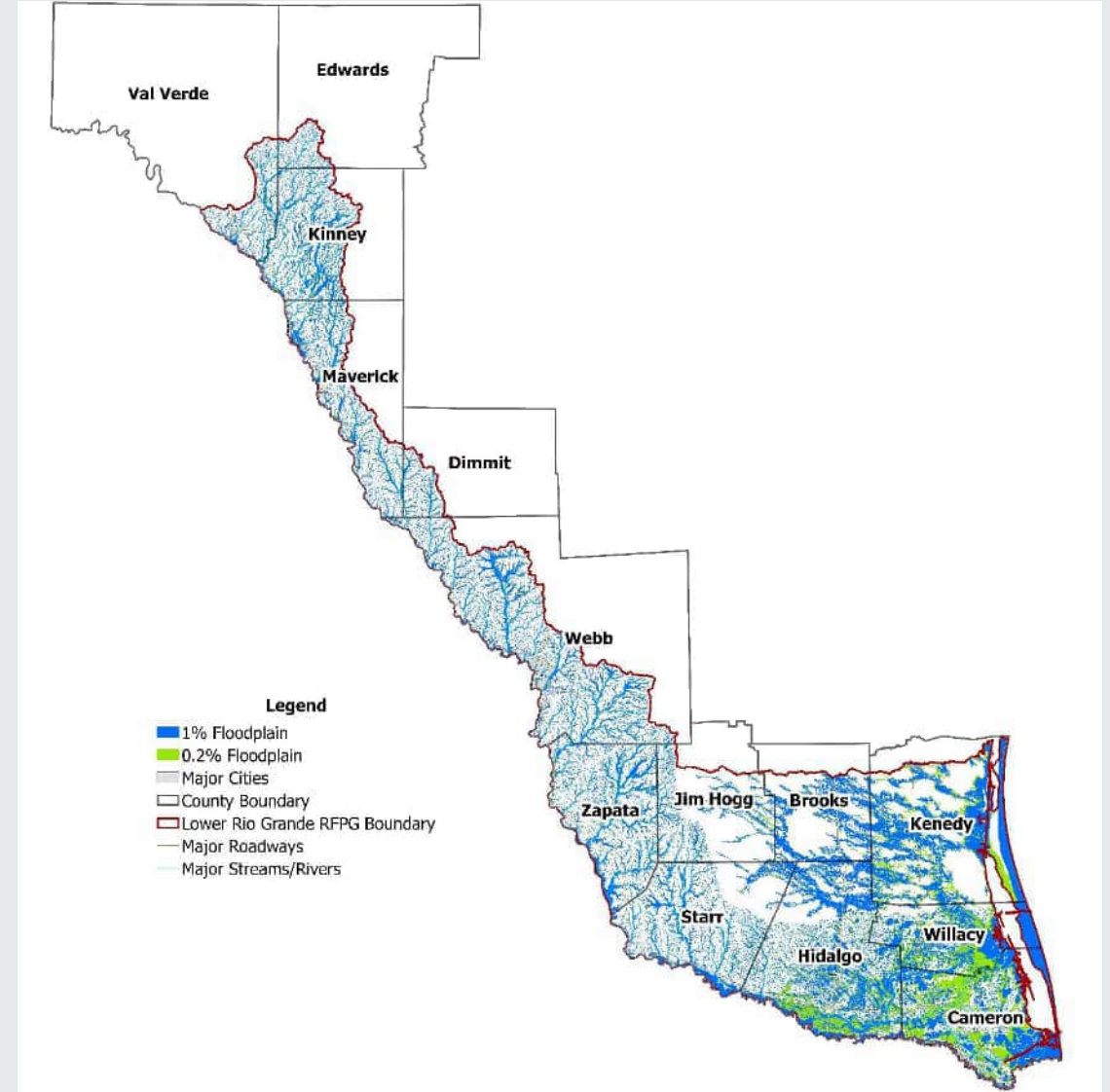


CH. 2 FLOOD RISK ANALYSES

Existing Condition Flood Risk Analyses

% of Area in Existing Floodplain Quilt by County

County	1% Flood Hazard	0.2% Flood Hazard*	Combined Flood Hazard
Brooks	34%	1%	35%
Cameron	46%	30%	76%
Dimmit	24%	2.5%	27%
Edwards	22%	2%	24%
Hidalgo	40%	15.4%	55%
Jim Hogg	16%	4%	20%
Kenedy	39%	16.5%	56%
Kinney	31%	4%	35%
Maverick	29%	3.7%	33%
Starr	27%	3%	30%
Val Verde	26%	3.2%	29%
Webb	28%	3%	31%
Willacy	46%	25.6%	72%
Zapata	30%	3%	33%



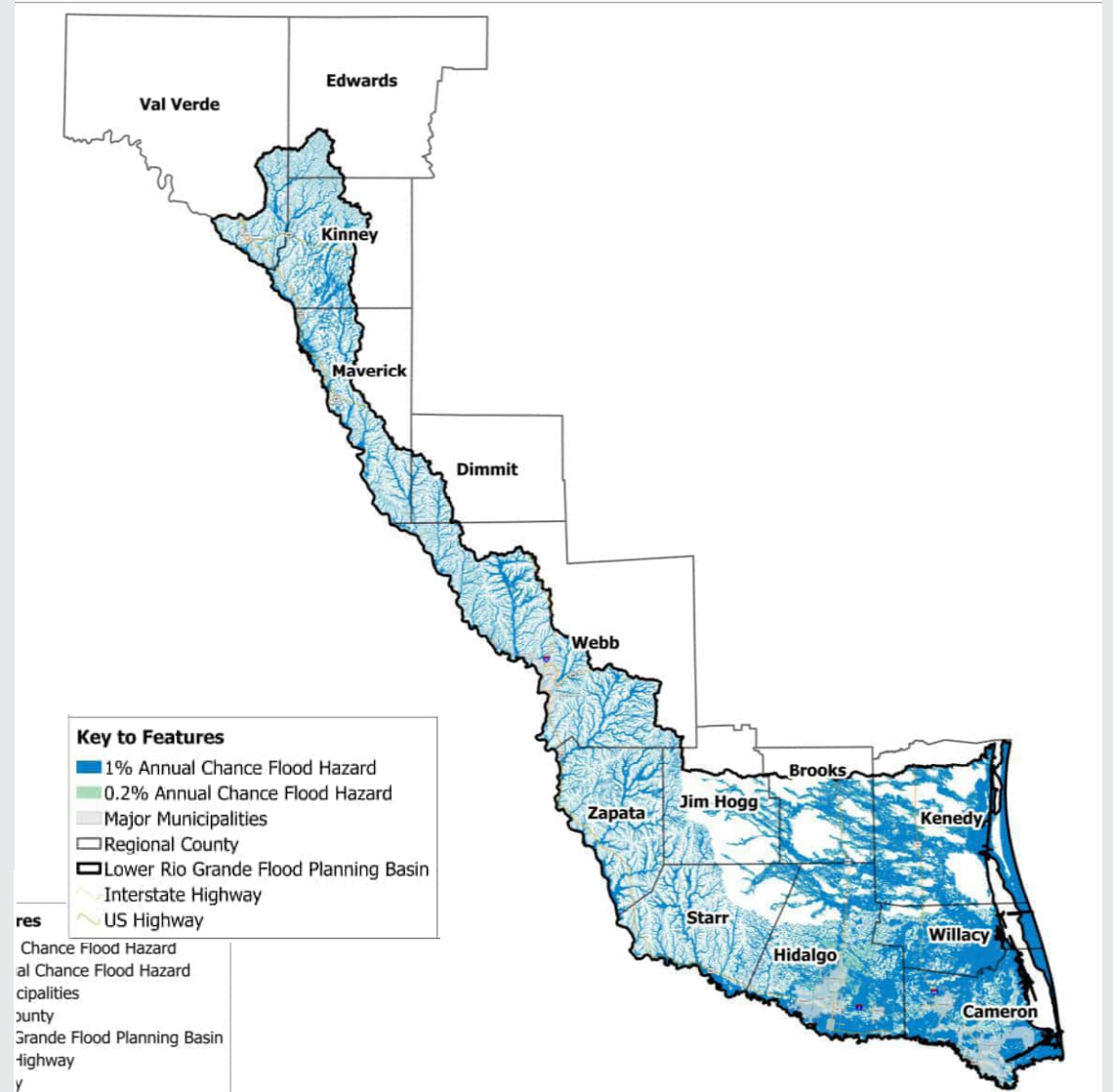


CH. 2 FLOOD RISK ANALYSES

Future Condition Flood Risk Analyses

Increase in Flood Hazard Area for Future Condition Compared to Existing Condition

Flood Frequency	Existing Conditions Area (2020) (Sq. Mi)	Future Conditions Area (2050) (sq. mi.)	Increase (sq. mi.)	% Increase
1% Annual Chance	4,078	5,287	1,209	29%
0.2% Annual Chance	5,287	6,556	1,269	24%





CH. 2 FLOOD RISK ANALYSES

Flood Risk Exposure Analysis

Summary of Increased Exposure in Flood Hazard Area, 1% ACE

Feature	Existing Conditions 2020	Future Conditions 2050	Increase
Population	965,787	1,365,701	399,914
Total Structures	288,366	394,669	106,303
Residential Structures	233,776	320,563	86,787
Non Residential Structures	54,590	74,106	19,516
Critical Facilities	566	865	299
Low Water Crossing	126	129	3
Roadway Segments (miles)	6,376	9,163	2,787
Agricultural Area (sq. mi)	1,793	2,258	465



CH. 3A – EVALUATION & RECOMMENDATION OF FLOODPLAIN MANAGEMENT PRACTICES

Recommended Practices and Standards, Region-wide

- ❑ Entities should base their BFEs on FEMA Firm maps in the absence of detailed Hydrologic and Hydraulic (H&H) studies or Base Level Engineering (BLE) studies.
- ❑ Where injury, sickness, or loss of life has happened, or where structural flood mitigation alternatives are not practical or are otherwise infeasible, communities should have a Buyout program to buy out properties if funding is available. The program should assist owners in relocating to areas with reduced flood risk.
- ❑ Storm drainage systems should convey the 4 percent annual chance (25-Year) flood event underground (within a storm sewer/pipe system) and the 1 percent annual chance (100-Year) flood event within the right-of-way.



CH. 3A – EVALUATION & RECOMMENDATION OF FLOODPLAIN MANAGEMENT PRACTICES

Recommended Practices and Standards, Region-wide

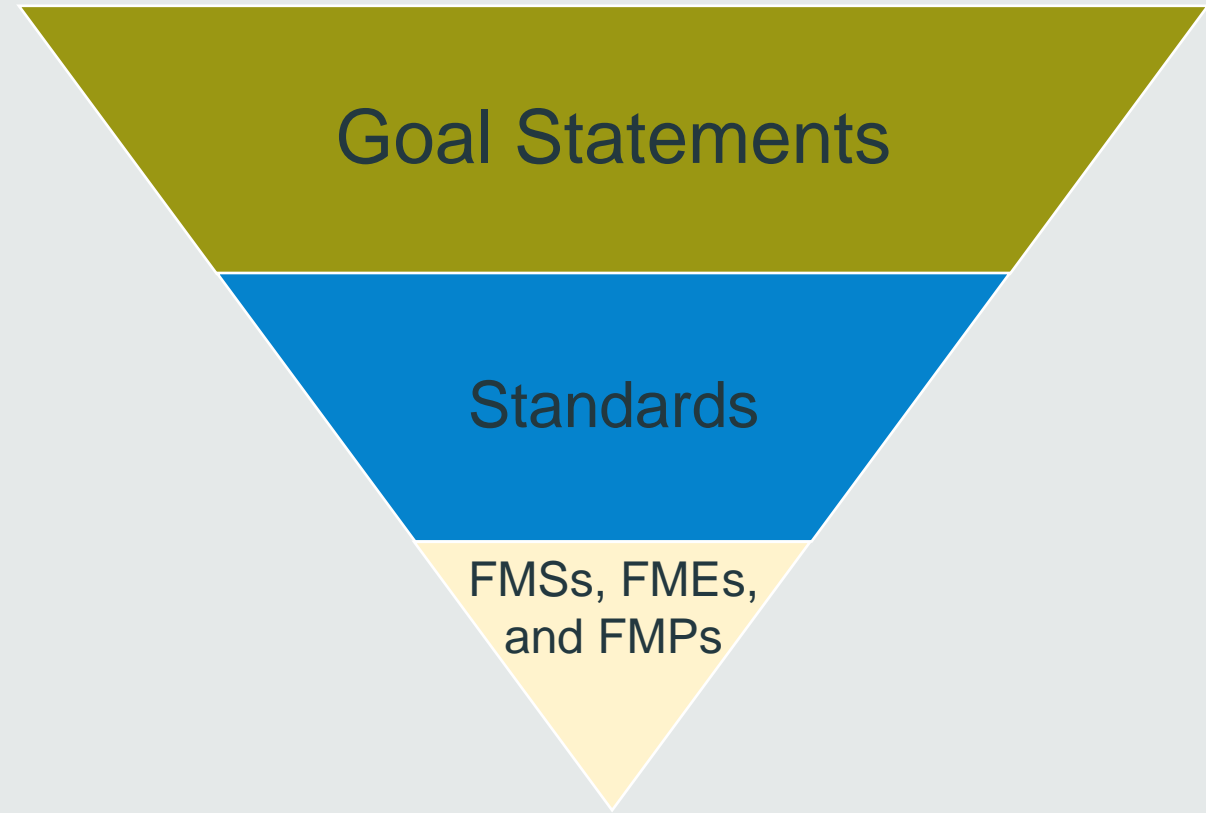
- ❑ New and significantly altered roadways with curb and gutter should have a 10 percent annual chance (10-year) flood event water surface elevation below the top of the curb and a 25-year design for culverts.
- ❑ New construction shall (and the retrofiting or pre-existing residential/ commercial buildings outside of coastal areas should) have a finished floor elevation of 1-foot above the 1 percent annual chance event BFE. New Construction shall (and retrofit pre-existing residential/commercial buildings in coastal areas) should have a finished floor elevation of 1-foot above the highest elevation of either the riverine or coastal BFE, including combined riverine and coastal effects.



CH. 3B – FLOOD MITIGATION AND FLOODPLAIN MANAGEMENT GOALS

Proposed Overarching Goal Categories

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

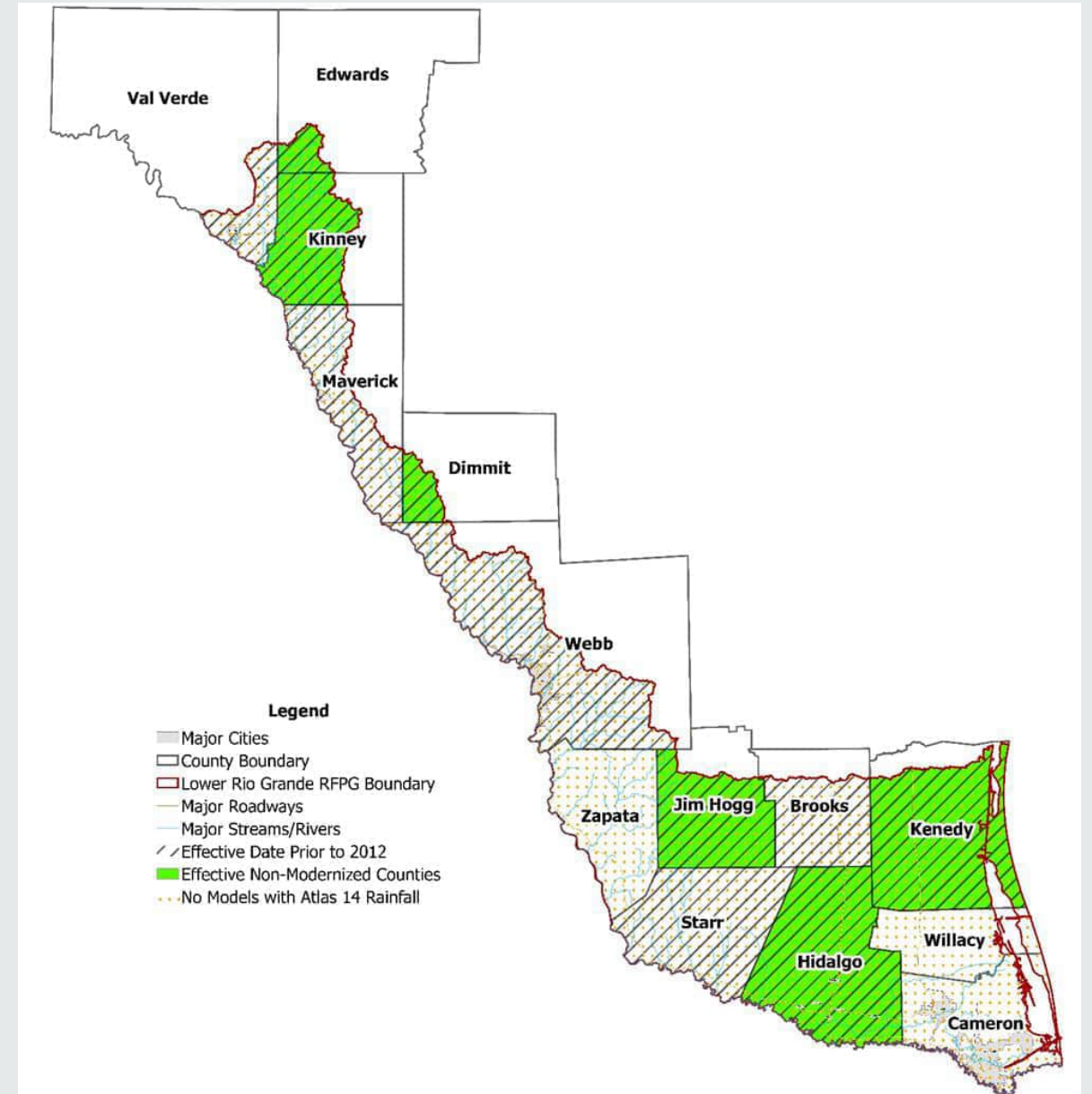




CH. 4A – FLOOD MITIGATION NEEDS ANALYSIS

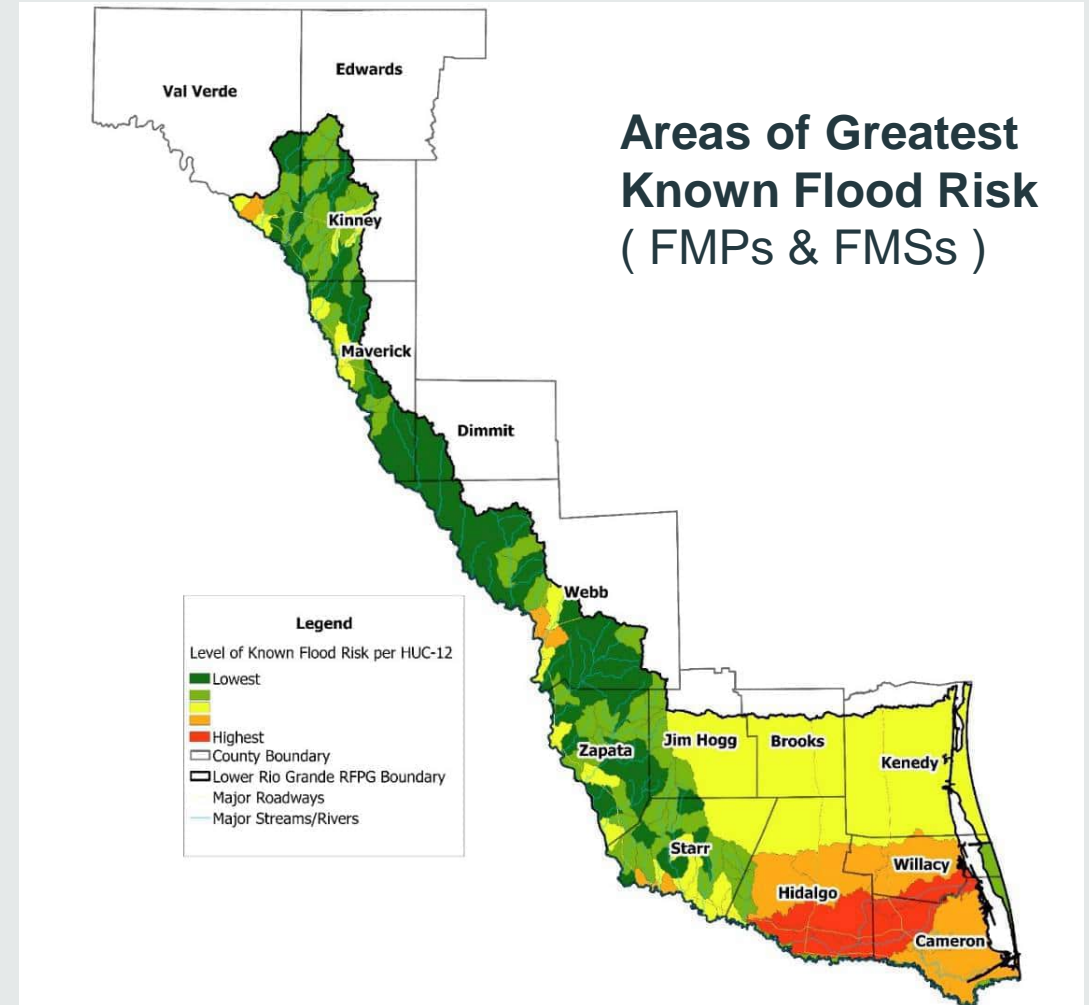
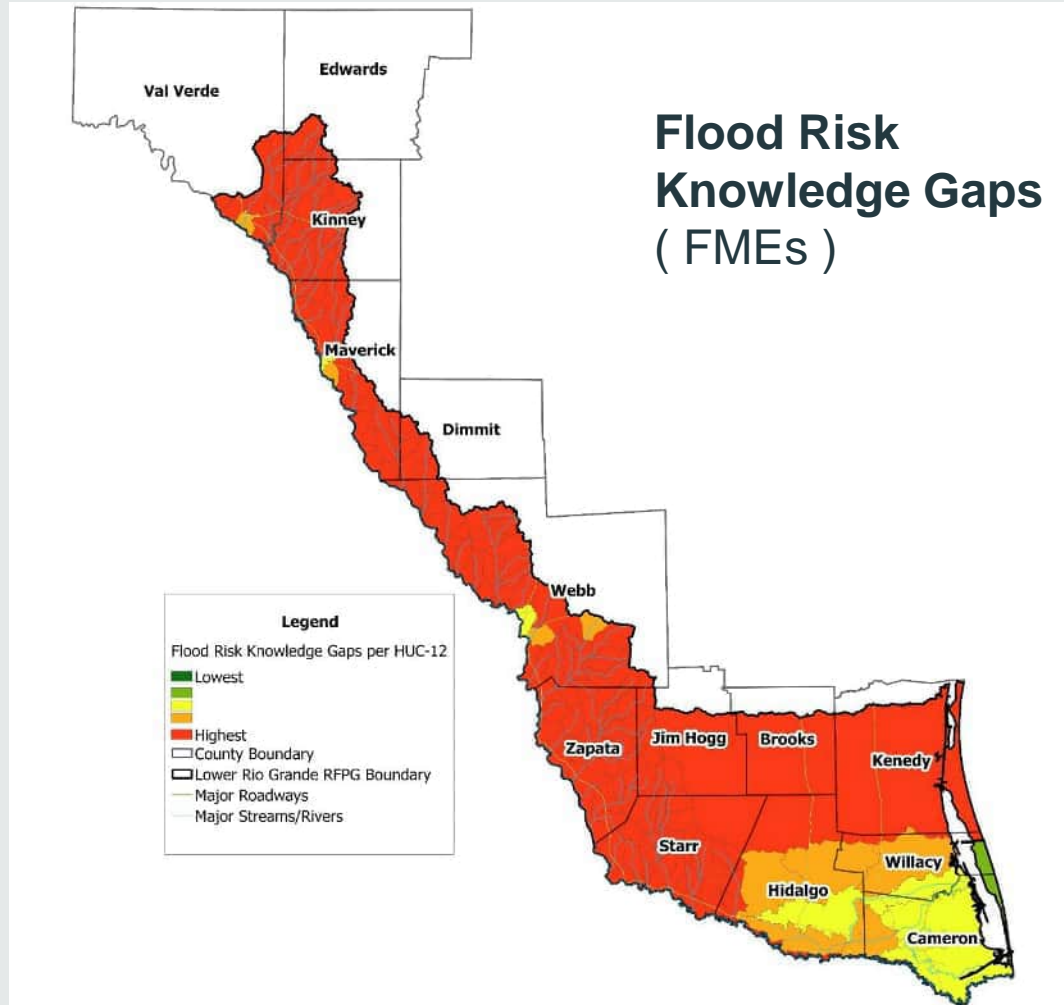
Goal of Task

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





CH. 4A – FLOOD MITIGATION NEEDS ANALYSIS





CH. 4B – POTENTIAL FMEs, FMSs & FMPs

Review of FMEs, FMPs, and FMSs (FMX)

FLOOD MANAGEMENT EVALUATIONS (FMEs) <i>(proposed studies)</i>				FLOOD MITIGATION PROJECTS (FMPs) <i>(proposed projects)</i>	
Studies		Risk Reduction Analysis		Structural Infrastructure	Non-Structural
Flood Preparedness Study	Modeling and Mapping / Risk Identification	Alternatives Analysis / Feasibility Assessment	Preliminary Engineering (30% design)	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
FLOOD MANAGEMENT STRATEGIES (FMSs) <i>(proposed plans)</i>					
<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 		



CH. 4B – FMX SELECTION PROCESS

6 General Steps

STEP 1	INITIAL SCREENING OF <i>EVALUATIONS, PROJECTS & STRATEGIES</i> RECEIVED Screen for minimum TWDB rules and guidance requirements
STEP 2	SCREENING OF <i>PROJECTS (FMPs)</i> Screen per TWDB flowchart and guidance
STEP 3	SCREENING OF <i>EVALUATIONS (FMEs)</i> Screen for minimum TWDB guidance requirements
STEP 4	SCREENING OF <i>STRATEGIES (FMSs)</i> Screen for minimum TWDB guidance requirements
STEP 5	DETAILED EVALUATIONS OF SELECTED <i>EVALUATIONS, PROJECTS & STRATEGIES</i>
STEP 6	FINAL RECOMMENDATIONS OF <i>EVALUATIONS, PROJECTS & STRATEGIES</i>



CH. 4B – FMX SELECTION PROCESS

STEP 1

INITIAL SCREENING OF *EVALUATIONS, PROJECTS & STRATEGIES* RECEIVED

Screen for minimum TWDB rules and guidance requirements

Does it address the following?

- 1.1 Flood mitigation or floodplain management goal (Task 3B)
- 1.2 Meet an emergency need
- 1.3 Flood problem with drainage area of 1 square mile or greater*
- 1.4 Reduce 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

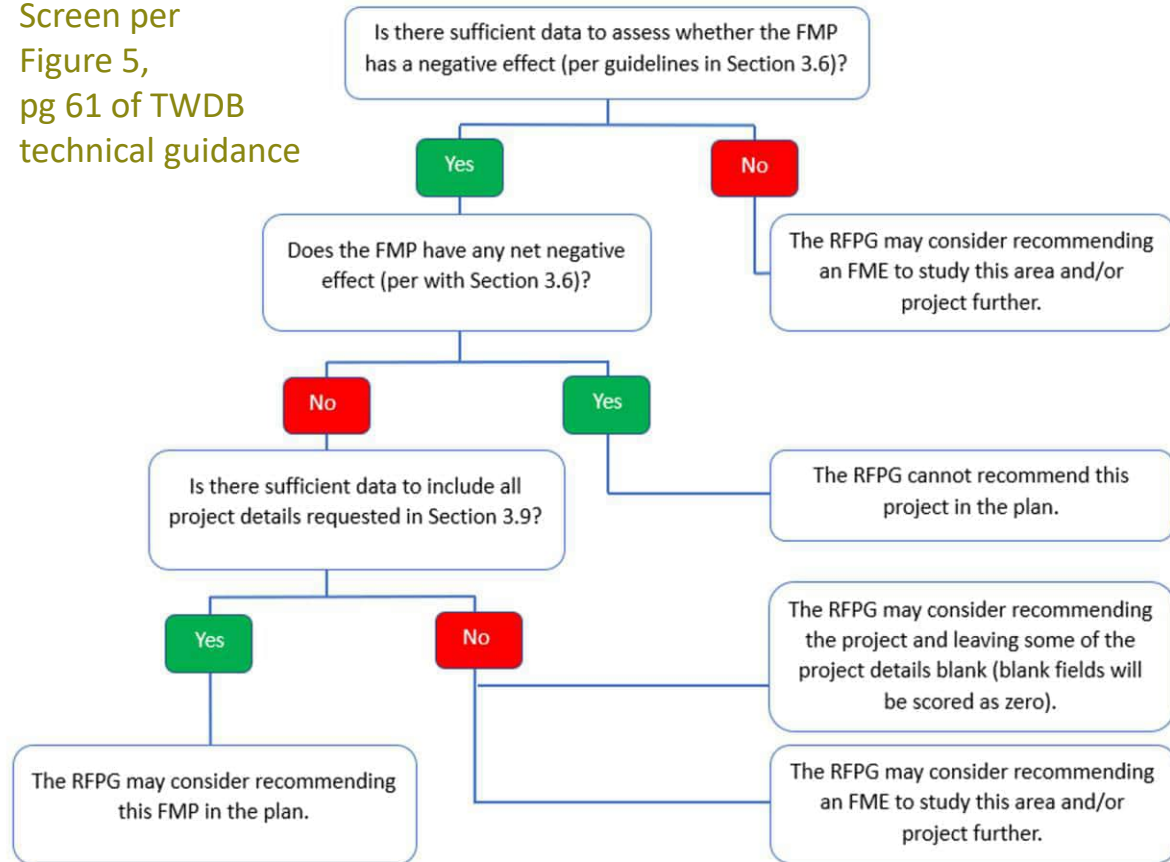


CH. 4B – FMP SELECTION PROCESS

STEP 2

SCREENING OF PROJECTS

Screen per
Figure 5,
pg 61 of TWDB
technical guidance



“Sufficient data”

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

“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



CH. 4B – FME SELECTION PROCESS

STEP 3

SCREENING OF *EVALUATIONS*

Three General Categories of Evaluations:

1. Projects (FMPs) that didn't make the cut in Step 2 FMP Selection Process
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

Screen for minimum TWDB rules and guidance requirements

- 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



CH. 4B – FMX SELECTION PROCESS

STEP 5

DETAILED EVALUATIONS OF SELECTED *EVALUATIONS, PROJECTS & STRATEGIES*

Does it have the following?

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



CH. 4B – IDENTIFICATION OF NEEDS

Potential FMEs Identified

FME Type	FME Description	# of Potential FMEs Identified
Watershed Planning	Flood Risk Modeling/ Mapping Promotes the development and/or refinement of detailed flood risk maps to address data gaps and inadequate mapping. Creates FEMA mapping in previously unmapped areas and updates existing FEMA maps as needed.	24
Project Planning	Flood Mitigation Alternative Analysis/ Feasibility Study Supports the development and analysis of H&H models to evaluate flood risk within specific problem area, evaluate potential alternatives to mitigate flood risk, and develop a project.	85
Other	Preliminary Engineering Evaluation of a proposed project to determine whether implementation would be feasible OR initial engineering assessment that includes conceptual design, alternative analysis, and up to 30 percent engineering design.	24
	Total	133



CH. 4B – IDENTIFICATION OF NEEDS

Potential FMPs Identified

Entity	FMP Description		# of Potential FMPs Identified
City of Alton	<ul style="list-style-type: none"> West Mile 5 Road and Louisiana Street Alt. 2 FM 676 South Glasscock Road Alternative 3 North Inspiration Rd and W St. Jude Ave Alt 2 	<ul style="list-style-type: none"> North Stewart Boulevard Alternative 2 South Stewart Boulevard Alternative 2A West Mile 5 and South Glasscock Road Alt 3 	6
City of Eagle Pass	<ul style="list-style-type: none"> Risk Area 11 Rancho Escondido Risk Area 12 Fox Borough Drive Risk Area 13 Celle De Los Santos neighborhood Risk Area 15 Trib 3 Detention at Main Street Risk Area 2 Treasure Hills 	<ul style="list-style-type: none"> Risk Area 3 Arrow Point Boulevard Risk Area 4 Bibb & Misty Willow storm drain Risk Area 5 Debona Drive Risk Area 6 Trib 2 bypass & detention at Eagle Pass High School fields Risk Area 8 Tributary 2 channel widening near Alexander Drive 	10
City of Pharr	<ul style="list-style-type: none"> Downtown Pharr Mitigation Project North Pharr Backwater Relief Project North Pharr Culvert Improvements 	<ul style="list-style-type: none"> North Pharr Mitigation Project Pharr - San Juan Regional Detention Facility 	5
City of Weslaco	<ul style="list-style-type: none"> South Texas Boulevard and East 18th Street Pleasantview Drive and 11th Street Los Torritos Str and N Kansas Avenue, Ph 2 Mile 10 N and Mile 5 ½ W 	<ul style="list-style-type: none"> South International Boulevard and Bus 83 Texas Blvd to Airport Dr South of Bus 83 West Weslaco Westgate Drive and Sugar Cane Drive 	8
Hidalgo County Precinct 4	<ul style="list-style-type: none"> Risk Area A at Mile 8.5 Rd. & Ware Rd. Risk Area B at Mile 6 & North Ware Rd. Risk Area C at FM 2812 & FM 493 Risk Area D at S. McColl & Canton Rd. 	<ul style="list-style-type: none"> Risk Area E at Hwy 107 & Val Verde Rd. Risk Area F at Texas Rd. & Cesar Chavez Rd. Risk Area G at Hoehn Rd. & Mile 11 Rd. Risk Area I at Sharp Rd. & E Monte Cristo Rd Risk Area J at SH107 & FM 907 	9
Total			38



CH. 4B – IDENTIFICATION OF NEEDS

Potential FMSs Identified

FMS Type	FMS Description	# of Potential FMSs Identified
Education and Outreach	NFIP Education; Flood Education; Floodplain Regulatory Awareness; Emergency Contact Awareness	8
Flood Measurement and Warning	Flood Warning Systems; Mass Notifications during Natural Hazard Incident; Dam Inundation Studies	25
Regulatory and Guidance	City Floodplain Ordinance Creation/Updates; Zoning Regulations; Land Use Programs;	18
	Total	51



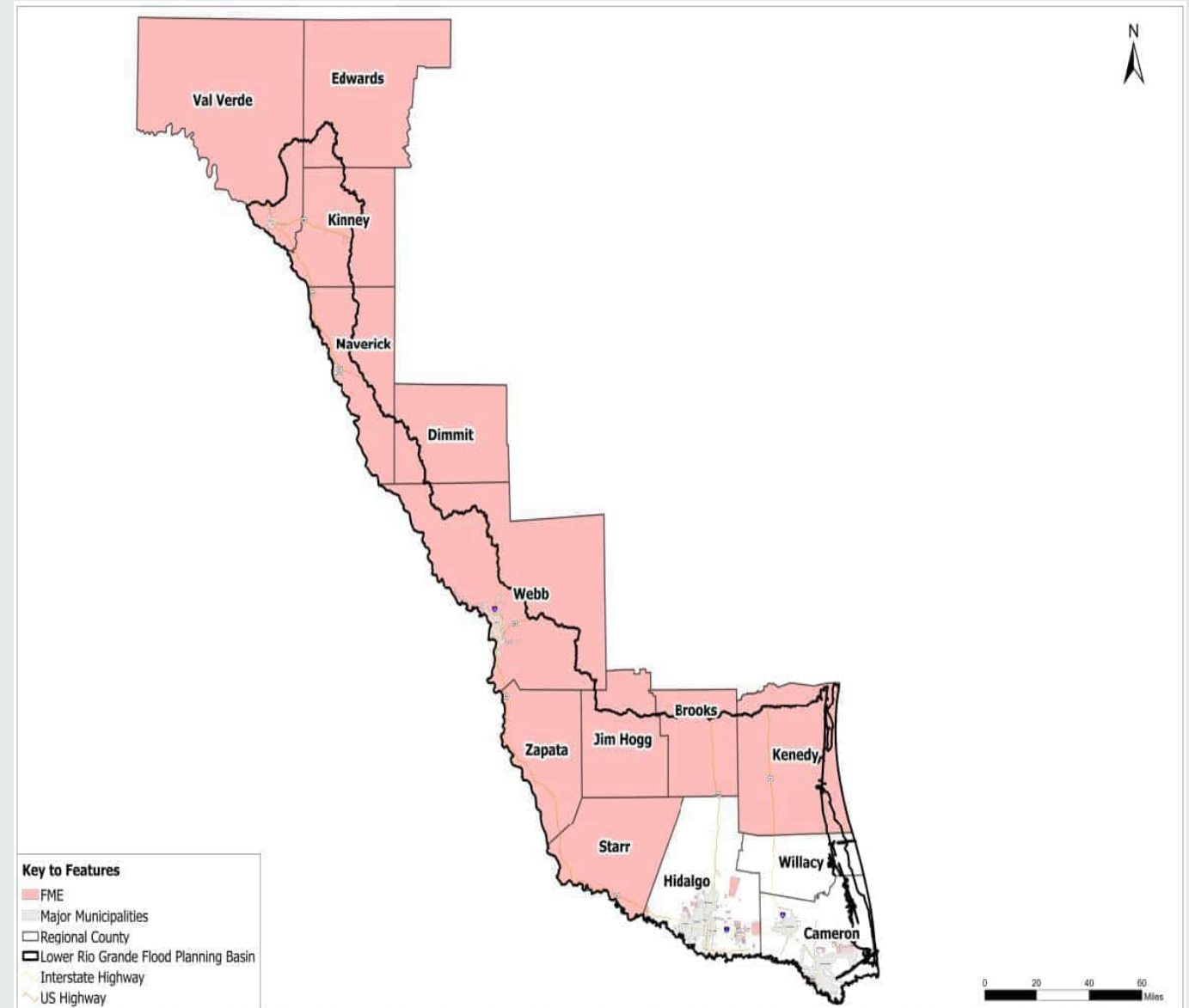
TASK 5 - RECOMMENDED FMEs

FME Type	FME Description	# of Potential FMEs Identified	# of FMEs Recommended	Total Cost of Recommended FMEs
Watershed Planning	Flood Risk Modeling/ Mapping	24	22	\$7,500,000
Preparedness	Flood Mitigation Alternative Analysis/ Feasibility Study	85	51	\$22,195,000
Other	Preliminary Engineering	24	22	\$27,330,000
Total		133	95	\$57,025,000



TASK 5 - RECOMMENDED FMEs

- ❑ FME's provide watershed planning, a detailed hydrologic and hydraulic studies and will highlight flood risk within the region.
- ❑ Preparedness and flood mitigation alternatives that serve as feasibility studies.
- ❑ Preliminary Engineering designs to address specific flood needs.





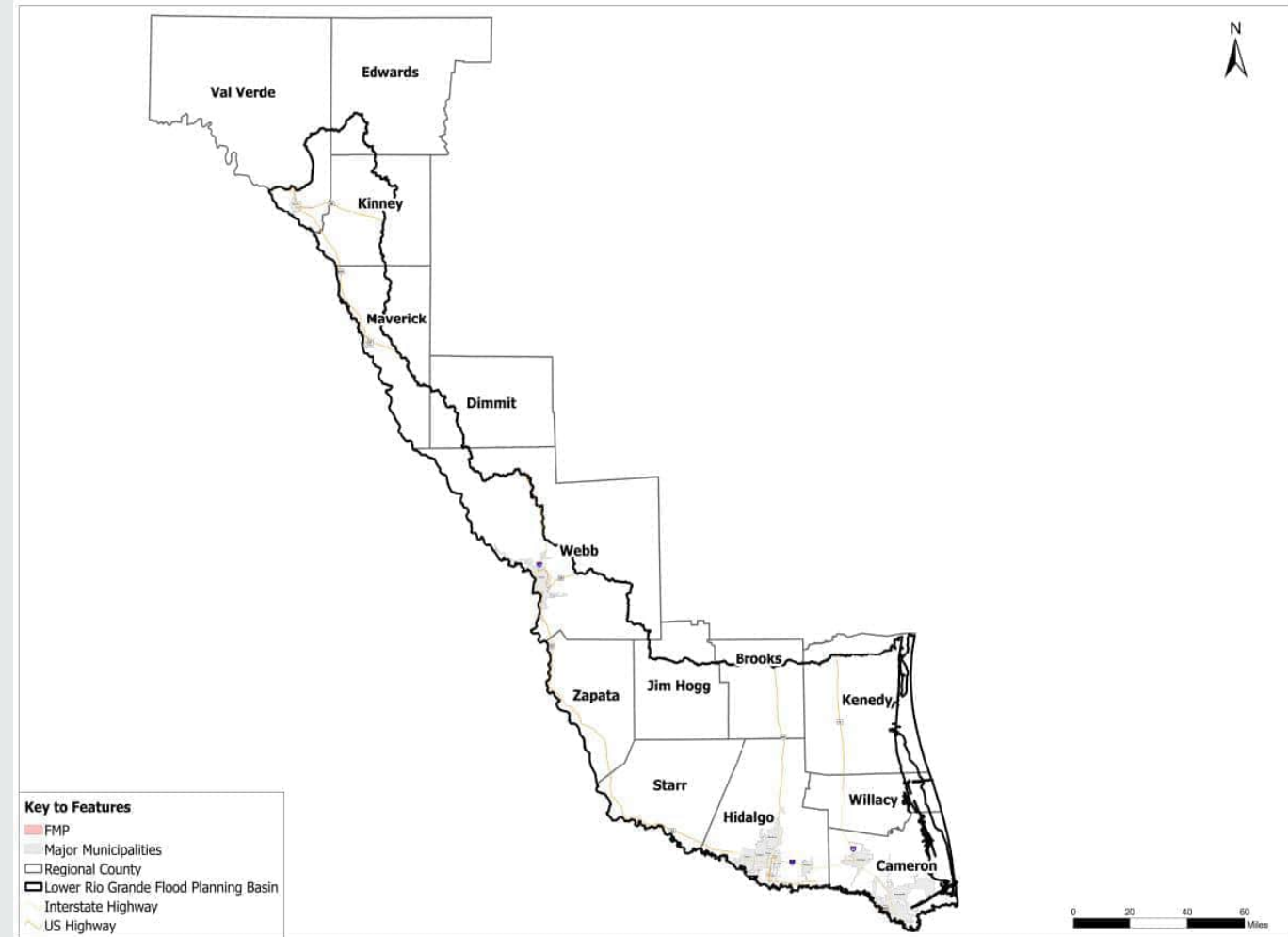
TASK 5 - RECOMMENDED FMPs

FMP Name	FMP Description	Cost
North Pharr Mitigation Project	Construct 3400 linear feet of channel, culvert improvements, a connection to the outfall, and an inline Regional Detention Facility (RDF) along the Pharr-McAllen drain	\$8,195,000
Southwest Pharr Drainage Mitigation Project	Construct four regional detention facilities (RDF) in South Pharr.	\$5,587,000
Total		\$13,782,000



TASK 5 - RECOMMENDED FMPs

- ❑ Designed to demonstrate a no negative impact on a neighboring area as a result of implementation.
- ❑ If negative impact are identified, mitigation measures may be utilized to alleviate impact.
- ❑ Uses engineers professional judgment to alleviate if negative impact is observed from implementation.





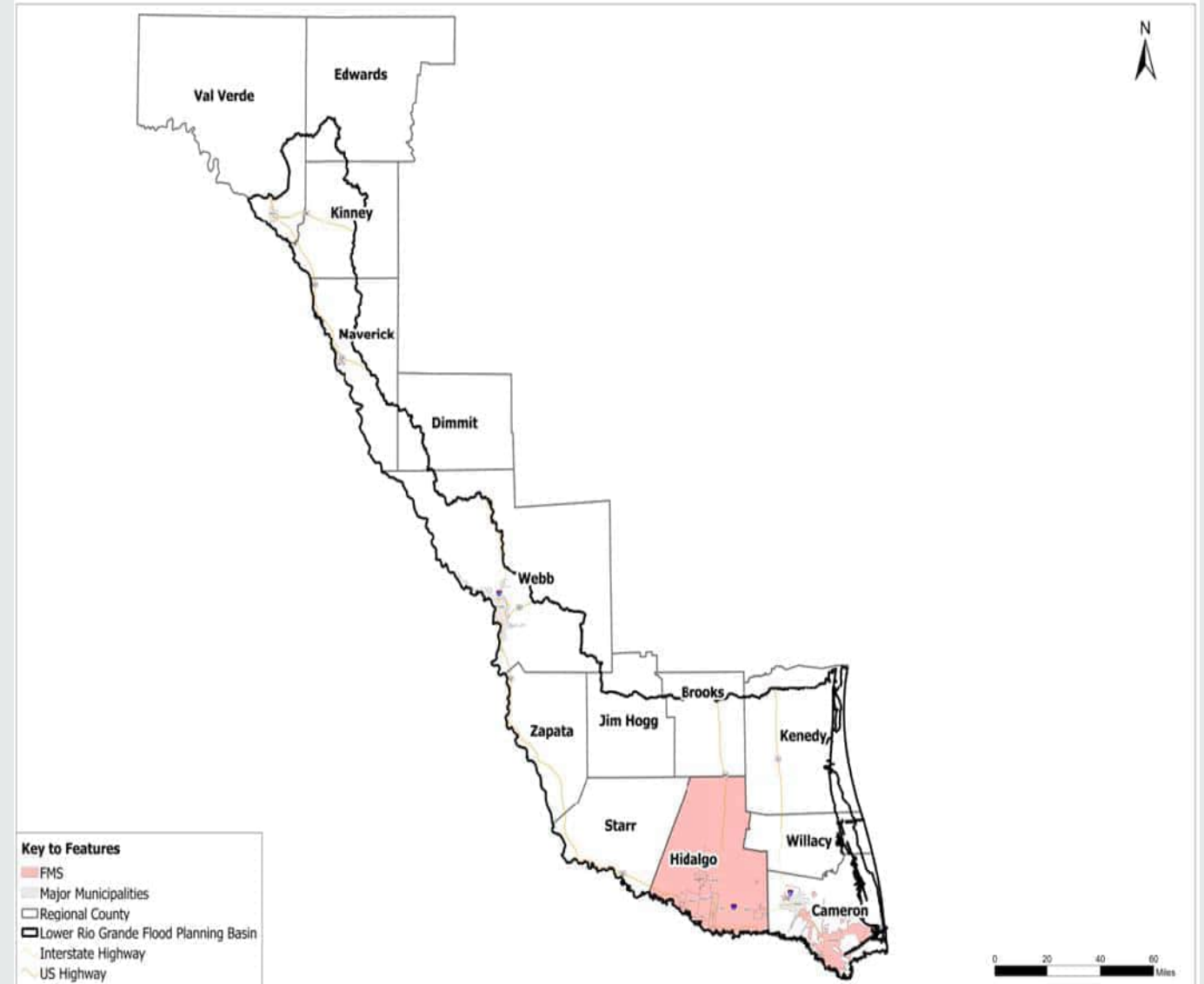
TASK 5 - RECOMMENDED FMSs

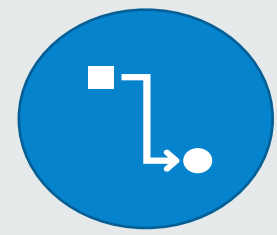
FMS Type	FMS Description	# of Potential FMSs Identified	# of FMSs Recommended	Total Cost of Recommended FMSs
Education and Outreach	NFIP Education; Flood Education; Floodplain Regulatory Awareness; Emergency Contact Awareness	8	8	\$66,000
Flood Measurement and Warning	Flood Warning Systems; Mass Notifications during Natural Hazard Incident; Dam Inundation Studies	25	25	\$1,867,000
Regulatory and Guidance	City Floodplain Ordinance Creation/Updates; Zoning Regulations; Land Use Programs;	18	18	\$2,177,000
	Total	51	51	\$4,109,000



TASK 5 - RECOMMENDED FMSs

- ❑ Similar to FMP requirements and must be able to demonstrate
 - ❑ Support one regional floodplain mitigation goal
 - ❑ No negative impact to an entity's water supply
 - ❑ No overallocation of a water source based on availability.
 - ❑ No negative impacts on downstream properties.





CH. 6 – IMPACTS & CONTRIBUTIONS OF THE REGIONAL FLOOD PLAN

Population Removed from the Floodplain

Annual Chance Event Flood Event	Existing At-Risk Population	Reduction of At-Risk Population after Implementation	Decrease in Population Impacted
1% (100-Year Event)	276,662	7,217	2.6%
0.2% (500-Year Event)	689,125	42,064	6.1%
Total	965,787	49,281	5.1%

Structures Removed from the Floodplain

Annual Chance Event Flood Event	Existing At-Risk Structures	Reduction of At-Risk Structures after Implementation	Decrease in Structures Impacted
1% (100-Year Event)	114,282	4,530	4%
0.2% (500-Year Event)	174,084	7,204	4.1%
Total	288,366	11,734	4%



TASK 7 – PREPAREDNESS ACTIVITIES

Activities before a flood event

☐ Preparedness Activities

- ☐ Early Warning Systems
- ☐ Education on Suggested Response Activities
- ☐ Procurement of Emergency Response Equipment
- ☐ Hazard Mitigation Planning



<p>WARNING</p> <p>A warning is issued when a hazardous weather or hydrologic event is occurring, imminent or likely. A warning means weather conditions pose a threat to life or property. People in the path of the storm need to take protective action.</p>
<p>WATCH</p> <p>A watch is used when the risk of a hazardous weather or hydrologic event has increased significantly, but its occurrence, location or timing is still uncertain. A watch means that hazardous weather is possible. People should have a plan of action in case a storm threatens and they should listen for later information and possible warnings especially when planning travel or outdoor activities.</p>
<p>ADVISORY</p> <p>An advisory is issued when a hazardous weather or hydrologic event is occurring, imminent or likely. Advisories are for less serious conditions than warnings, that cause significant inconvenience and if caution is not exercised, could lead to situations that may threaten life or property.</p>
<p>OUTLOOK</p> <p>An outlook is issued when a hazardous weather or hydrologic event is possible in the next week. Outlooks are intended to raise awareness of the potential for significant weather that could lead to situations that may threaten life or property.</p>



TASK 7 – RESPONSE ACTIVITIES

Efforts during and immediately after a flood

Response Activities

- Distribution of Emergency Supplies
 - Sandbags
- Deployment of Emergency Response Equipment and Activities
 - Rescue
 - Debris Removal
 - Mobile Pumps
 - Notification System for Closures





TASK 7 – RECOVERY ACTIVITIES

Restoration efforts after the flood

Recovery Activities

- Restoration of Utilities
- Removal of Excess Debris
- Continued use of Response Equipment
- Documentation of activities for future mitigation efforts
- Damage Assessments and Reparations





TASK 8 – ADMINISTRATIVE, REGULATORY, AND LEGISLATIVE RECOMMENDATIONS

ID	Regulatory & Administrative Recommendation Statements
8.2.1	Flooding does not recognize jurisdictional boundaries. Remove barriers that prevent jurisdictions from working together to provide regional flood mitigation solutions and regional detention across jurisdictional boundaries.
8.2.2	Funding for projects that benefit agricultural activities should not be scored or awarded based on a traditional benefit-cost ratio.
8.2.3	Funding for projects in Historically Disadvantaged Communities or Areas of Persistent Poverty should be allocated a minimum amount of future funding, so they are not competing against more fortunate communities.
8.2.4	Separate funding should be made available for each of the different aspects of floodplain management, such as developing floodplain maps, flood planning studies, advance project planning and development for floodplain management projects, and implementation of floodplain management projects.
8.2.5	Require that future regional flood planning studies develop and maintain a 100-year timeline.



TASK 8 – ADMINISTRATIVE, REGULATORY, AND LEGISLATIVE RECOMMENDATIONS

ID	Legislative Recommendation Statements
8.1.1	Add legislative ability to allow counties the opportunity to establish and assess drainage (stormwater) utility fees. Legislation is needed to allow counties and others with flood control responsibilities to establish drainage (stormwater) utilities and collect fees for these services. Extend Local Government Code, Title 13, Subtitle A, Chapter 552 to allow counties the opportunity to establish and collect drainage utilities/fees.
8.1.2	Provide alternative revenue-generating sources of funding. Expand eligibility for and use of funding for stormwater and flood mitigation solutions (Local, State, Federal, Public/Private Partnerships, etc.)
8.1.3	Requirements for future planning studies



TASK 8 – ADMINISTRATIVE, REGULATORY, AND LEGISLATIVE RECOMMENDATIONS

ID	Other Recommendation Statements
8.3.1	Flood planning alternatives should include options that do not cause irreparable damage to coastal habitats.
8.3.2	The Regional Flood Plan should include tools and resources to continuously include all significant impacts on the watersheds and floodplain management.



TASK 9 – FLOOD INFRASTRUCTURE FINANCING ANALYSIS

- What role should the RFPG recommend that the State of Texas take when financing recommended FMSs, FMPs, and FMEs?
 - The State of Texas should:
 - Take additional steps to inform communities of funding opportunities
 - Expand the eligibility of project and entity types under existing programs
 - Expand funding opportunities or create new programs for communities and special districts unable to meeting local cost sharing requirements.
 - Provide resources for communities unable to apply for funding due to lack of expertise
 - Provide technical resources (or funding to acquire technical resources) to provide technical and professional services needed for funding opportunities applications
 - Prioritize vulnerable communities when considering financing recommendations
 - Require that all projects consider impacts on downtown areas.



PUBLIC COMMENT

Let us know if we need to change something.

3 WAYS TO COMMENT

1. Comment here or at any RFPG meeting
2. Provide written comments to:

Kleal@halff.com

Jaime.Salazar@hcdd1.org

Include Region 15 in the subject line.

3. www.region15lrg.org – Public Comments Page





COMMENTS



YOUR INPUT IS
IMPORTANT.

GRUPO REGIONAL DEL PLANIFICACIÓN DE INUNDACIONES DEL BAJO RIO GRANDE

*Asamblea Publica – Bosquejo revision de el
plan de inundaciones de la Región 15*

19 de octubre 2022



AGENDA

- Definir Región 15
- Grupo regional de planificación de inundaciones y el grupo de planificación
- Descripción del proceso regional de planificación de inundaciones
- Resumen del bosquejo del Plan Regional de Inundaciones para el Bajo Río Grande, Región 15
- Comentarios



REGIÓN 15- REGIÓN DE PLANIFICACIÓN DE INUNDACIONES DEL BAJO RÍO GRANDE



REGIÓN 15 - BAJO RIO GRANDE

Condados Representados:

Brooks*

Cameron

Dimmit*

Edwards*

Hidalgo

Jim Hogg*

Kenedy*

Kinney*

Maverick*

Starr

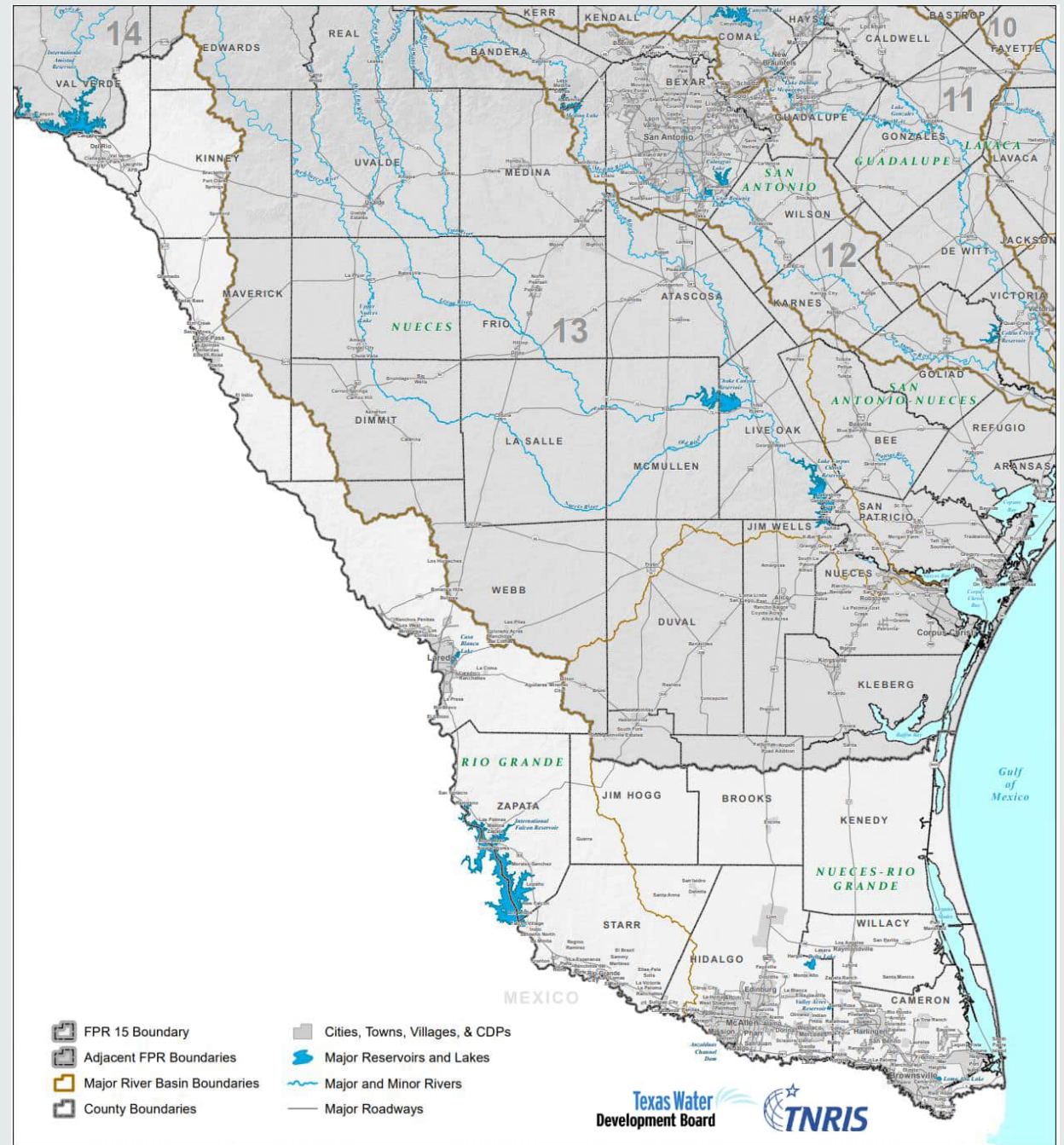
Val Verde

Webb*

Willacy

Zapata

** denota parcialmente incluido*





REGIÓN 15 - BAJO RIO GRANDE

Estimada población(2020):

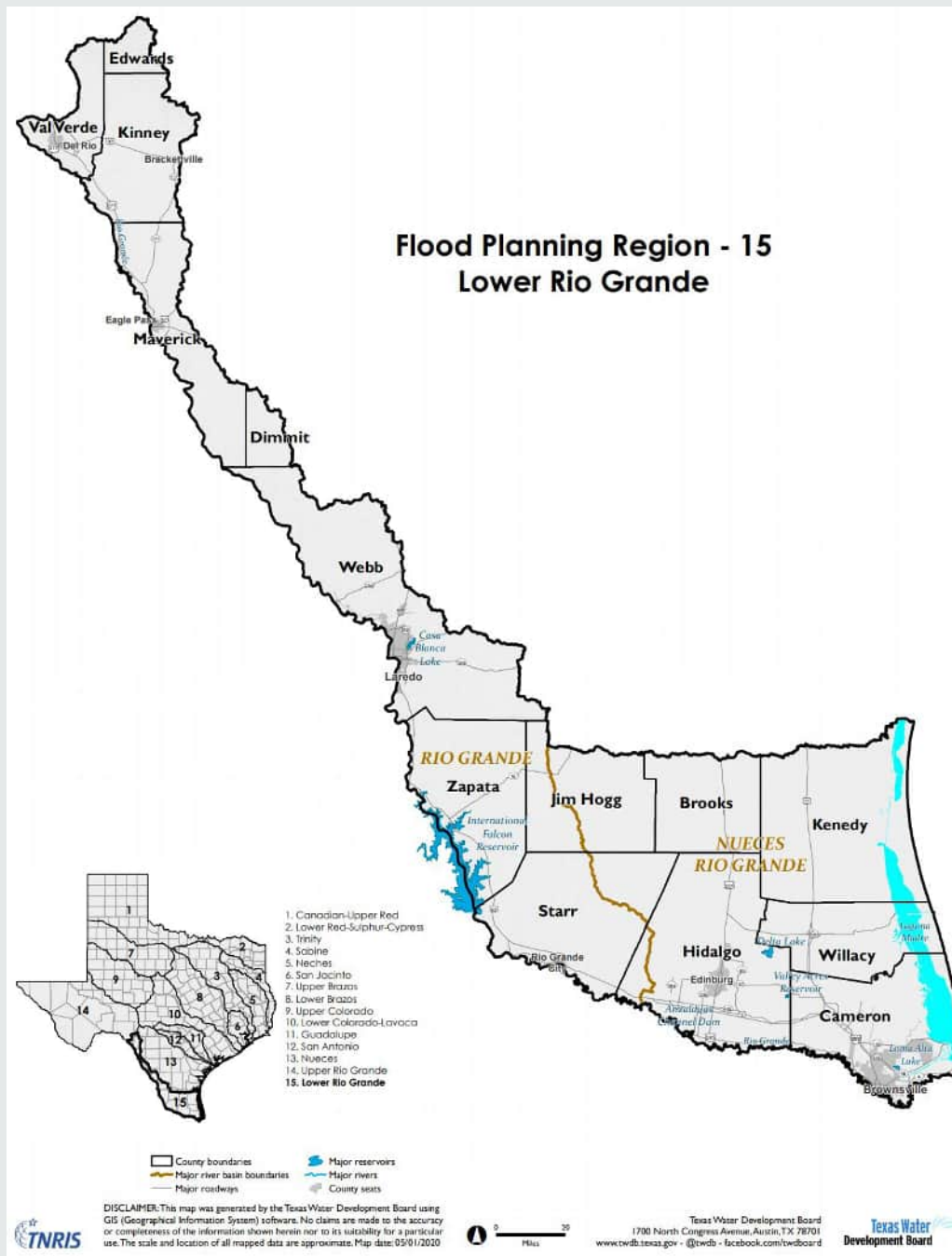
2,040,371

Área aproximada:

43,204 millas cuadradas

Approx. millas de corriente:

29,878,170





GRUPO REGIONAL DE PLANIFICACIÓN DE INUNDACIONES MIEMBROS Y EQUIPO DE PLANIFICACIÓN



MIEMBROS DEL GRUPO REGIONAL DE PLANIFICACIÓN DE INUNDACIONES (Votando)

Nombre	Categoría de Interés	Entidad
Jose Hinojosa	Agricultura	Santa Cruz Distrito de Irrigación No. 15
David A. Garza	Condados	Condado de Cameron
Raul Pena Jr.	Condados	Condado de Starr
Eduardo Gonzalez	Condados	Condado de Willacy
Daniel Lucio	Utilidades generadoras de electricidad	AEP Texas
Hudson DeYoe	Medioambiental	University of Texas Rio Grande Valley
Alan Moore	Distritos de inundación	Condado de Cameron Distrito de drenaje No. 5
David L. Fuentes	Distritos de inundación	Condado de Hidalgo Distrito de drenaje No. 1
Joey Trevino	Industrias	Capítulo del Valle del Río Grande de Contratistas Generales Asociados de América
Rene Estrada	Municipios	Ciudad de Combes
Joe Califa	Publico	Mismo
Jose Caso	Pequeñas empresas	Caso Law Firm, PLLC
Sonia Lambert	Distritos de agua	Condado de Cameron Distrito de Irrigación #2
Riazul Mia	Utilidades de agua	Ciudad de Laredo



MIEMBROS DEL GRUPO REGIONAL DE PLANIFICACIÓN DE INUNDACIONES(sin-votar)

Nombre	Titulo	Entidad
Megan Ingram	Planificadora regional de inundaciones	Junta de desarrollo de agua de Texas
Ramon Macias III	Ingeniero principal	IBWC, sección EE.UU
Shonda Mace	Planificadora	Oficina general de tierras
Willy Cupit	Especialista de recursos naturales	Departamento de Parques y vida salvaje de Texas
Lupita Trinidad- Ramos	Planificadora III de la Seguridad Nacional	Consejo de Desarrollo del sur de Texas
Brian Hurtuk	Planificador de mitigación de riesgo	Departamento de manejo de emergencias de Texas
Nelda Barrera	Representante	Departamento de agricultura de Texas
Adrian Perez	Representante	Junta de conservación de suelo y agua del estado de Texas
Manny Cruz	Director ejecutivo	Consejo de desarrollo del bajo Rio Grande
David Ramirez	Director de area – Frontera y Cuenca Permica	Comisión de Texas sobre calidad ambiental
Nick Gallegos	Director ejecutivo	Consejo de Desarrollo del Medio Río Grande



PATROCINADORES DEL GRUPO REGIONAL DE PLANIFICACIÓN DE INUNDACIONES



Hidalgo County
Drainage District
No. 1

Texas Water 
Development Board



CONSULTOR TECNICO





PARTES INTERESADAS

- Condados**
- Ciudades**
- Distritos de Control de Inundaciones**
- Distritos de drenaje**
- Distritos de Riego**

Cualquier persona con autoridad y responsabilidades de mitigación de inundaciones.

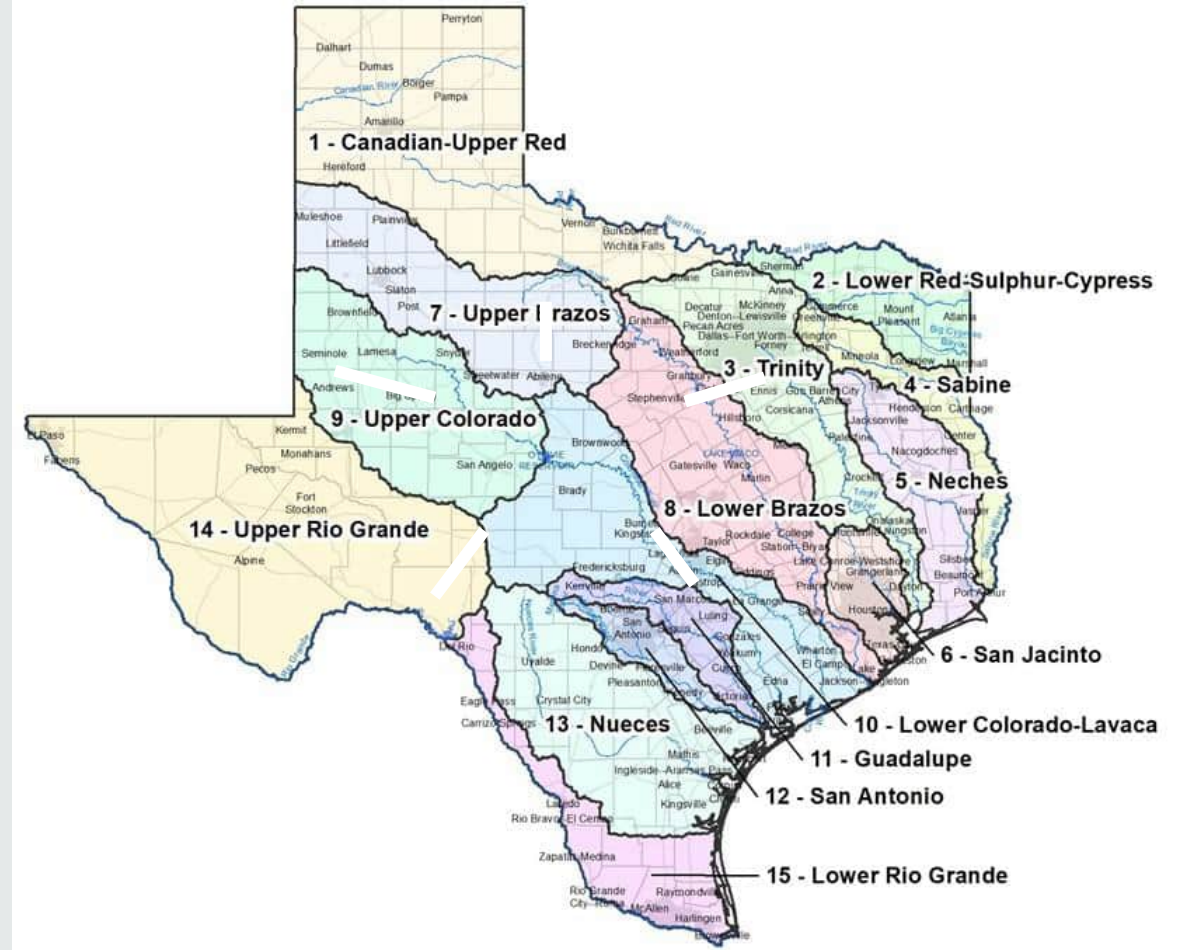
DESCRIPCIÓN DEL PROCESO REGIONAL DE PLANIFICACIÓN DE INUNDACIONES





PROCESO DE PLANIFICACIÓN REGIONAL DE INUNDACIONES

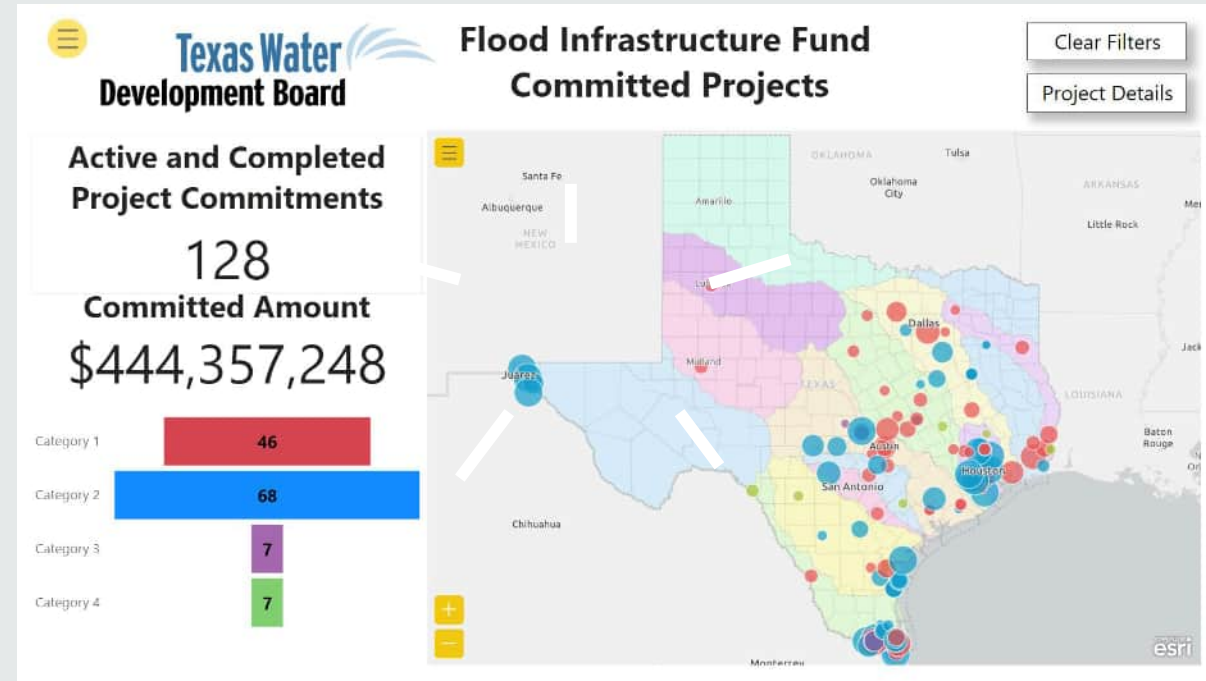
- ❑ 2019: 86th Texas Legislature passed Senate Bill 8, La Legislatura 86 de Texas aprobó el Proyecto de Ley 8 del Senado, que proporciona un nuevo proceso para la planificación de inundaciones en todo el estado
- ❑ Junta de desarrollo de agua de Texas (TWDB) encargado de la implementación
- ❑ 15 grupos regionales de planificación de inundaciones (RFPG) creados por TWDB, basados en cuencas de drenajeFirst planning cycle started late 2020
- ❑ Planes Regionales para convertirse en parte del Plan Estatal de Inundaciones en septiembre de 2024
- ❑ Actualizado cada 5 años





PROCESO DE PLANIFICACIÓN REGIONAL DE INUNDACIONES

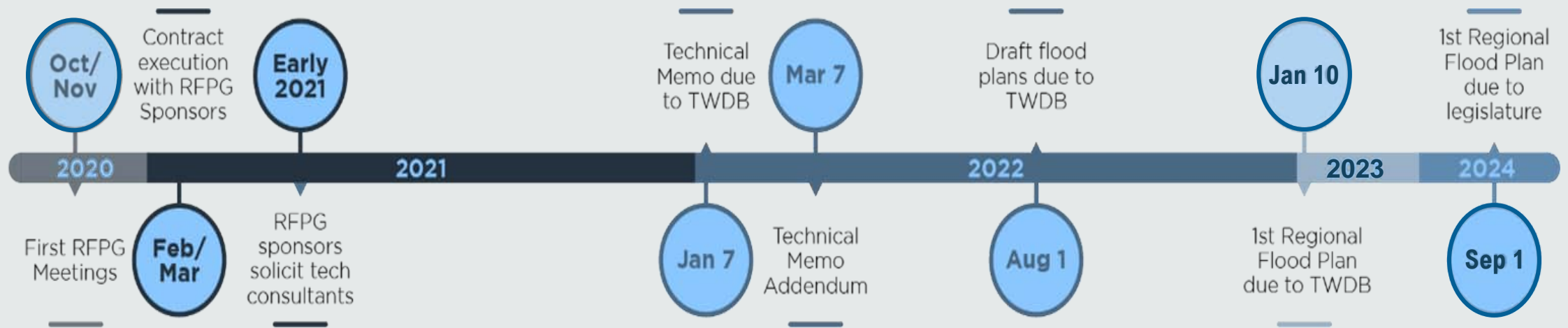
- ❑ Los planes regionales de inundación identificarán el riesgo de inundación y recomendarán
- ❑ Evaluaciones de Gestión de Inundaciones (FME)
 - ❑ Proyectos de mitigación de inundaciones (FMP)
 - ❑ Estrategias de gestión de inundaciones (FMS)
- ❑ El Plan Estatal de Inundaciones clasificará los FME, FMP y FMS recomendados a nivel estatal.
- ❑ Se necesitará la inclusión en el Plan Estatal de Inundaciones para futuros fondos estatales para actividades relacionadas con inundaciones.





REGIONAL FLOOD PLANNING PROCESS

Schedule





DESCRIPCIÓN DEL BOSQUEJO REGIÓN 15 BAJO RÍO GRANDE PLAN REGIONAL DE INUNDACIONES

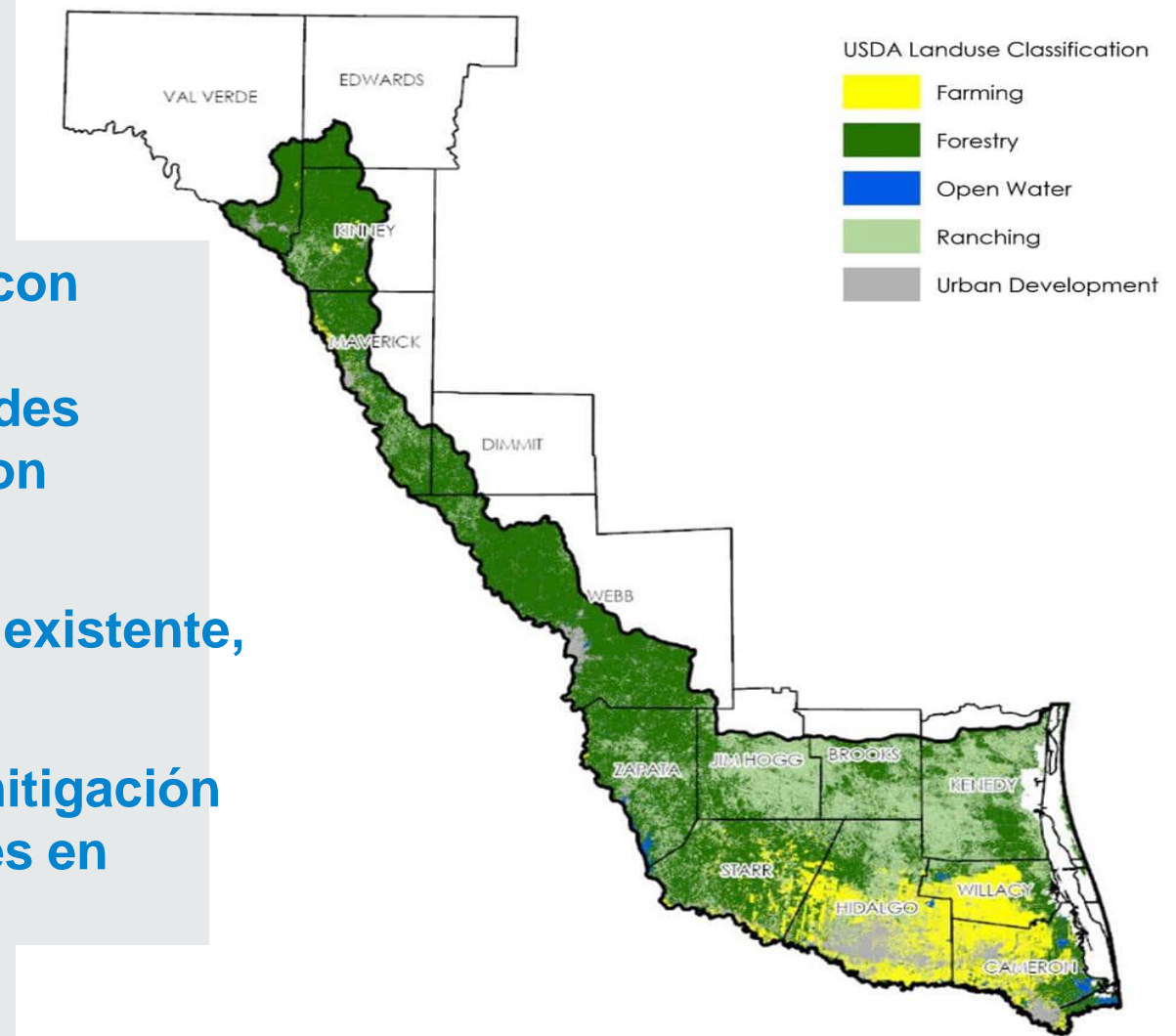


CH. 1 – PLANNING AREA DESCRIPTION

Descripción de Region 15

Descripciones de:

- ☐ ubicación,
- ☐ ciencias económicas,
- ☐ información agrícola,
- ☐ vulnerabilidad social,
- ☐ áreas propensas a inundaciones,
- ☐ inundaciones históricas y daños asociados,
- ☐ jurisdicciones con autoridades o responsabilidades relacionadas con inundaciones,
- ☐ infraestructura existente, y
- ☐ proyectos de mitigación de inundaciones en curso





CH. 1 – DESCRIPCIÓN DEL ÁREA DE PLANIFICACIÓN

Descripción de Region 15

62.7% aumento pob.

Año	Poblacion
2020	2,040,371
2050	3,311,860

54

comunidades locales

Más del 70% de la población vive en los condados de Cameron e Hidalgo

INDUSTRIAS PRINCIPALES

- ❖ cuidado de la salud
- ❖ comercio
- ❖ Otros servicios

Región MHI - \$37,595

Estado MHI - \$63,500

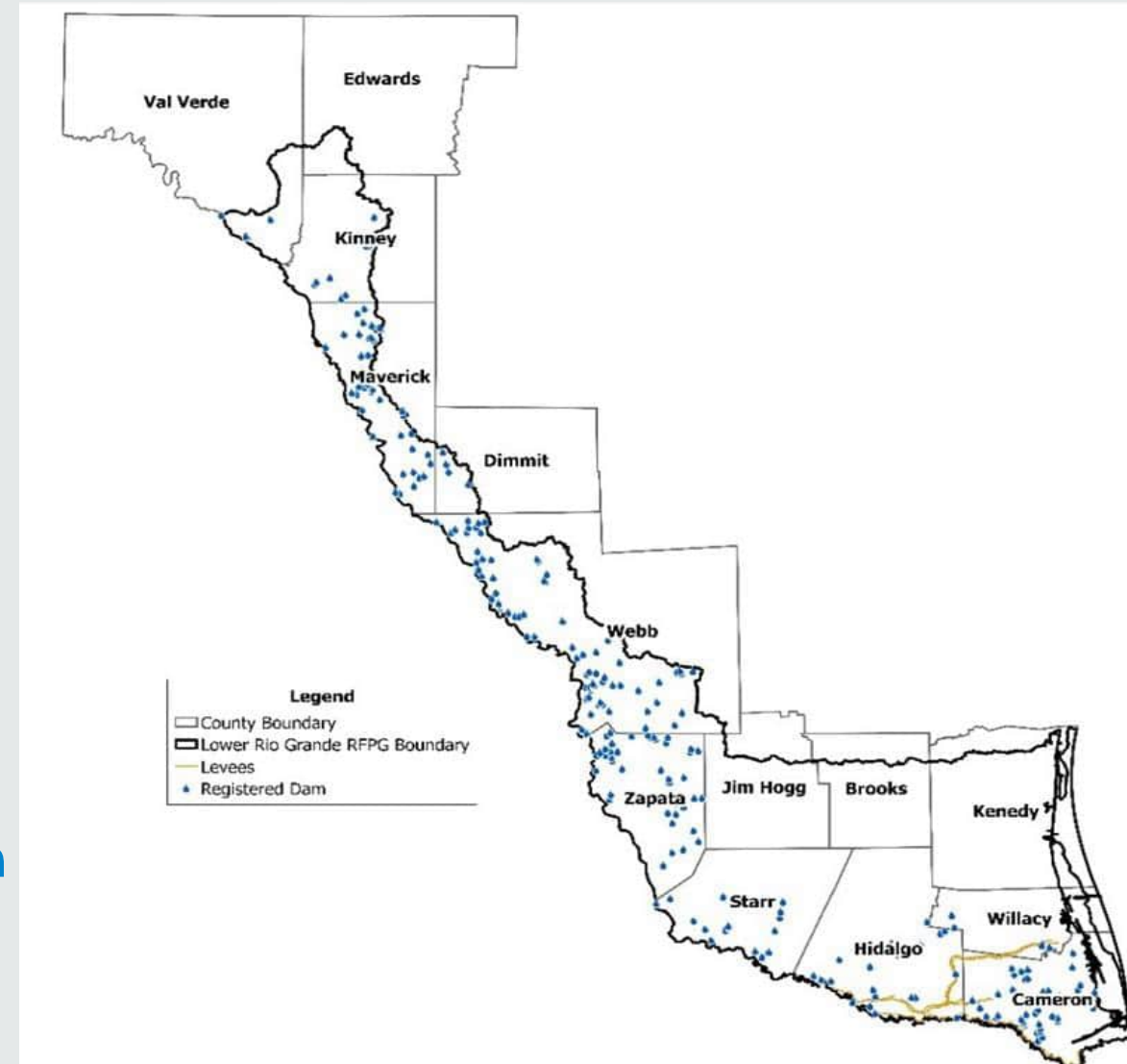
SVI para la mayor parte de la región es 0.5 – 1.0



CH. 1 – DESCRIPCIÓN DEL ÁREA

Descripción de Region 15

- ❑ 15% de la area total esta en 1% ACE
- ❑ 41 of 54 comunidades tienen 20%+ area en 1% ACE
- ❑ 86 entidades con autoridad de control de inundaciones
- ❑ 91% of entidades participan in NFIP
- ❑ 57% de los condados tienen planes de mitigación de riesgos
- ❑ 85 proyectos de mitigación de inundaciones en curso



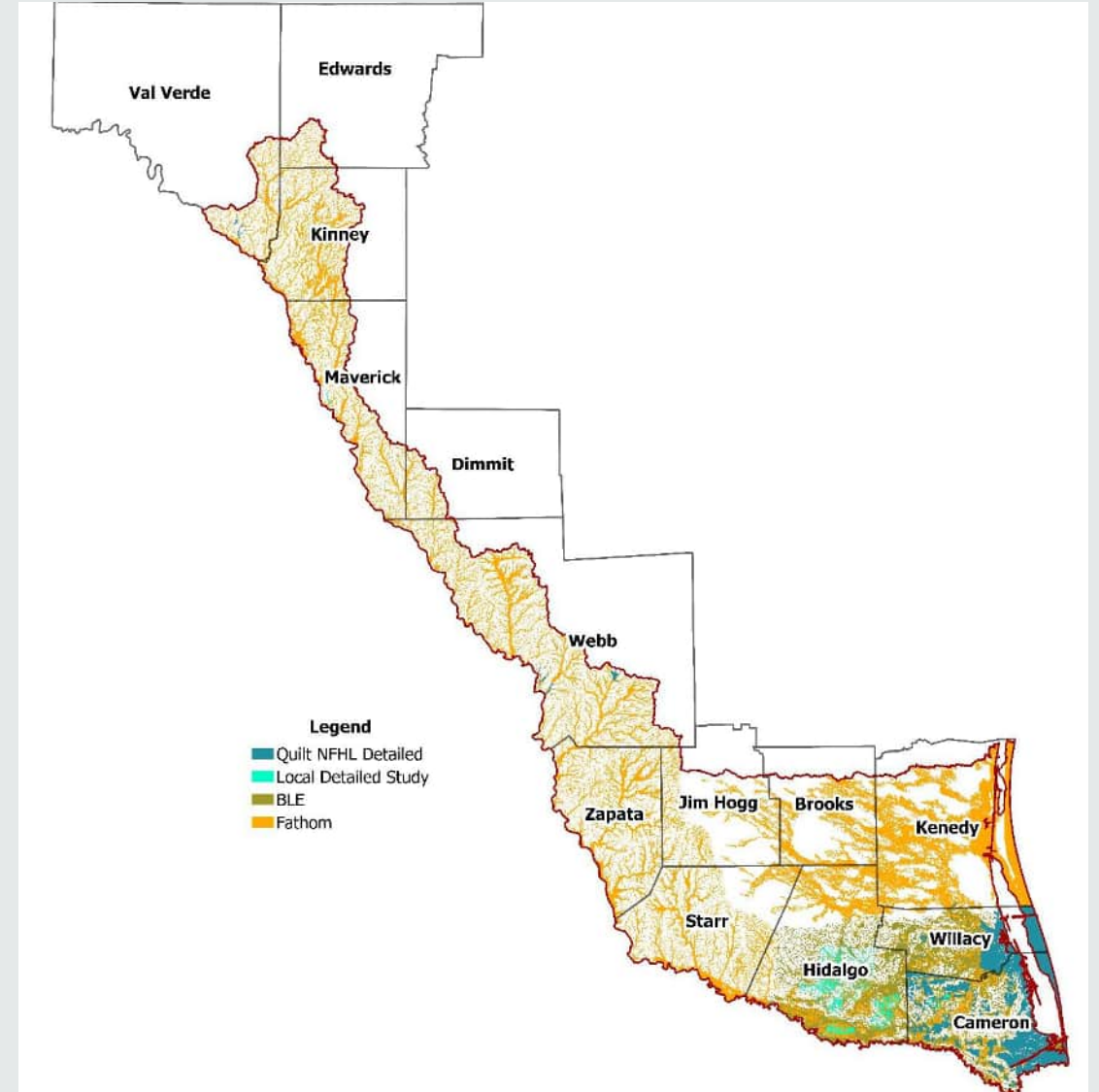


CH. 2 ANÁLISIS DE RIESGO DE INUNDACIÓN

1% & 0.2% Evento de oportunidad anual: condiciones existentes y futuras

❑ Fuentes de datos para la red/capas de la llanura de inundación

- ❑ Estudios locales (de ciudades, condados, autoridades ribereñas, etc.)
- ❑ FEMA Capa Nacional de Peligro de Inundación
- ❑ Fecha de vigencia para las áreas de estudio detalladas (Zona AE, AO, AH y VE)
 - ❑ Datos pendientes y preliminares
 - ❑ Datos efectivos para áreas de estudio aproximadas (Zona A y V)
- ❑ Ingeniería de nivel básico
- ❑ Profundo – Llanuras de inundación a nivel nacional con una resolución aproximada de 10 metros



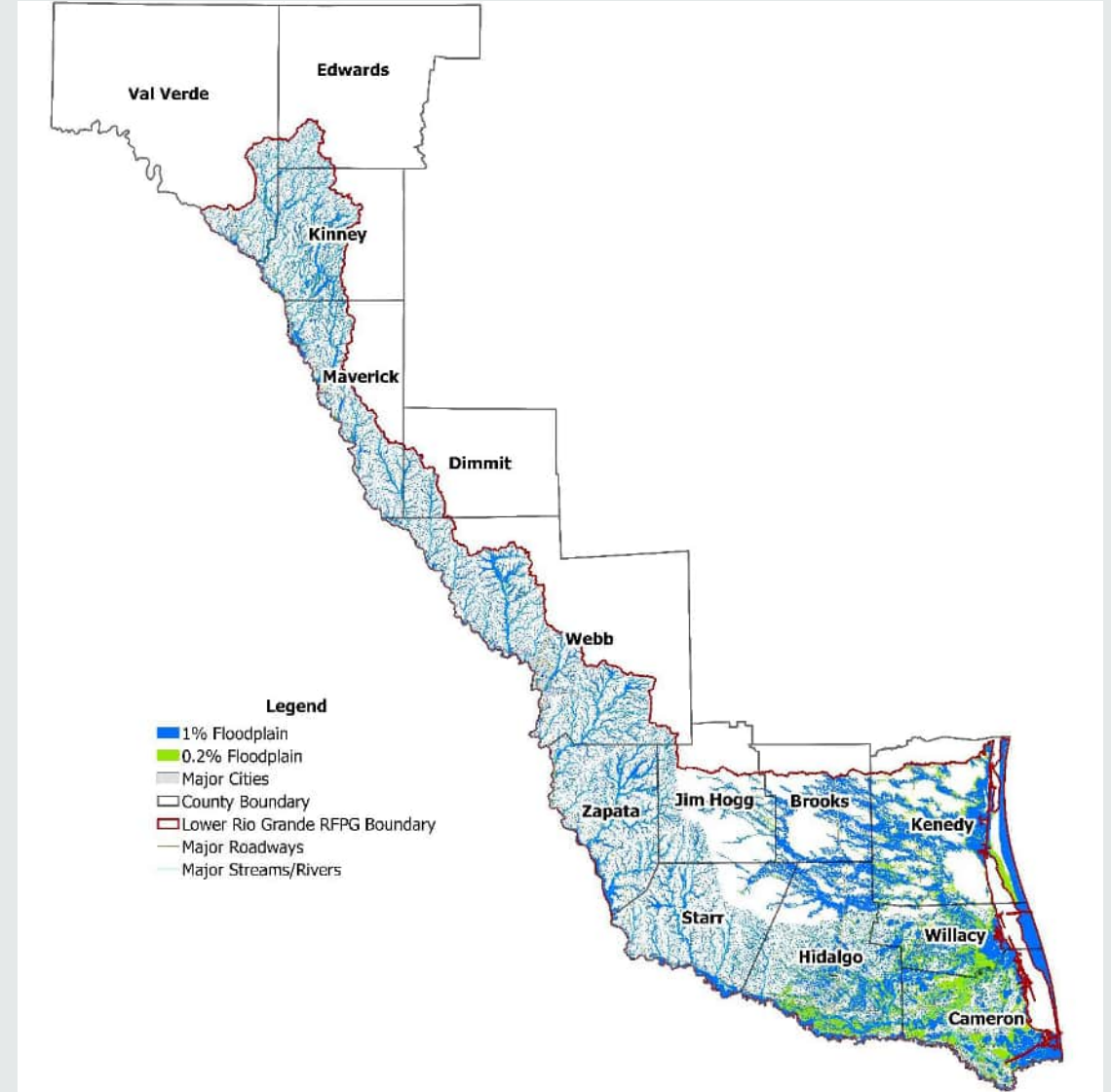


CH. 2 ANÁLISIS DE RIESGO DE INUNDACIÓN

Análisis de riesgo de inundación de condiciones existentes

% del área en el edredón existente de la planicie de inundación por condado

Condado	1% peligro de inundación	0.2% peligro de inundación*	Combinado peligro de inundación
Brooks	34%	1%	35%
Cameron	46%	30%	76%
Dimmit	24%	2.5%	27%
Edwards	22%	2%	24%
Hidalgo	40%	15.4%	55%
Jim Hogg	16%	4%	20%
Kenedy	39%	16.5%	56%
Kinney	31%	4%	35%
Maverick	29%	3.7%	33%
Starr	27%	3%	30%
Val Verde	26%	3.2%	29%
Webb	28%	3%	31%
Willacy	46%	25.6%	72%
Zapata	30%	3%	33%



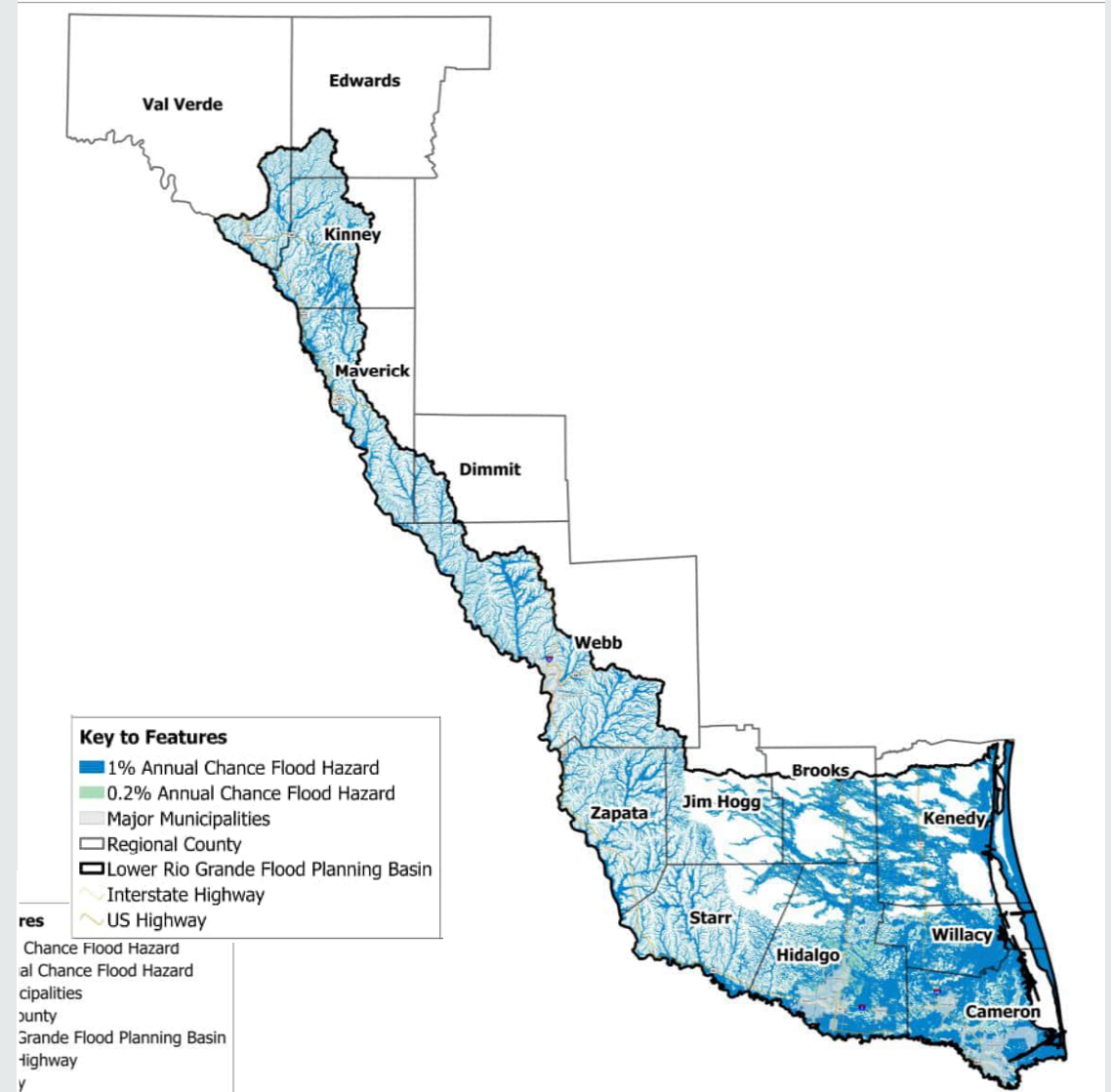


CH. 2 ANÁLISIS DE RIESGO DE INUNDACIÓN

Análisis de riesgo de inundación de condición futura

Incrementos en el área de peligro de inundación para condiciones futuras en comparación con las condiciones existentes

Frecuencia de inundaciones	Área de Condiciones Existentes (sq.mi)	Área de Condiciones Futuras (sq. mi.)	Incremento (sq. mi.)	% Incremento
1% oportunidad anual	4,078	5,287	1,209	29%
0.2% oportunidad anual	5,287	6,556	1,269	24%





CH. 2 ANÁLISIS DE RIESGO DE INUNDACIÓN

Análisis de exposición al riesgo de inundación

Resumen del aumento de la exposición en el área de riesgo de inundación, 1% ACE

Característica	Condiciones existentes	Condiciones futuras	Aumento
Poblacion	965,787	1,365,701	399,914
Total de Estructuras	288,366	394,669	106,303
Estructuras Residenciales	233,776	320,563	86,787
Estructuras no residencial	54,590	74,106	19,516
Comodidades crítica	566	865	299
Crucadero de aguas bajas	126	129	3
Segmentos de caminos (millas)	6,376	9,163	2,787
Área Agrícola (sq. mi)	1,793	2,258	465



CH. 3A – EVALUACIÓN Y RECOMENDACIÓN DE PRÁCTICAS DE GESTIÓN DE LLANURAS ALUVIALES

Prácticas y estándares recomendados, en toda la región

- ❑ Las entidades deben basar sus BFE en los mapas de empresa de FEMA en ausencia de estudios hidrológicos e hidráulicos (H&H) detallados o estudios de ingeniería de nivel básico (BLE).
- ❑ Cuando se hayan producido lesiones, enfermedades o pérdidas de vida, o cuando las alternativas de mitigación de inundaciones estructurales no sean prácticas o no sean factibles, las comunidades deben tener un programa de compra total para comprar propiedades si hay fondos disponibles. El programa debería ayudar a los propietarios a reubicarse en áreas con riesgo de inundación reducido.
- ❑ Los sistemas de drenaje pluvial deben transportar el evento de inundación con una probabilidad anual del 4 % (25 años) bajo tierra (dentro de un sistema de tubería/alcantarillado pluvial) y el evento de inundación con una probabilidad anual del 1 % (100 años) dentro del derecho de paso.



CH. 3A – EVALUACIÓN Y RECOMENDACIÓN DE PRÁCTICAS DE GESTIÓN DE LLANURAS ALUVIALES

Prácticas y estándares recomendados, en toda la región

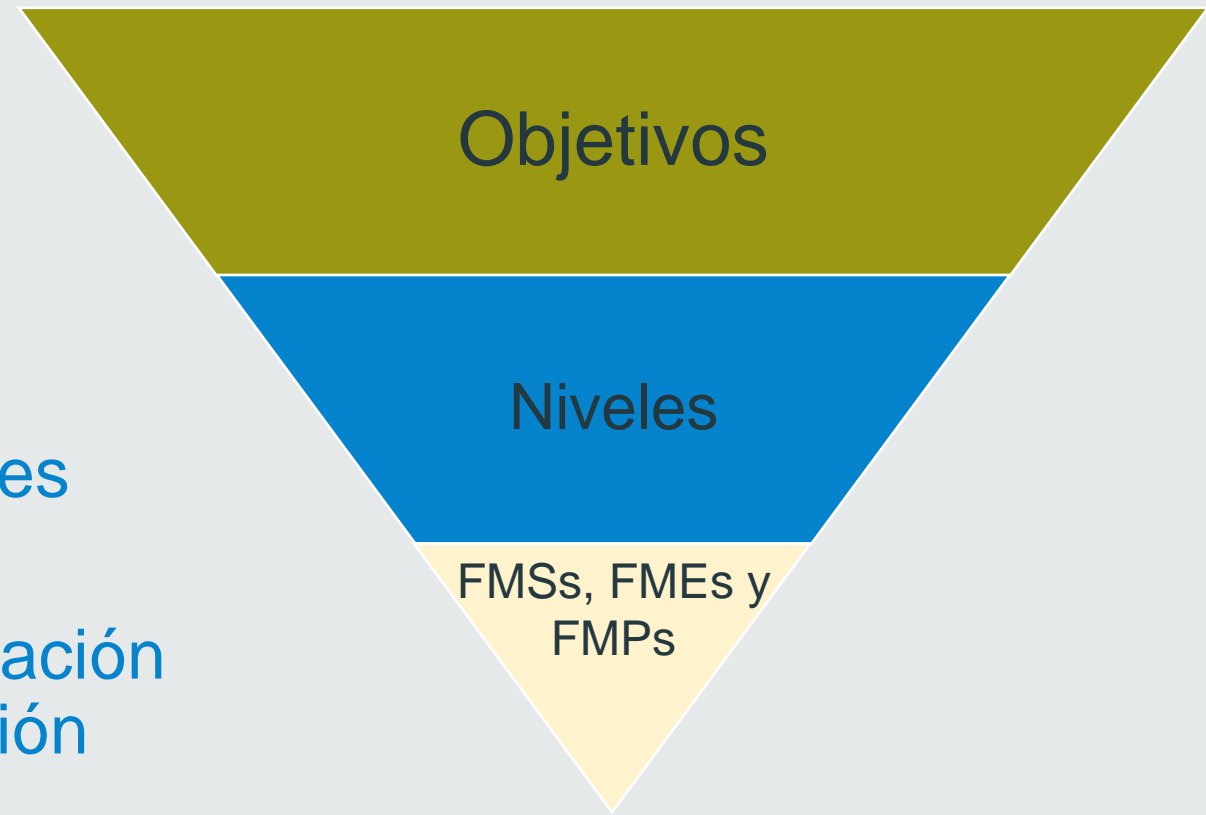
- ❑ Las carreteras nuevas y significativamente alteradas con bordillo y cuneta deben tener una probabilidad anual del 10 % (10 años) de elevación de la superficie del agua por evento de inundación por debajo de la parte superior del bordillo y un diseño de 25 años para las alcantarillas.
- ❑ Las construcciones nuevas deberán (y los edificios residenciales/comerciales preexistentes o reacondicionados fuera de las áreas costeras deberán) tener una elevación del piso terminado de 1 pie por encima del 1 por ciento anual de probabilidad de evento BFE. La nueva construcción (y la modernización de edificios residenciales/comerciales preexistentes en áreas costeras) debe tener una elevación del piso terminado de 1 pie por encima de la elevación más alta del BFE ribereño o costero, incluidos los efectos combinados ribereños y costeros.



CH. 3B – OBJETIVOS DE MITIGACIÓN DE INUNDACIONES Y GESTIÓN DE LLANURAS ALUVIALES

Categorías de metas integrales propuestas

1. Proyectos de Infraestructura de Inundaciones
2. Educación y divulgación
3. Advertencia y preparación para inundaciones
4. Estudios y Análisis de Inundaciones
5. Dgirección
6. Adquisición de Propiedades, Elevación de Estructuras e Impermeabilización

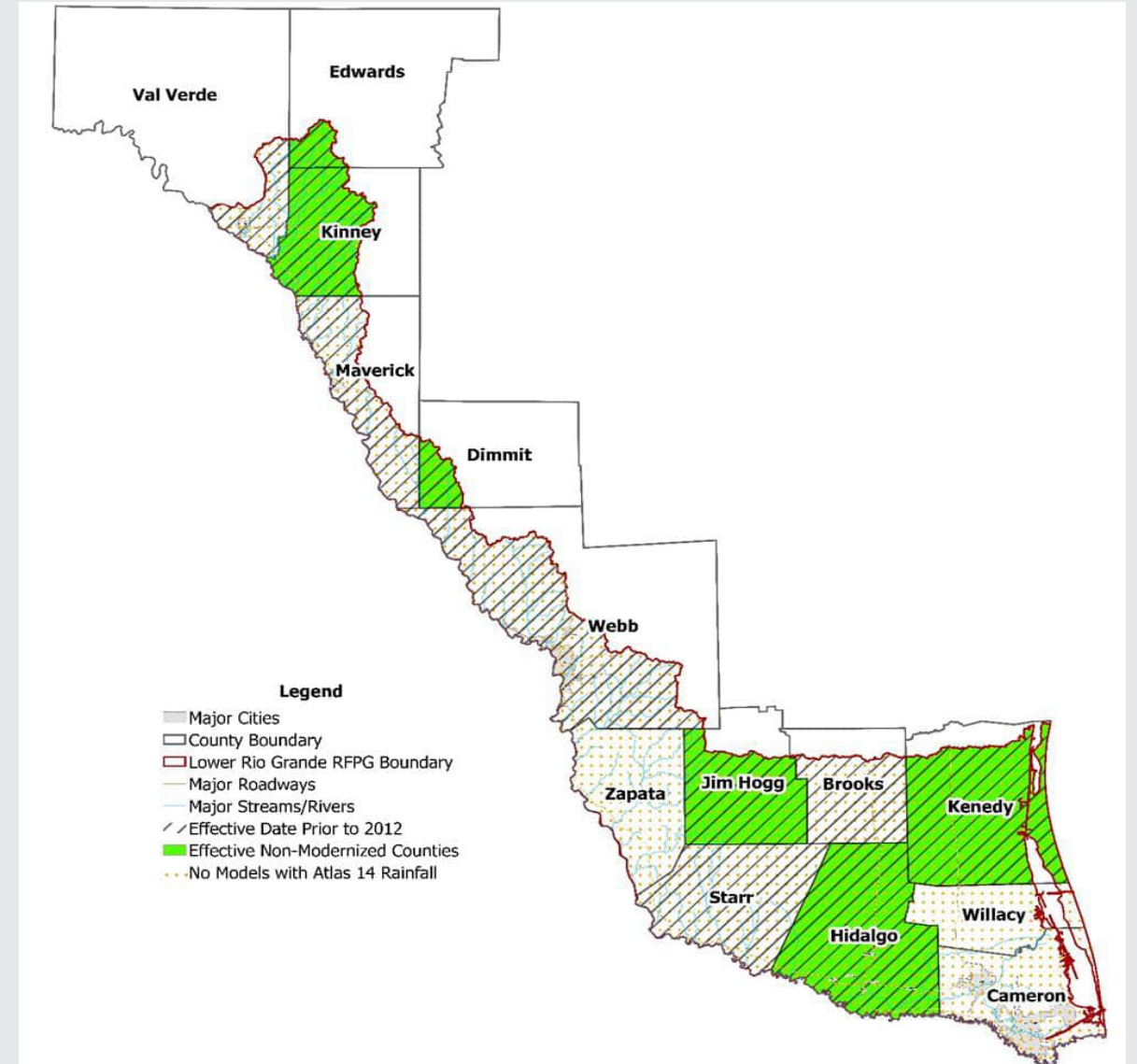




CH. 4A -ANÁLISIS DE LAS NECESIDADES DE MITIGACIÓN DE INUNDACIONES

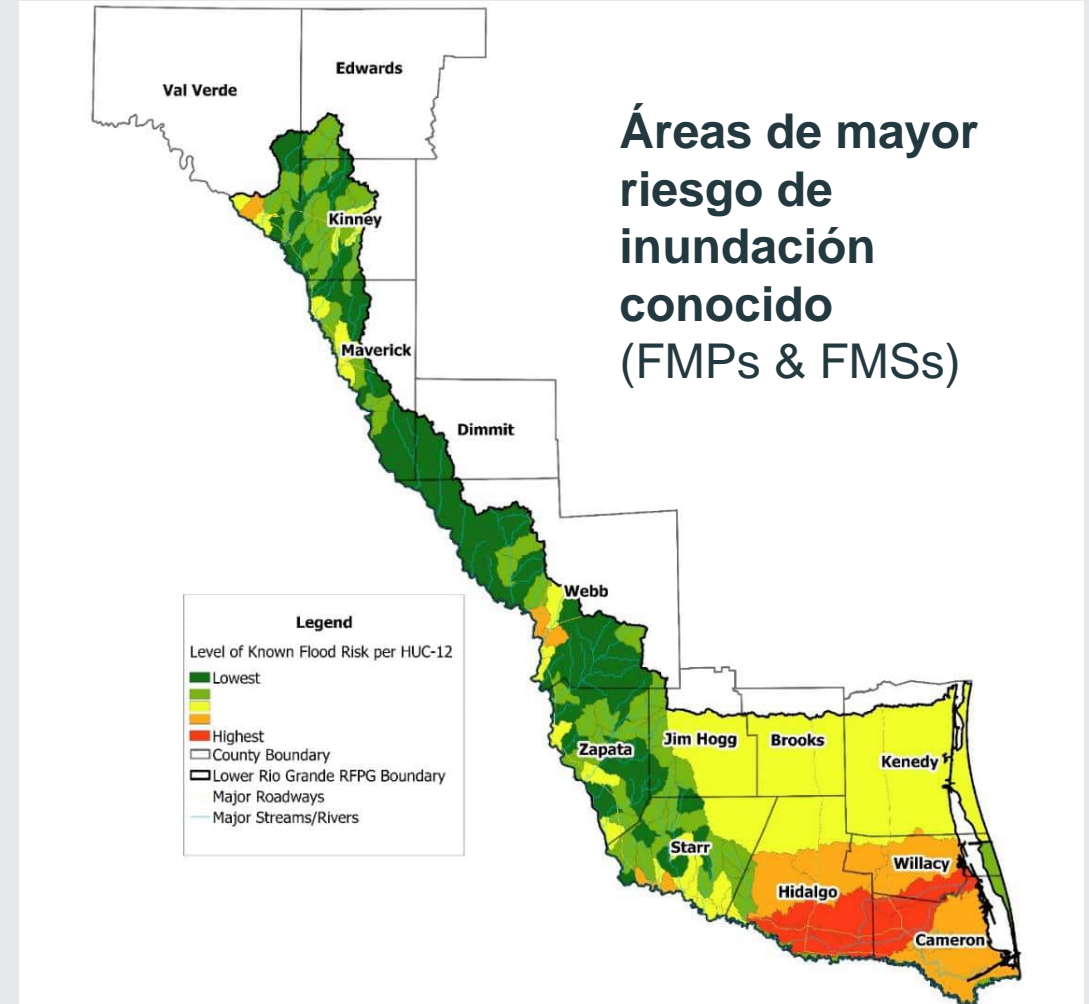
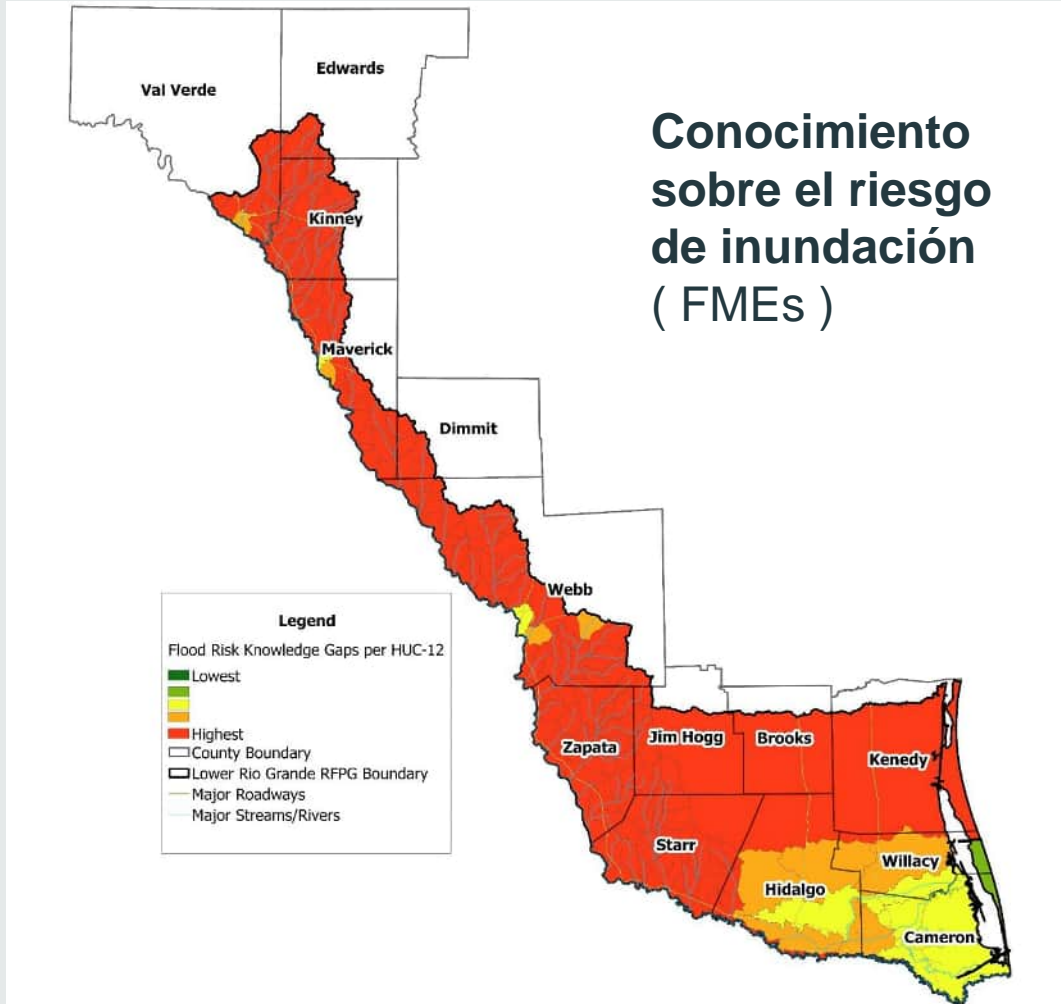
El Quehacer

- Identificar áreas en la región con mayor:
 - Conocimiento sobre el riesgo de inundación
 - FMEs
 - Riesgos de inundaciones conocidos y necesidades de mitigación de inundaciones
 - FMSs
 - FMPs





CH. 4A – ANÁLISIS DE LAS NECESIDADES DE MITIGACIÓN DE INUNDACIONES





CH. 4B – Potencial FMEs, FMSs & FMPs

Revisión de FMEs, FMPs, and FMSs (FMX)

ADMINISTRACIÓN DE INUNDACIÓN EVALUACIONES (FMEs)				PROYECTOS DE MITIGACIÓN DE INUNDACIONES (FMPs)	
Estudios		Análisis de reducción de riesgos		Infraestructura Estructural	No estructural
Estudio de preparación para inundaciones	Modelado y Mapeo / Identificación de riesgo	Análisis de alternativas / Evaluación de factibilidad	Ingeniería Preliminar (30% diseño)	Análisis avanzado / Diseño / Construcción (30 - 100% diseño)	Implementación de proyecto <ul style="list-style-type: none"> • Adquisición de Propiedad/Servidumbre • Elevación de Estructuras • Impermeabilización • Preparación para inundaciones y resiliencia • Advertencia de inundación, medidores • Los requisitos reglamentarios

ESTRATEGIAS DE GESTIÓN DE INUNDACIONES (FMSs)	
<ul style="list-style-type: none"> • Proyectos de infraestructura • Adquisición de Propiedad • Elevación de Estructuras 	<ul style="list-style-type: none"> • Educación y divulgación • Alerta y Medición de Inundaciones • Normativa y Orientación



CH. 4B – FMX PROCESO DE SELECCIÓN

6 pasos generales

MEDIDA 1	EVALUACIONES INICIALES, PROYECTOS Y ESTRATEGIAS RECIBIDAS Verifique las reglas mínimas de TWDB y los requisitos de orientación
MEDIDA 2	MUESTRA DE PROYECTOS (FMPs) Pantalla según diagrama de flujo TWDB y guía
MEDIDA 3	MUESTRA DE EVALUACIONES (FMEs) Mostrar para conocer los requisitos mínimos de orientación de TWDB
MEDIDA 4	MUESTRA DE ESTRATEGIAS (FMSs) Mostrar para conocer los requisitos mínimos de orientación de TWDB
MEDIDA 5	EVALUACIONES DETALLADAS DE SELECCIONADO EVALUACIONES, PROYECTOS Y ESTRATEGIAS
MEDIDA 6	RECOMENDACIONES FINALES DE <i>EVALUACIONES, PROYECTOS Y ESTRATEGIAS</i>



CH. 4B – FMX PROCESO DE SELECCIÓN

MEDIDA 1

EVALUACIONES INICIALES, PROYECTOS Y ESTRATEGIAS RECIBIDAS

Verifique las reglas mínimas de TWDB y los requisitos de orientación

¿Aborda lo siguiente??

- 1.1 Mitigación de inundaciones o objetivo de gestión de planicie aluvia
- 1.2 Satisfacer una necesidad de emergencia
- 1.3 Problema de inundación con área de drenaje de 1 milla cuadrada o más*
- 1.4 Reducir el riesgo de inundación para inundaciones de 100 años (1% de probabilidad anual)

*excepto en casos de inundación de instalaciones críticas o rutas de transporte o por otras razones, incluidos los niveles de riesgo o el tamaño del proyecto, determinados por la RFPG

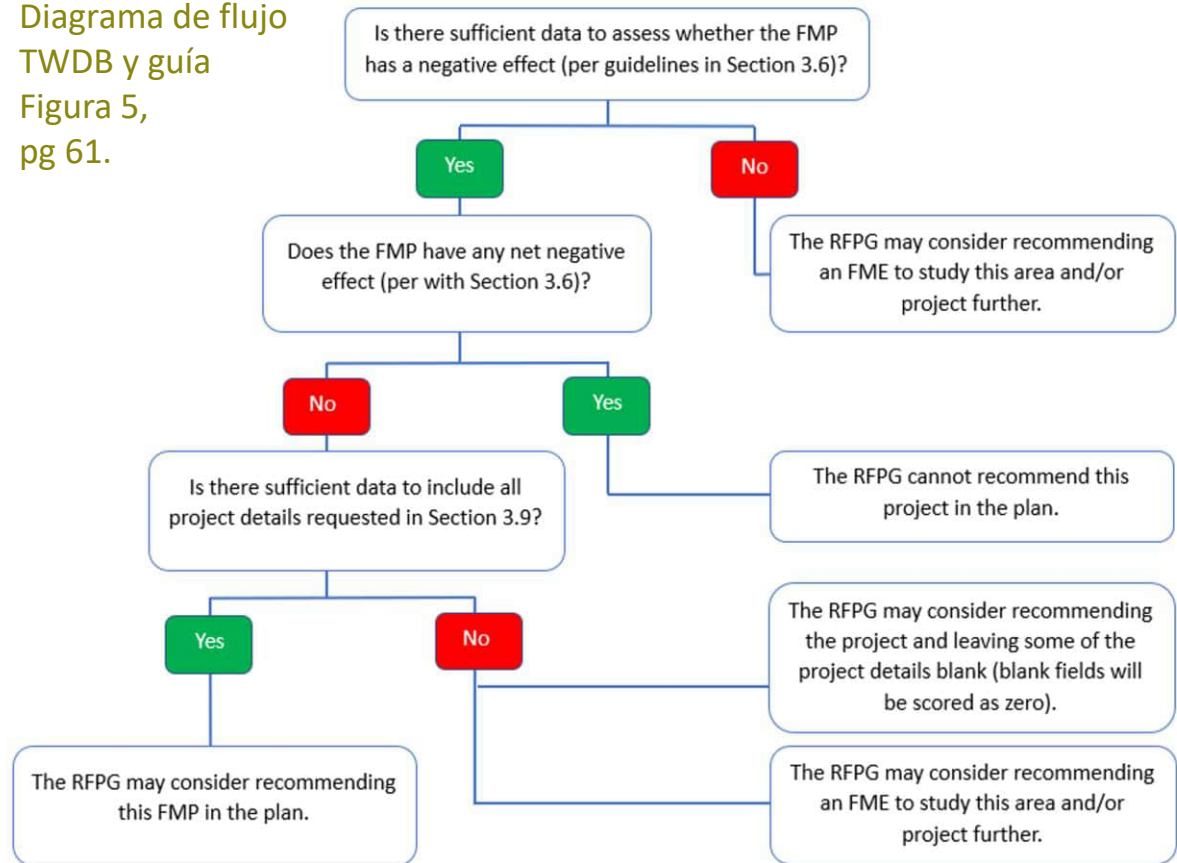


CH. 4B – FMP PROCESO DE SELECCIÓN

MEDIDA 2

MUESTRA DE PROYECTOS (FMPs)

Diagrama de flujo
TWDB y guía
Figura 5,
pg 61.



“Datos suficientes”

- El modelado, el mapeo y la base para el análisis de proyectos de mitigación de H&H generalmente cumplen con la Sección 3.5 de las pautas técnicas de TWDB
 - Confianza
 - Inseguridad mínima

“Negative effect”

- Para el evento de inundación de 100 años (1% de probabilidad anual), no debe permitirse un aumento en la elevación o descarga de la inundación. Los proyectos no deben
 - Aumentar las inundaciones en casas o edificios comerciales.
 - Aumentar la inundación más allá del derecho de vía
 - Aumentar las inundaciones más allá de la capacidad de infraestructura de drenaje existente



CH. 4B – FME PROCESO DE SELECCIÓN

MEDIDA 3

MUESTRA DE EVALUACIONES (FMEs)

Tres categorías generales de Evaluaciones:

1. Proyectos (FMP) que no lograron el corte en el Paso 2
2. Estudios de inundación planificada o análisis de alternativas de reducción de riesgo de inundación proporcionados por las comunidades
3. Estudio de inundaciones o necesidades de análisis de alternativas de reducción del riesgo de inundaciones identificadas en la Medida 4A

Mostrar para conocer los requisitos mínimos de orientación de TWDB

- 3.1 Si se detallan H&H y alternativas de mitigación análisis→ *Proyecto o Estrategia*
- 3.2 Razonable
- 3.3 Estimación de costos razonable a nivel de planificación
- 3.4 patrocinador(es) identificado(s)
- 3.5 Estructuras, población e instalaciones críticas en riesgo
- 3.6 Carreteras en peligro
- 3.7 Área de terrenos agrícolas y ganaderos en riesgo



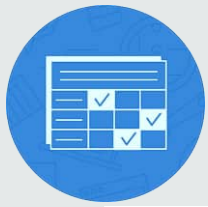
CH. 4B – FMX PROCESO DE SELECCIÓN

MEDIDA 5

EVALUACIONES DETALLADAS DE SELECCIONADO EVALUACIONES, PROYECTOS Y ESTRATEGIAS

¿Tiene lo siguiente?

- 5.1 Relaciones costo-beneficio del Proyecto > 1.0
- 5.2 Un patrocinador dispuesto
- 5.3 No se conocen restricciones u obstáculos de implementación desafiantes
- 5.4 Cumplió con los requisitos específicos de RFPG para incorporar un proyecto o estrategia en la RFP?



CH. 4B – IDENTIFICACION DE NECESIDADES

FME potenciales identificadas

Typo de FME	Descripcion de FME	# de FME potenciales identificadas
Planificación de cuencas hidrográficas	Modelado/mapeo de riesgo de inundación Promueve el desarrollo y/o el perfeccionamiento de mapas detallados de riesgo de inundación para abordar las lagunas de datos y el mapeo inadecuado. Crea mapas de FEMA en áreas previamente no mapeadas y actualiza los mapas de FEMA existentes según sea necesario.	24
Planificación de proyectos	Análisis de alternativa de mitigación de inundaciones/estudio de factibilidad Apoya el desarrollo y análisis de modelos de H&H para evaluar el riesgo de inundación dentro de un área problemática específica, evaluar posibles alternativas para mitigar el riesgo de inundación y desarrollar un proyecto.	85
Otro	Ingeniería Preliminar Evaluación de un proyecto propuesto para determinar si la implementación sería factible O una evaluación de ingeniería inicial que incluye diseño conceptual, análisis alternativo y hasta un 30 por ciento de diseño de ingeniería.	24
	Total	133



CH. 4B – IDENTIFICACION DE NECESIDADES

FMP potenciales identificadas

Entidad	Descripcion de FMP		# de FMP potenciales identificadas
Ciudad de Alton	<ul style="list-style-type: none"> West Mile 5 Road and Louisiana Street Alt. 2 FM 676 South Glasscock Road Alternative 3 North Inspiration Rd and W St. Jude Ave Alt 2 	<ul style="list-style-type: none"> North Stewart Boulevard Alternative 2 South Stewart Boulevard Alternative 2A West Mile 5 and South Glasscock Road Alt 3 	6
Ciudad de Eagle Pass	<ul style="list-style-type: none"> Risk Area 11 Rancho Escondido Risk Area 12 Fox Borough Drive Risk Area 13 Celle De Los Santos neighborhood Risk Area 15 Trib 3 Detention at Main Street Risk Area 2 Treasure Hills 	<ul style="list-style-type: none"> Risk Area 3 Arrow Point Boulevard Risk Area 4 Bibb & Misty Willow storm drain Risk Area 5 Debona Drive Risk Area 6 Trib 2 bypass & detention at Eagle Pass High School fields Risk Area 8 Tributary 2 channel widening near Alexander Drive 	10
Ciudad de Pharr	<ul style="list-style-type: none"> Downtown Pharr Mitigation Project North Pharr Backwater Relief Project North Pharr Culvert Improvements 	<ul style="list-style-type: none"> North Pharr Mitigation Project Pharr - San Juan Regional Detention Facility 	5
Ciudad de Weslaco	<ul style="list-style-type: none"> South Texas Boulevard and East 18th Street Pleasantview Drive and 11th Street Los Torritos Str and N Kansas Avenue, Ph 2 Mile 10 N and Mile 5 ½ W 	<ul style="list-style-type: none"> South International Boulevard and Bus 83 Texas Blvd to Airport Dr South of Bus 83 West Weslaco Westgate Drive and Sugar Cane Drive 	8
Condado de Hidalgo Recinto 4	<ul style="list-style-type: none"> Risk Area A at Mile 8.5 Rd. & Ware Rd. Risk Area B at Mile 6 & North Ware Rd. Risk Area C at FM 2812 & FM 493 Risk Area D at S. McColl & Canton Rd. 	<ul style="list-style-type: none"> Risk Area E at Hwy 107 & Val Verde Rd. Risk Area F at Texas Rd. & Cesar Chavez Rd. Risk Area G at Hoehn Rd. & Mile 11 Rd. Risk Area I at Sharp Rd. & E Monte Cristo Rd Risk Area J at SH107 & FM 907 	9
Total			38



CH. 4B – IDENTIFICACION DE NECESIDADES

FMS potenciales identificadas

Typo de FMS	Descripcion de FMS	# de FMS potenciales identificadas
Educación y divulgación	Educación NFIP; educación sobre inundaciones; conciencia reglamentaria de llanuras aluviales; Conciencia de contacto de emergencia	8
Medición y advertencia de inundaciones	Sistemas de Alerta de Inundaciones; Notificaciones Masivas durante Incidentes de Riesgos Naturales; Estudios de inundación de presas	25
Normativa y Orientación	Creación/actualizaciones de ordenanzas de llanuras aluviales de la ciudad; Reglamento de Zonificación; Programas de Uso de la Tierra;	18
	Total	51



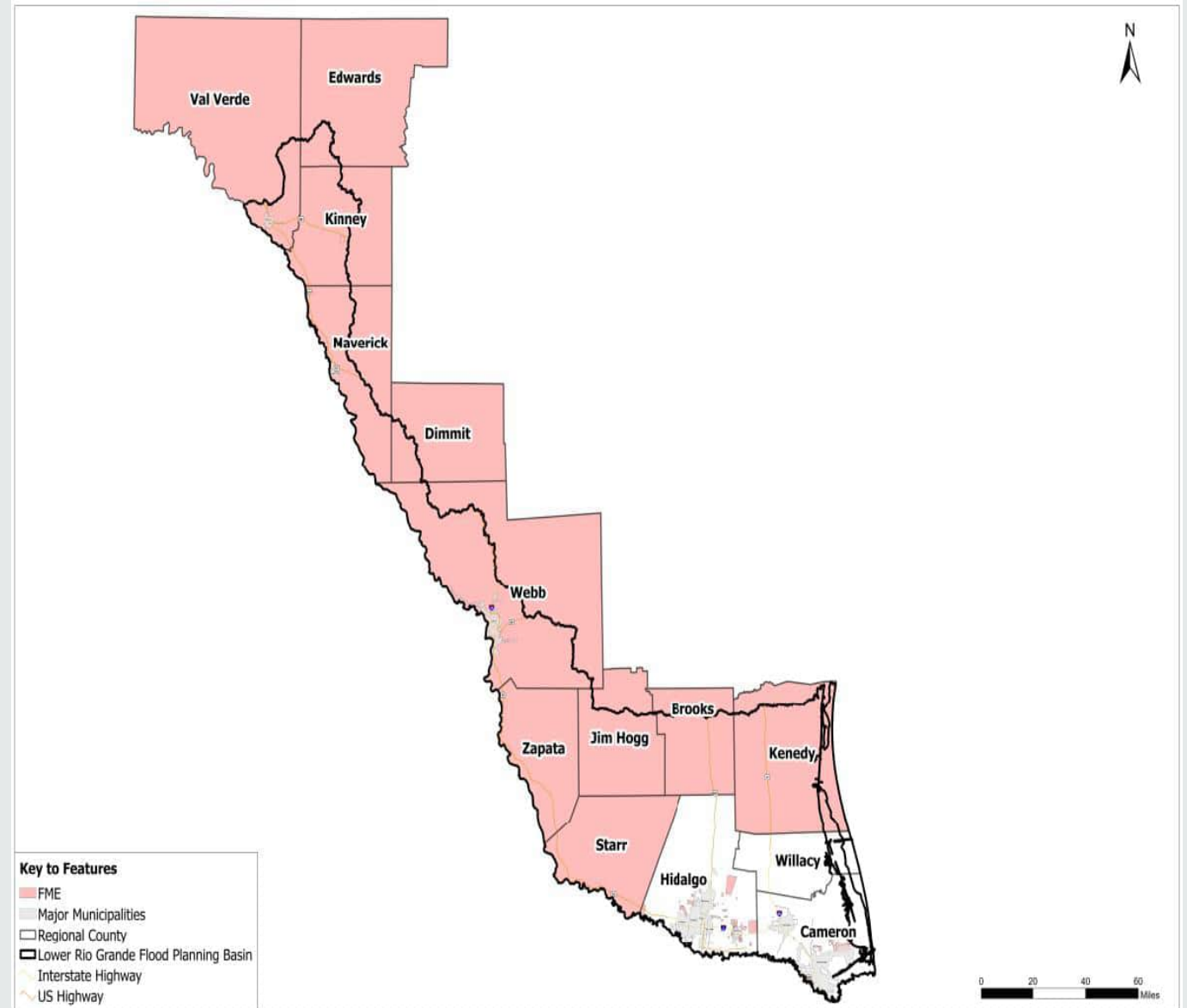
MEDIDA 5 – FMEs RECOMENDADOS

FME Type	Descripción de FME	#de FME potenciales identificadas	# de FME recomendados	Costo total de FME recomendados
Planificación de cuencas hidrográficas	Modelado/mapeo de riesgo de inundación	24	22	\$7,500,000
	Preparación	Análisis de alternativa de mitigación de inundaciones/estudio de factibilidad	85	51
Otro	Ingeniería Preliminar	24	22	\$27,330,000
Total		133	95	\$57,025,000



MEDIDA 5 – FME’S RECOMENDADOS

- ❑ FME’s proporcionará planificación de cuencas hidrográficas, estudios hidrológicos e hidráulicos detallados y destacará el riesgo de inundación dentro de la región.
- ❑ Alternativas de preparación y mitigación de inundaciones que sirvan como estudios de factibilidad.
- ❑ Diseños preliminares de ingeniería para abordar necesidades específicas de inundación.





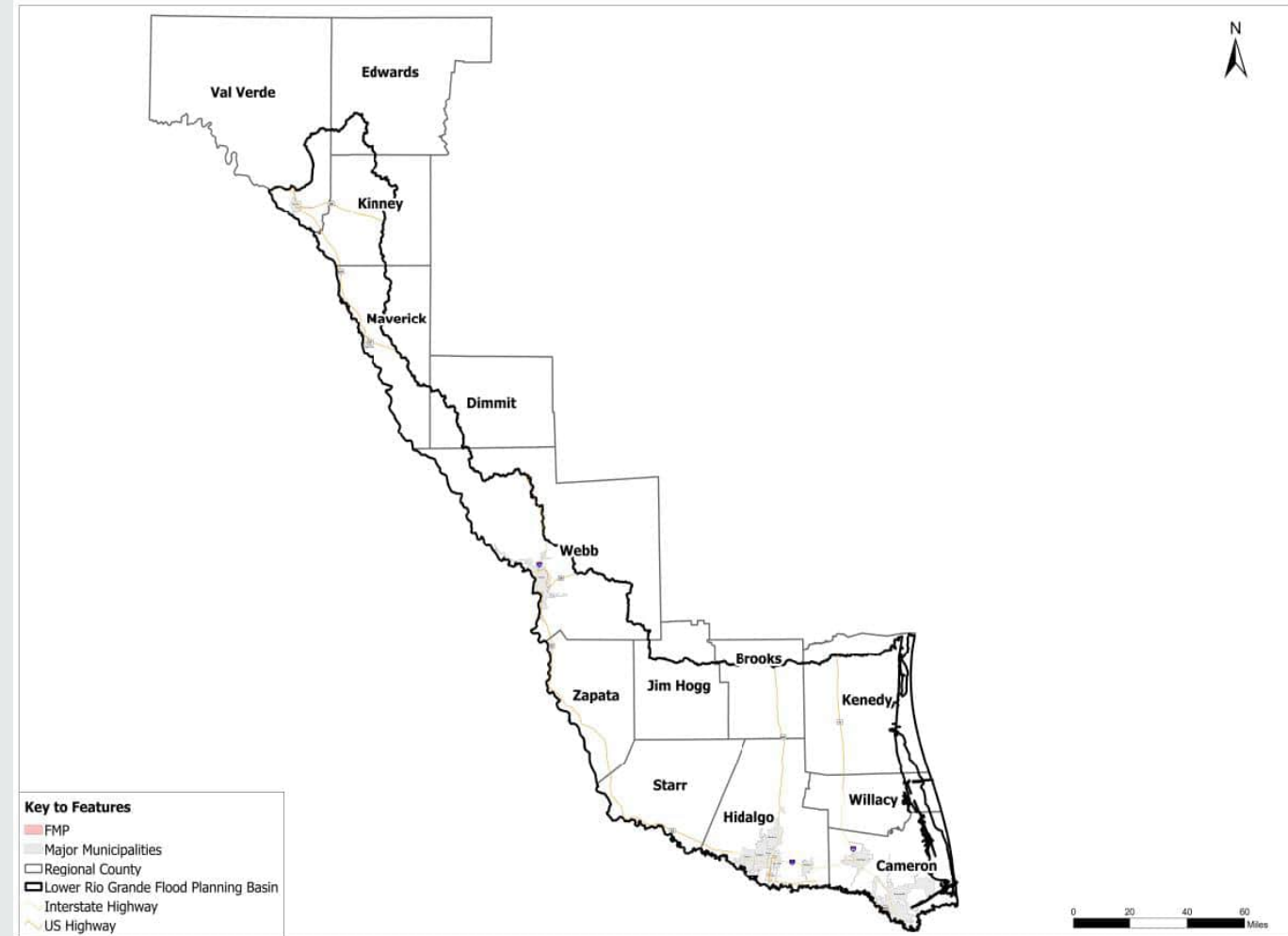
MEDIDA 5 – FMP RECOMENDADOS

Nombre de FMP	Descripción de FMP	Costo
Proyecto de mitigación de North Pharr	Construir 3400 pies lineales de canal, mejoras a la alcantarilla, una conexión al desagüe y una instalación de detención regional (RDF) en línea a lo largo del drenaje Pharr-McAllen	\$8,195,000
Proyecto de mitigación de drenaje de Southwest Pharr	Construir cuatro centros de detención regionales (RDF) en South Pharr.	\$5,587,000
Total		\$13,782,000



MEDIDA 5 – FMP RECOMENDADOS

- ❑ Diseñado para demostrar un impacto no negativo en un área vecina como resultado de la implementación.
- ❑ Si se identifica un impacto negativo, se pueden utilizar medidas de mitigación para aliviar el impacto.
- ❑ Utiliza el juicio profesional de los ingenieros para aliviar si se observa un impacto negativo de la implementación.





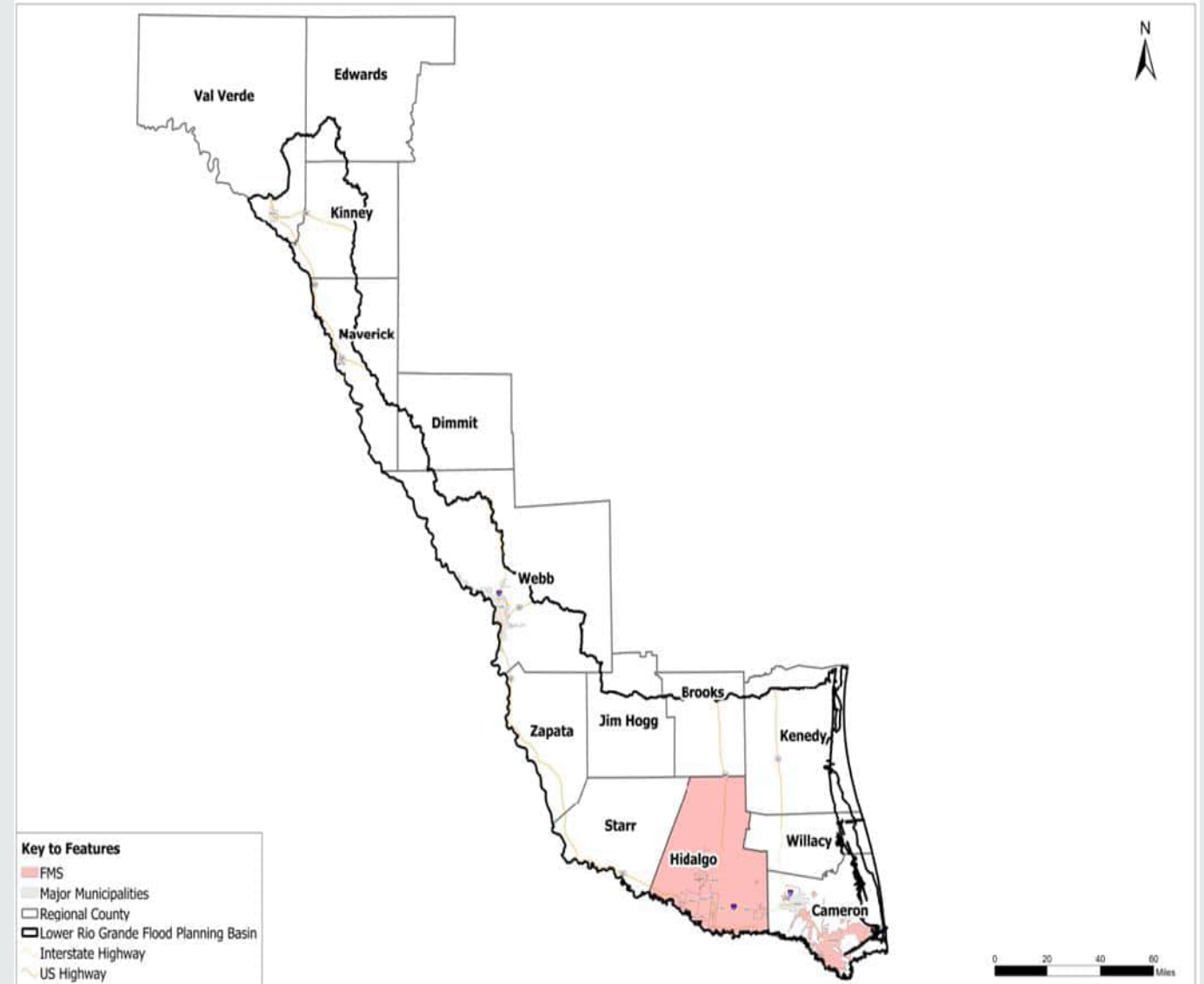
MEDIDA 5 - FMS RECOMENDADOS

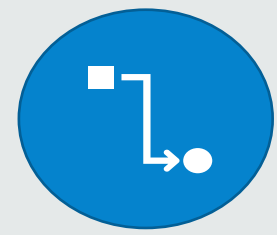
Typo de FMS	Descripción de FMS	# de FMS potenciales identificados	# de FMS recomendados	Costo total de los FMS recomendados
Educación y divulgación	Educación NFIP; educación sobre inundaciones; conciencia reglamentaria de llanuras aluviales; Conciencia de contacto de emergencia	8	8	\$66,000
Medición y advertencia de inundaciones	Sistemas de Alerta de Inundaciones; Notificaciones Masivas durante Incidentes de Riesgos Naturales; Estudios de inundación de presas	25	25	\$1,867,000
Normativa y Orientación	Creación/actualizaciones de ordenanzas de llanuras aluviales de la ciudad; Reglamento de Zonificación; Programas de Uso de la Tierra;	18	18	\$2,177,000
	Total	51	51	\$4,109,000



MEDIDA 5 - FMS RECOMENDADOS

- ❑ Similar a los requisitos de FMP y debe poder demostrar
 - ❑ Apoyar un objetivo regional de mitigación de llanuras aluviales
 - ❑ Ningún impacto negativo en el suministro de agua de una entidad
 - ❑ No hay sobreasignación de una fuente de agua basada en la disponibilidad.
 - ❑ Sin impactos negativos en las propiedades aguas abajo.





CH. 6 – IMPACTOS Y CONTRIBUCIONES DEL PLAN REGIONAL DE INUNDACIONES

Población removida de la llanura aluvial

Evento anual Evento de inundación	Población en riesgo existente	Reducción de la población en riesgo después de la implementación	Disminución de la población afectada
1% (100-Year Event)	276,662	7,217	2.6%
0.2% (500-Year Event)	689,125	42,064	6.1%
Total	965,787	49,281	5.1%

Estructuras removidas de la planicie de inundación

Evento anual Evento de inundación	Población en riesgo existente	Reducción de la población en riesgo después de la implementación	Disminución de la población afectada
1% (100-Year Event)	114,282	4,530	4%
0.2% (500-Year Event)	174,084	7,204	4.1%
Total	288,366	11,734	4%



MEDIDA 7 – ACTIVIDADES DE PREPARACIÓN

Actividades antes de un evento de inundación

- ❑ Actividades de preparación
 - ❑ Sistemas de Alerta Temprana
 - ❑ Educación sobre las actividades de respuesta sugeridas
 - ❑ Adquisición de equipos de respuesta a emergencias
 - ❑ Planificación de Mitigación de Riesgos



<p>WARNING</p> <p>A warning is issued when a hazardous weather or hydrologic event is occurring, imminent or likely. A warning means weather conditions pose a threat to life or property. People in the path of the storm need to take protective action.</p>
<p>WATCH</p> <p>A watch is used when the risk of a hazardous weather or hydrologic event has increased significantly, but its occurrence, location or timing is still uncertain. A watch means that hazardous weather is possible. People should have a plan of action in case a storm threatens and they should listen for later information and possible warnings especially when planning travel or outdoor activities.</p>
<p>ADVISORY</p> <p>An advisory is issued when a hazardous weather or hydrologic event is occurring, imminent or likely. Advisories are for less serious conditions than warnings, that cause significant inconvenience and if caution is not exercised, could lead to situations that may threaten life or property.</p>
<p>OUTLOOK</p> <p>An outlook is issued when a hazardous weather or hydrologic event is possible in the next week. Outlooks are intended to raise awareness of the potential for significant weather that could lead to situations that may threaten life or property.</p>



MEDIDA 7 – ACTIVIDADES DE PREPARO

Esfuerzos durante e inmediatamente después de una inundación

- Actividades
- Distribución de Suministros de Emergencia
 - sacos de arena
 - Despliegue de Equipos y Actividades de Respuesta a Emergencias Rescue
 - quitar escombros
 - bombas móviles
 - Sistema de Notificación de Cierres





MEDIDA 7 – PREPAREDNESS ACTIVITIES

Restoration efforts after the flood

Recovery Activities

- Restoration of Utilities
- Removal of Excess Debris
- Continued use of Response Equipment
- Documentation of activities for future mitigation efforts
- Damage Assessments and Reparations





MEDIDA 8 – RECOMENDACIONES ADMINISTRATIVAS, REGLAMENTARIAS Y LEGISLATIVAS

ID	Declaraciones de recomendación
8.2.1	Las inundaciones no reconocen límites jurisdiccionales. Eliminar las barreras que impiden que las jurisdicciones trabajen juntas para brindar soluciones regionales de mitigación de inundaciones y detención regional a través de los límites jurisdiccionales.
8.2.2	La financiación de proyectos que benefician a las actividades agrícolas no debe puntuarse ni otorgarse en función de una relación costo-beneficio tradicional.
8.2.3	El financiamiento para proyectos en Comunidades Históricamente Desfavorecidas o Áreas de Pobreza Persistente debe recibir una cantidad mínima de financiamiento futuro, para que no compitan contra comunidades más afortunadas.
8.2.4	Debe haber fondos separados disponibles para cada uno de los diferentes aspectos de la gestión de llanuras aluviales, como el desarrollo de mapas de llanuras aluviales, estudios de planificación de inundaciones, planificación y desarrollo de proyectos avanzados para proyectos de gestión de llanuras aluviales e implementación de proyectos de gestión de llanuras aluviales.
8.2.5	Requerir que los futuros estudios regionales de planificación de inundaciones desarrollen y mantengan un cronograma de 100 años.



TASK 8 – ADMINISTRATIVE, REGULATORY, AND LEGISLATIVE RECOMMENDATIONS

ID	Declaraciones de recomendación
8.1.1	Add legislative ability to allow counties the opportunity to establish and assess drainage (stormwater) utility fees. Legislation is needed to allow counties and others with flood control responsibilities to establish drainage (stormwater) utilities and collect fees for these services. Extend Local Government Code, Title 13, Subtitle A, Chapter 552 to allow counties the opportunity to establish and collect drainage utilities/fees.
8.1.2	Provide alternative revenue-generating sources of funding. Expand eligibility for and use of funding for stormwater and flood mitigation solutions (Local, State, Federal, Public/Private Partnerships, etc.)
8.1.3	Requirements for future planning studies



MEDIDA 8 – RECOMENDACIONES ADMINISTRATIVAS, REGLAMENTARIAS Y LEGISLATIVAS

ID	Recommendation Statements
8.3.1	Las alternativas de planificación de inundaciones deben incluir opciones que no causen daños irreparables a los hábitats costeros.
8.3.2	El Plan Regional de Inundaciones debe incluir herramientas y recursos para incluir continuamente todos los impactos significativos en las cuencas hidrográficas y la gestión de llanuras aluviales.



MEDIDA 9 – ANÁLISIS DE FINANCIAMIENTO DE INFRAESTRUCTURA DE INUNDACIONES

- ¿Qué oficio debería recomendar la RFPG que asuma el estado de Texas al financiar los FMS, FMP y FME recomendados?
 - El estado de Texas debe de:
 - Tomar medidas adicionales para informar a las comunidades sobre las oportunidades de financiación.
 - Ampliar la elegibilidad de los tipos de proyectos y entidades en los programas existentes
 - Ampliar las oportunidades de financiación o crear nuevos programas para comunidades y distritos especiales que no puedan cumplir con los requisitos locales de distribución de costos.
 - Proporcionar recursos para las comunidades que no pueden solicitar financiación debido a la falta de experiencia.
 - Proporcionar recursos técnicos (o financiación para adquirir recursos técnicos) para proporcionar los servicios técnicos y profesionales necesarios para las solicitudes de oportunidades de financiación
 - Dar prioridad a las comunidades vulnerables al considerar las recomendaciones de financiamiento
 - Requerir que todos los proyectos consideren los impactos en las áreas del centro.



COMENTARIO PÚBLICO

Háganos saber si necesitamos cambiar algo.

3 FORMAS DE COMENTAR

1. Comente aquí o en cualquier reunión de la RFPG
2. Proporcionar comentarios por escrito a:

Kleal@halff.com

Jaime.Salazar@hcdd1.org

Incluya la Región 15 en la línea de asunto.

3. www.region15lrg.org – Página de comentarios públicos





COMENTARIOS



SU ENTRADA ES
IMPORTANTE.

**Review of Draft Region 15 Regional Flood Plan
Public Meeting**

MEETING LOCATION:

Joe A. Guerra Laredo Public Library (1120 E. Calton Road, Laredo, TX 78540)

MEETING DATE:

October 13, 2022

ATTENDEES:

Name	Community/ Company	Phone Number	Email
SALGAR AVILA	SEB INFRASTRUCTURE	956-236-5792	bavila@sbinfra.com
DAVID A. GARZA	cameron county	956-399-1411	
Kristina Leal	Half Associates	956-667-3400	kleal@half.com
EDWARD GARZA	CRANE ENGINEERING/WCDD	956-712-1996	EDDIE GARZA@CRANEEN96.COM
Benjamin Vondrak	RATES	845-499-4526	bvondrak@office.rates.org
JOSE LUIS FLORES	HALFF Associates	(956) 391-5603	jflores@half.com
JAIME J. SALCUM	HCCDDI	956-792-7080	jaime.salcum@hccddi.org
Ramon E. Chavez	City of Laredo	956-791-7346	rchavez@ci.laredo.tx.us

**Review of Draft Region 15 Regional Flood Plan
Public Meeting**

MEETING LOCATION: Joe A. Guerra Laredo Public Library (1120 E. Calton Road, Laredo, TX 78540)	MEETING DATE: October 13, 2022
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ATTENDEES:

Name	Community/ Company	Phone Number	Email
Nora D Cavazos	HCDDI	956-292-7080	nora.cavazos@hcdcll.org
RIAZUL MIA	CITY OF LAREDO	956-791-7302	rmia@ci.laredo.tx.us
Melisa Gonzales	RATES	956-78605-0650	mgonzales@rgvstormwater
LUIS PEREZ GARCIA	WEBB COUNTY	956-523-4055	lperezgarcia@webbcountytx.gov
Ivan Santoyo	City of Laredo E.S.D.	956-794-1650	isantoyo@ci.laredo.tx.us
Federico Elizondo	"	"	felizondo1@ci.laredo.tx.us
Jonathan Prukop	S = B Infrastructure		jprukop@sbinfra.com

Draft Region 15 Regional Flood Plan

MEETING LOCATION:
Joe A. Guerra Laredo Public Library (1120 E. Carlton Road, Laredo, TX 78540)

MEETING DATE:
October 13, 2022

Name	
Community/ Company	
Phone Number	
Email	
Comment:	

**Review of Draft Region 15 Regional Flood Plan
Public Meeting**

MEETING LOCATION:

Lower Rio Grande Valley Development Council Conference Room (301 W Railroad, Weslaco, TX 78596)

MEETING DATE:

October 19, 2022

ATTENDEES:

Name	Community/ Company	Phone Number	Email
Elijah Casas	Texas General Land Office	512-657-9473	elijah-casas.glo@recovery.texas.gov
Melisa Gonzales	RATES - LR & V Stormwater Dept	956-605-0650	mgonzales@office.matesresearch.com
Eugen F. Gonzalez	City of Mission	956-580-0780	eecon@cityofmission.texas.gov
Alan Moore	CCDD5	956-423-6411	alan@hidect.com
Raul Gomez	Cameron County	345-0196	Raul.Gomez@CO.CameronTX.us
Gume Barra	S&B	998-9398	gbarra@sb.com
GABRIEL GONZALEZ	PCT3	585-4509	gabriel.gonzalez@co.harris.tx.us
JUAN CEDILLO	CITY OF LA VILLA		
David Alvarez	City of Lavilla	956-351-1247	
Kristina Leal	Half Associates	956-664-0286	kleal@half.com
Jonathan Prunkop	S & B Infrastructure		jprunkop@sbindra.com
Jose L. Flores	Half Associates	956-664-0286	jflores@half.com

Review of Draft Region 15 Regional Flood Plan Public Meeting

MEETING LOCATION:

Lower Rio Grande Valley Development Council Conference Room (301 W Railroad, Weslaco, TX 78596)

MEETING DATE:

October 19, 2022

ATTENDEES:

Name	Community/ Company	Phone Number	Email
GILBERTO Lucio Edgar Gonzalez	Palm Valley City Council City of Mission	720-980-1157 956-580-8790	glucio@palmvalleytx.com egonzalez@missiontxns.us
Commissioner David Garza Victor Gallardo	Cameron County Hidalgo county Pct 3	956-361-8209 956-585-4509	dagarza@co.cameron.tx.us victor.gallardo@co.hidalgo.tx.us
RICK CARRERA	LRGVDC	979-682-3481	RCARRERA@LRGVDC.ORG

Draft Region 15 Regional Flood Plan

MEETING LOCATION: Lower Rio Grande Valley Development Council Conference Room (301 W Railroad, Weslaco, TX 78596)	MEETING DATE: October 19, 2022
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Mayor Rick Salinas, Donna	Luis Albert Perez
Daniel Gonzalez	Clongoria
Barry Goldsmith, Brownsville NWS	Gilbert Milan, Rio Grande City
Mark Milum, Los Fresnos	Jim Darling, Region M
Yvette Barrera, Hidalgo County Drainage District No. 1	Velinda Reyes, Hidalgo County Precinct 4
Troy Allen, Delta Lake Irrigation District	Abel Bocanegra, City of Mission
Maribel Guerrero. Brownsville	David A Garza
S&B Infrastructure	Rick Carrera, LRGVDC
Ester A. Valle	Alex Barrera
Tom Mclemore	Joaquin Hernandez, Jr.
Eduardo Mendoza, City of McAllen	
Dan Lucio, AEP Texas	
Craig Cook, City of Harlingen	
Alejandro Gutierrez	
Ramon Macias	
Harlingen Zoom	
Agusto Sanchez, Cameron County	
Esolis	
Michael Kent	
Yolanda De la Torre, City of Brownsville	
Carlos Lastra, City of Brownsville	
Shonda Mace, GLO	
Hector Garcia	
Chairman Garza, Region 15 RFPG	

Draft Region 15 Regional Flood Plan

MEETING LOCATION: Lower Rio Grande Valley Development Council Conference Room (301 W Railroad, Weslaco, TX 78596)	MEETING DATE: October 19, 2022
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Name	
Community/ Company	
Phone Number	
Email	
Comment:	



APPENDIX E - DRAFT COMMENTS & RESPONSES

Comments on the Draft Regional Flood Plan

The following comments were received from on the Lower Rio Grande Regional Flood Plan. Included in the Tables below are the comments received and the responses that were provided for the comments received. Copies of the original Letters are provided after these tables.

TWDB Comments

The following comments were received by the Regional Flood Planning Group via email on October 26, 2022. The comments received, as well as the provided responses are included in **Table E.1** below.

Table E.1 TWDB Comments on Region 15 Lower Rio Grande Regional Flood Planning Group’s Draft Regional Flood Plan

Comment Received	RFPG Response
<p>Level 1: Comments and questions must be satisfactorily addressed to meet statutory, agency rule, and/or contract requirements.</p> <p>General Comments</p>	
<p>1. Please ensure that all “Submittal requirements” identified in each of the Exhibit C Guidance document sections are submitted in the final flood plan.</p>	<p>A review of the “Submittal Requirements” identified in each of the Exhibit C Guidance document sections were checked for compliance prior to submittal of the Final Regional Flood Plan.</p>
<p>2. Please consider including bookmarks in the pdf of the reports to facilitate ease of navigation for readers.</p>	<p>Bookmarks were added to the pdf of the Final Regional Flood Plan prior to submittal.</p>

APPENDIX E: COMMENTS & RESPONSES TO THE DRAFT REGIONAL FLOOD PLAN

Comment Received	RFPG Response
<p>3. Several maps appear to be missing depictions of major roadways, major streams and rivers, major reservoirs, and other required features (e.g., Exhibit C Map 3 appears to be missing major streams and rivers). Exhibit C Section 3.10 requires all maps to contain certain base map information depicting the RFPG boundary, counties, HUCs as applicable, major streams or rivers, major reservoirs as applicable, major watershed boundaries as applicable, major roadways, major cities or urban areas, and other features identified by the RFPG. Please reconcile.</p>	<p>A template was created to address this comment for all maps.</p>
SOW Task 1	
<p>4. Entities GIS Feature Class, Entities:</p> <p>a. It appears that some fields contain invalid entries such as “Y” instead of “Yes” for the ‘POLSUB_FLG’ field. Please complete all required fields with valid entries per Exhibit D Table 3.</p> <p>b. It appears that some fields are missing entries, including ‘ACTIVE’. Please complete all required fields with valid entries per Exhibit D Table 3 [31 TAC §361.30(4) & (5)].</p>	<p>Fields were updated to contain valid entries/ formatting or missing information.</p>
<p>5. Existing Flood Infrastructure Table (Exhibit C Table 1): Low water crossings (LWC) do not appear to be included in Table 1. A summary and location of all low water crossings in the region identified by local communities is required to be included in Table 1. At minimum, identified LWCs within the Low Water Crossing dataset provided in the TWDB Flood Planning Data Hub should be included. Please include all LWCs identified during the flood planning process in this table [Exhibit C Section 2.1].</p>	<p>TWDB-provided low water crossings were included in Table 1. Tables were updated to include missing information. Tables reconciled with GIS/Text.</p>
<p>6. Existing Flood Infrastructure GIS Feature Class, ExFldInfraPol: It appears that some fields contain invalid entries, including ‘NAME’ and ‘DESCR’. Please complete all required fields with valid entries</p>	<p>Fields were updated to contain valid entries/ formatting or missing information.</p>

APPENDIX E: COMMENTS & RESPONSES TO THE DRAFT REGIONAL FLOOD PLAN

Comment Received	RFPG Response
<p>per Exhibit D Table 5 [31 TAC §361.31 & Exhibit D 3.3].</p>	
<p>7. Existing Flood Infrastructure GIS Feature Class, ExFldInfraLn: It appears that some fields contain invalid entries, including 'NATBUILT and 'NAME. Please complete all required fields with valid entries per Exhibit D Table 6 [31 TAC §361.31 & Exhibit D 3.3].</p>	<p>Fields were updated to contain valid entries/ formatting or missing information.</p>
<p>8. Existing Flood Infrastructure GIS Feature Class, ExFldInfraPt:</p> <ul style="list-style-type: none"> a. Please include all low water crossings (LWCs) identified during the flood planning process in this feature layer. The ExFldExpAll feature class contains 240 LWCs, whereas the ExFldInfraPt feature class appears to contain no LWCs. Note: This is required in contrast to the optional LWC feature class [31 TAC §361.31 & Exhibit D 3.3]. b. All low water crossings (LWC) in the region identified by local communities are required to be included in the ExFldInfraPt feature class. At minimum, identified LWCs within the Low Water Crossing dataset provided in the TWDB Flood Planning Data Hub should be included. Please reconcile [31 TAC §361.31 & Exhibit D 3.3]. c. It appears that some fields contain invalid entries, including 'DESCR'. Please complete all required fields with valid entries as referenced in Exhibit D Table 7 [31 TAC §361.31 & Exhibit D 3.3]. 	<p>Fields were updated to contain valid entries/ formatting or missing information.</p>
<p>9. Existing Flood Infrastructure Map (Exhibit C Map 1): Low water crossings (LWC) do not appear to be included in Map 1. All LWCs in the region identified by local communities are required to be included in the ExFldInfraPt feature class and this should be reflected in Map 1. At minimum, identified LWCs within the Low Water Crossing dataset provided in the TWDB Flood Planning Data Hub should be</p>	<p>LWCs provided by TWDB were included in EXFldInfraPt feature class and Maps 1 & 3.</p>

Comment Received	RFPG Response
<p>included. Please reconcile [31 TAC §361.31 & Exhibit C 2.1].</p>	
<p>10. Existing Flood Projects GIS Feature Class, ExFldProjs: The polygons representing proposed and ongoing flood mitigation projects appear to follow county boundaries in all instances. Please ensure polygons reflect actual project boundaries, service areas, and/or contributing drainage areas as applicable [31 TAC §361.32].</p>	<p>Fields were updated to contain valid entries/ formatting or missing information.</p>
<p>11. Existing Flood Projects Map (Exhibit C Map 2): The shaded areas representing proposed and ongoing flood mitigation projects appear to follow county boundaries in all instances. Please ensure these shaded areas align with the ExFldProjs feature class to reflect actual project boundaries, service areas, and/or contributing drainage areas as applicable [31 TAC §361.32].</p>	<p>Maps were updated to include the best project boundary we could find.</p>
<p>SOW Task 2A</p>	
<p>12. Existing Condition Flood Hazard Analysis, Text:</p> <ul style="list-style-type: none"> a. Please include total land areas (square miles) of each flood risk by flood risk type, county, region, and frequency as per guidance document (Exhibit C page 24): Submittal requirement number 2. b. Please include a reference to Exhibit C Table 3 in the text, as per the guidance document (Exhibit C page 27). Once Task 2A Existing Condition Flood Risk Analyses is complete, RFPGs must include a summary table with findings summarizing flood risk by county. c. The Existing Hazard section does not appear to explicitly identify flood hazards specific to different types of flooding including riverine, coastal, urban, or other flooding. Please reconcile [31 TAC §361.33(a)]. 	<p>The Existing Hazard Section of Chapter 2 was updated to include the total land areas, in square miles, of each flood risk by flood risk type, county, and frequency. A Reference to Table 3 in Appendix B is included in the text of Chapter 2.</p>

APPENDIX E: COMMENTS & RESPONSES TO THE DRAFT REGIONAL FLOOD PLAN

Comment Received	RFPG Response
<p>13. Existing Condition Flood Hazard Map (Exhibit C Map 4): It appears that flood hazards specific to different types of flooding are not depicted. Please include identification of each type of flooding including riverine, coastal, urban, or other flooding as per guidance document (Exhibit C page 24): Submittal requirement number 1. This may be included as a supplemental map.</p>	<p>Maps were updated to include missing information.</p>
<p>14. Existing Condition Flood Exposure, Text: The text of the Existing Condition Flood Exposure Analysis section does not appear to describe exposure of structures and populations explicitly in the 1% and 0.2% floodplains. Please reconcile [31 TAC 361.33(c)].</p>	<p>Chapter 2 was updated to include missing and more detailed information.</p>
<p>15. Existing Condition Flood Exposure Table (Exhibit C Table 3):</p> <ul style="list-style-type: none"> a. It appears that the day population is duplicated in the night population field. Please correct these sets of population values as necessary. b. There appear to be inconsistencies between Table 3 and the ExFldExpAll feature class. For example, counts for Residential Structures and Total Structures do not appear to match. Please ensure data consistency between all related deliverables [31 TAC §361.33 & Exhibit C 2.2.A.3]. 	<p>A population night column was added and all residential buildings match with Exhibit C tables. Updated fields to contain valid entries/ formatting or missing information. Tables were updated to include missing information. Tables reconciled with GIS/Text.</p>
<p>16. Existing Condition Flood Vulnerability GIS Feature Class, ExFldExpAll:</p> <ul style="list-style-type: none"> a. It appears that some fields are missing entries, including 'CRITICAL' Please complete all required fields with valid entries per Exhibit D Table 14 [31 TAC §361.33(c), (d) & Exhibit C 2.2.A.2]. b. It appears that some fields contain invalid entries, including 'CRIT_TYPE'. Please use the updated 'CRIT_TYPE' valid entry list: "Medical, Police, Fire, EMS, Shelter, School, 	<p>Fields were updated to contain valid entries/ formatting or missing information.</p>

APPENDIX E: COMMENTS & RESPONSES TO THE DRAFT REGIONAL FLOOD PLAN

Comment Received	RFPG Response
<p>Infrastructure, Water Treatment, Wastewater Treatment, Power Generation, Other" per the Summary Update to Exhibit D document available on the TWDB website.</p>	
<p>17. Model Coverage GIS Feature Class, ModelCoverage:</p> <ul style="list-style-type: none"> a. Please provide additional detail to the descriptions of the existing models (i.e. software, type, date completed, scenario modeled) in the 'MODEL_DESCR' field. b. Please ensure that all entries within the 'MODEL_ID' field are 12 digits long per the Summary Update to Exhibit D document available on the TWDB website [31 TAC §361.33(b)(2)]. 	<p>Fields were updated to contain valid entries/ formatting or missing information.</p>
<p>SOW Task 2B</p>	
<p>18. Future Condition Flood Hazard Map (Exhibit C Map 8): It appears that flood hazards specific to different types of flooding are not depicted. Please include identification of each type of flooding including riverine, coastal, urban, or other flooding as per guidance document (Exhibit C page 33): Submittal requirement number 1. This may be included as a supplemental map.</p>	<p>Maps were updated to include missing information.</p>
<p>19. Future Condition Flood Hazard Analysis, Text: a. Please include total land areas (square miles) of each flood risk by flood risk type, county, region, and frequency as per guidance document (Exhibit C page 33): Submittal requirement number 3. b. Please include a reference to Exhibit C Table 5 in the text, as per the guidance document (Exhibit C page 35). Once Task 2B Future Condition Flood Risk Analyses is complete, RFPGs must include a summary table with findings summarizing flood risk by county. c. The Future Hazard section does not appear to explicitly identify flood hazards specific to different types of flooding including riverine,</p>	<p>The Future Hazard Section of Chapter 2 was updated to include the total land areas, in square miles, of each flood risk by flood risk type, county, and frequency. A Reference to Table 5 in Appendix B is included in the text of Chapter 2.</p>

APPENDIX E: COMMENTS & RESPONSES TO THE DRAFT REGIONAL FLOOD PLAN

Comment Received	RFPG Response
coastal, urban, or other flooding. Please reconcile [31 TAC §361.33(a)].	
20. Future Condition Flood Exposure Table (Exhibit C Table 5): It appears that the table does not contain information in the Possible Flood Prone Areas section. Please verify that this is correct and, if necessary, add data as appropriate [31 TAC §361.34 & Exhibit C 2.2.B.3].	Tables were updated to include missing information. Tables were reconciled with GIS/Text
21. Future Condition Flood Vulnerability GIS Feature Class, FutFldExpAll: <ul style="list-style-type: none"> a. It appears that some fields contain invalid entries, including 'CRIT_TYPE'. Please use the updated 'CRIT_TYPE' valid entry list: "Medical, Police, Fire, EMS, Shelter, School, Infrastructure, Water Treatment, Wastewater Treatment, Power Generation, Other" per the Summary Update to Exhibit D document available on the TWDB website. b. It appears that some fields are missing entries, including 'FLOOD_FREQ' and 'CRITICAL'. Please complete all required fields with valid entries per Exhibit D Table 14 [31 TAC §361.34(c); Exhibit D 3.6.2]. 	Fields were updated to contain valid entries/ formatting or missing information.
22. Future Condition Flood Vulnerability Map (Exhibit C Map 12): The map legend does not appear to clearly indicate that the map is depicting SVI values. Please reconcile.	Added "SVI" under Key to Features. Maps were updated to include missing information/ labels.
SOW Task 3A	
23. Existing Floodplain Management Practices Map (Exhibit C Map 13): The map does not appear to depict entities that regulate and enforce floodplain practices. The map should depict the areas with established floodplain management practices, the entities that regulate and enforce those floodplain practices, and locations that lack floodplain management as per guidance document (Exhibit C	The map was updated to show entities that regulate and enforce floodplain practices.

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Comment Received	RFPG Response
<p>page 47): Submittal requirement number 4. Please reconcile [31 TAC §361.35 & Exhibit C 2.3.A].</p>	
<p>24. Existing Floodplain Management Practices Table (Exhibit C Table 6): The text appears to include cities that do not match Appendix B, Table 6. For example, the text states that the Cities of Granejo and Progreso are not NFIP participants. However, they are both listed as NFIP participants in Table 6. Please reconcile as appropriate.</p>	<p>Table 6 was updated to reflect Progreso as a community participating in the National Flood Program and not Granjeno. The text was updated accordingly.</p>
<p>SOW Task 4B</p>	
<p>25. Streams GIS Feature Class, Streams: a. It appears that some fields are missing entries, including ‘STR_NAME’. Please complete all required fields with valid entries per Exhibit D Table 22. Please consider naming streams as “Tributary of XX” whenever the main channel is known. b. Please ensure that entries within the ‘STREAM_ID’ field are nine digits long consisting of a two-digit region number followed by seven digits. Unique IDs must be accurate for the database to connect and work properly. Please refer to Exhibit D Table 2 or more recent updates for Unique ID guidance [Exhibit D 3.9].</p>	<p>Entered names for tributaries where streams were known. STREAM_ID was updated to be 9 digits. Fields were updated to contain valid entries/formatting or missing information.</p>
<p>26. Flood Management Evaluations (FME) Table (Exhibit C Table 12): The count of FMEs in the FME feature class (100) does not appear to match the count of FMEs in Table 12 (133). Please reconcile [31 TAC §361.38(i) & Exhibit D 3.10].</p>	<p>Tables were updated to include missing information. Tables were reconciled with GIS/Text</p>
<p>27. Flood Management Evaluations (FME) GIS Feature Class, FME: The count of FMEs in the FME feature class (100) does not appear to match the count of FMEs in Table 12 (133). Please reconcile [31 TAC §361.38(i) & Exhibit D 3.10].</p>	<p>Tables were reconciled with GIS/Text</p>
<p>28. Flood Management Evaluations (FME) Map (Exhibit C Map 16): Please revise the map based on</p>	<p>Maps were updated and reconciled with GIS/Text/Tables.</p>

APPENDIX E: COMMENTS & RESPONSES TO THE DRAFT REGIONAL FLOOD PLAN

Comment Received	RFPG Response
<p>revisions to the FME feature class and Table 12 as needed [31 TAC §361.38 & Exhibit D 3.10].</p>	
<p>29. Flood Mitigation Projects (FMP) Table (Exhibit C Table 13):</p> <ul style="list-style-type: none"> a. The count of FMPs in Table 13 (38) does not appear to match the count in the FMP feature class (36). Please reconcile. b. The estimated project costs for some FMPs do not appear to match between the FMP feature class and Table 13. For example, FMP_IDs 153000001 and 153000003. Please reconcile. 	<p>Table 13 was reconciled with GIS/Text.</p>
<p>30. Flood Mitigation Projects (FMP) GIS Feature Class, FMP:</p> <ul style="list-style-type: none"> a. The count of FMPs in Table 13 (38) does not appear to match the count in the FMP feature class (36). Please reconcile. b. The estimated project costs for some FMPs do not appear to match between the FMP feature class and Table 13. For example, FMP_IDs 153000001 and 153000003. Please reconcile. c. Please add the required field 'MODEL_ID' per the Summary Update to Exhibit D document available on the TWDB website. Leave NULL when the field is unknown. d. It appears that some fields contain invalid entries, including 'EMER_NEED' and 'FMP_TYPE'. For example, "yes" instead of "Yes". Note that valid entries are case sensitive. Please complete all required fields with valid entries per Exhibit D Table 24. e. It appears that some fields are missing entries, including 'RECUR_COST' and 'FUND'. Please complete all required fields with valid entries per Exhibit D Table 24. Leave NULL 	<p>The Feature class reconciled with Text and Tables. Fields were updated to contain valid entries/ formatting or missing information.</p>

Comment Received	RFPG Response
<p>when the field is not applicable or unknown [31 TAC §361.38(c-e) & Exhibit D 3.11.1].</p>	<p>Tables were updated to include missing information. Tables reconciled with GIS/Text.</p>
<p>32. Flood Management Strategies (FMS) GIS Feature Class, FMS:</p> <ul style="list-style-type: none"> a. It appears that some fields contain invalid entries, including 'EMER_NEED'. For example, "yes" instead of "Yes". Note that valid entries are case sensitive. Please complete all required fields with valid entries per Exhibit D Table 26. b. It appears that some fields are missing entries, including 'RECUR_COST' and 'FUND', Please complete all required fields with valid entries per Exhibit D Table 24. Leave NULL when the field is not applicable or unknown [31 TAC §361.38(d) & Exhibit D]. c. There appears to be a duplicate entry for each FMS in the FMS feature class. Please review and remove all duplicates. 	<p>Fields were updated to contain valid entries/ formatting or missing information.</p>
<p>SOW Task 5</p>	
<p>33. Flood Management Evaluation (FME) Recommendations Table (Exhibit C Table 15): The count of FMEs in the FME feature class (100) does not appear to match the count of FMEs in Table 15 (133). Please reconcile [31 TAC §361.39 & Exhibit D 3.10].</p>	<p>Tables were updated to include missing information. Tables reconciled with GIS/Text.</p>

35. Flood Management Evaluation (FME) Recommendations Map (Exhibit C Map 19): Please revise the map based on revisions to the FME feature class and Table 15 as needed [31 TAC §361.39 & Exhibit D 3.10].	Maps were updated and reconciled with GIS/Text/Tables.

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Comment Received	RFPG Response
<p>feature class. Please reconcile [31 TAC §361.39 & Exhibit C 2.5.B].</p>	
<p>37. Flood Mitigation Project (FMP) Recommendations GIS Feature Class, FMP:</p> <ul style="list-style-type: none"> a. It appears that some fields contain invalid entries, including 'EMER_NEED' and 'FMP_TYPE'. For example, "yes" instead of "Yes". Note that valid entries are case sensitive. Please complete all required fields with valid entries per Exhibit D Table 24. b. It appears that some fields are missing entries, including 'RECUR_COST', 'FUND', and 'PREPROJLOS'. Please complete all required fields with valid entries per Exhibit D Table 24. Leave NULL when the field is not applicable or unknown [31 TAC §361.39 & Exhibit D 3.11.1]. 	<p>Feature Class was updated and with missing information and proper formatting.</p>
<p>38. Flood Mitigation Project (FMP) Details Geodatabase, FMP_Details:</p> <ul style="list-style-type: none"> a. <i>FMP_Details</i> was not provided in the geodatabase. Please ensure this is provided with the geodatabase submittal with the final regional flood plan [31 TAC §361.39, Exhibit D 3.11.3 & Exhibit C 3.10.C]. 	<p>Fields were updated to contain missing information.</p>
<p>39. Flood Management Strategy (FMS) Recommendations Table (Exhibit C Table 17):</p> <ul style="list-style-type: none"> a. Table 17 should list "Non-Recurring, Non-Capital Costs" instead of "Reoccurring Non-Capital Costs". b. Non-recurring, non-capital costs in Table 17 do not appear to match what is included in the FMS feature class. Please review and reconcile accordingly [31 TAC §361.39 & Exhibit C 2.5.C]. 	<p>Tables were updated to include missing information. Tables reconciled with GIS/Text.</p>

Comment Received	RFPG Response
<p>40. Flood Management Strategy (FMS) Recommendations GIS Feature Class, FMS:</p> <ul style="list-style-type: none"> a. It appears that some fields contain invalid entries, including 'EMER_NEED'. For example, "yes" instead of "Yes". Note that valid entries are case sensitive. Please complete all required fields with valid entries per Exhibit D Table 26. b. It appears that some fields are missing entries, including 'RECUR_COST', 'FUND', and 'PREPROJLOS'. Please complete all required fields with valid entries per Exhibit D Table 24. Leave NULL when the field is not applicable or unknown [31 TAC §361.39 & Exhibit D 3.10]. 	<p>Fields were updated to contain valid entries/ formatting or missing information.</p>
<p>SOW Task 6A</p>	
<p>41. Impacts of Regional Flood Plan, Text:</p> <ul style="list-style-type: none"> a. Chapter 6 does not appear to explicitly state that the regional flood plan, when implemented, will not negatively affect neighboring areas located within or outside the flood planning region. Chapter 5 states "the local sponsor will ultimately be responsible for proving the final project design has no negative flood impacts before initiating construction." Please consider updating this statement or including additional statements to meet this requirement [31 TAC §361.40 & Exhibit C 2.6.A]. b. Chapter 6 does not appear to contain an analysis of overall impacts of the plan on the following required categories: environment, agriculture, erosion, and sedimentation. Please reconcile [31 TAC §361.40 & Exhibit C 2.6.A]. 	<p>Chapter 6 was updated to include missing information and more detailed information.</p>

Comment Received	RFPG Response
SOW Task 7	
<p>42. Flood Response Information and Activities, Text:</p> <ul style="list-style-type: none"> a. Please include where more detailed information is available regarding recovery, as required [31 TAC §361.42 & Exhibit C 2.7]. b. Please include a written summary of entities involved and actions taken or planned for recovery from past flood disasters in the region, as required [31 TAC §361.42 & Exhibit C 2.7]. 	<p>Chapter 7 was updated to include more detailed information on recovery efforts in the region.</p>
SOW Task 9	
<p>43. Flood Infrastructure Financing, Text:</p> <ul style="list-style-type: none"> a. Please include a description of the percentage of survey completions and whether an acceptable minimum survey completion was achieved, as required [Exhibit C Section 2.9]. b. Table 19 does not appear to be included. Please reconcile [§361.44 & Exhibit C 2.9]. 	<p>Chapter 9 was updated to include missing information and more detailed information. Percentage calculated and included in the data. Tables were updated to include missing information. Tables reconciled with GIS/Text.</p>
<p>Level 2: Comments and suggestions for consideration that may improve the readability and overall understanding of the regional flood plan.</p>	
General Comments	
<p>44. Please consider including a complete table of contents for the entire regional flood plan.</p>	<p>A complete Table of Contents is included.</p>
<p>45. For maps that display large amounts of data (e.g., Maps 4, 6, 8, and 10), please consider a region-wide map and accompanying map index as well as inset maps, as appropriate.</p>	<p>Insets were included in some maps and other maps were broken into a series of maps.</p>
<p>46. Existing Flood Infrastructure, Text: Please consider providing a description of how Low Water Crossings were identified within the text of Chapter 1.</p>	<p>This will be included in the amended plan.</p>

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Comment Received	RFPG Response
<p>47. Existing Flood Infrastructure Map (Exhibit C Map 1): Please consider modifying the relative colors and/or line thickness (e.g., of "Levee") to improve map legibility.</p>	<p>Map has been updated to increase readability.</p>
<p>48. Existing Flood Projects Table (Exhibit C Table 2):</p> <ul style="list-style-type: none"> a. Existing Project IDs 15000028 and 15000029 have been awarded HMGP funds, but do not appear to have HMGP listed as a project funding source. Please consider including HMGP in the "Source of Funding" field for these projects. b. Please consider including the City of McAllen's FMA Grant EMT-2018-FM-E002 drainage project that is currently in progress. 	<p>This will be included in the amended plan.</p>
<p>49. Existing Flood Projects GIS Feature Class, ExFldProjs:</p> <ul style="list-style-type: none"> a. Existing Project IDs 15000028 and 15000029 have been awarded HMGP funds, but do not appear to have HMGP listed as a project source. Please consider including HMGP in the 'FUND_SRC' field for these projects. b. Please consider including the City of McAllen's FMA Grant EMT-2018-FM-E002 drainage project that is currently in progress. 	<p>This will be included in the amended plan.</p>
<p>SOW Task 2A</p>	
<p>50. Existing Condition Flood Hazard GIS Feature Class, <i>ExFldHazard</i>: There appears to be approximately 35 square miles of overlap in this feature class, particularly along the coast. Please verify accuracy of data and reconcile if necessary.</p>	<p>No reconciliation is necessary map is accurate.</p>
<p>51. Existing Condition Gaps Map (Exhibit C Map 5): Municipal boundaries do not appear visible on the map. Please consider modifying the map elements</p>	<p>Layers reordered and symbols changed</p>

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Comment Received	RFPG Response
(e.g., reordering the layers or changing symbology) to improve legibility.	
<p>52. Existing Condition Flood Vulnerability Map (Exhibit C Map 7):</p> <ul style="list-style-type: none"> a. Please consider increasing the size of the color dots within the legend to improve legibility. b. Municipal boundaries and major roadways do not appear visible on the map. Please consider modifying the map elements (e.g., reordering the layers or changing symbology) to improve legibility. c. Map 7 appears to depict all features within the SVI range of 0 to 1. Please consider only including features with SVI scores above 0.75 as required per guidance document (Exhibit C Page 27): Submittal requirement number 3. d. Please consider adding a separate point symbology class for LWCs to improve map legibility. 	<p>Maps were improved.</p>
<p>53. Model Coverage, Text:</p> <ul style="list-style-type: none"> a. Please consider including a table with descriptions of local detailed studies shown in the ModelCoverage feature class and in Figure 2.4. b. Please consider describing what "Non-Modernized" indicates in Figure 2.7. 	<p>Table is included in report and in Exhibit. A definition for non-modernized will be included in the amended plan.</p>
SOW Task 2B	
<p>54. Future Condition Flood Vulnerability, Text: The text of the Future Condition Vulnerability Analysis section does not appear to provide detail of the resilience of communities located in flood-prone areas identified in the future condition flood exposure analysis, or the vulnerabilities of critical facilities to flooding by looking at factors such as</p>	<p>This will be included in the amended plan.</p>

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Comment Received	RFGP Response
<p>55. Future Condition Flood Vulnerability Map (Exhibit C Map 12):</p> <ul style="list-style-type: none"> a. Please consider increasing the size of the color dots within the legend to improve legibility. b. Municipal boundaries and major roadways do not appear visible on the map. Please consider modifying the map elements (e.g., reordering the layers or changing symbology) to improve legibility. c. Map 12 appears to depict all features within the SVI range of 0 to 1. Please consider only including features with SVI scores above 0.75 as required per guidance document (Exhibit C Page 35): Submittal requirement number 3. d. Please consider adding a separate point symbology class for LWCs to improve map legibility. 	<p>Map corrected and enhanced</p>
	<p>Text and table are reconciled.</p>
<p>57. Flood Management Evaluations (FME), Text:</p>	<p>This will be included in the amended plan.</p>

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Comment Received	RFPG Response
<p>a. For FMEs that potentially overlap with an existing TWDB-funded, FIF Category 1, study, please state how the FME will expand on the existing study.</p> <p>b. For county-wide FMEs where most of the county falls outside of the RFPG boundary, please include justification of how the FME benefits the region and please coordinate with other RFPGs to make sure the efforts are not duplicated.</p>	
<p>58. Flood Management Evaluations (FME) Map (Exhibit C Map 16): Please consider providing an inset map, or using another method, for certain cities to improve legibility of potentially smaller FMEs.</p>	<p>Maps have an inset included.</p>
<p>SOW Task 5</p>	
<p>59. Flood Management Evaluation (FME) Recommendations, Text:</p> <p>a. For FMEs that potentially overlap with an existing TWDB-funded, FIF Category 1 study, please state how the FME will expand on the existing study.</p> <p>b. For county-wide FMEs where most of the county falls outside of the RFPG boundary, please include justification of how the FME benefits the region and please coordinate with other RFPGs to make sure the efforts are not duplicated.</p>	<p>This will be included in the amended plan.</p>
<p>60. Flood Management Evaluation (FME) Recommendations Table (Exhibit C Table 15): Please consider documenting existing or ongoing BLE and TWDB-funded, FIF Category 1 studies.</p>	<p>This will be included in the amended plan.</p>
<p>61. Flood Management Evaluation (FME) Recommendations GIS Feature Class, FME:</p> <p>a. Please consider populating 'MODEL_DESC' field for clarity on existing studies to be used.</p>	<p>Model populated and document corrected on Category studies</p>

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Comment Received	RFPG Response
<p>b. b. Please make sure to document existing or ongoing BLE and TWDB-funded, FIF, Category 1 studies.</p>	
<p>62. Flood Mitigation Project (FMP) Recommendations Map (Exhibit C Map 20): Please consider revising this map to more clearly depict the two recommended FMPs displayed on the map.</p>	<p>Map revised and inset added.</p>
<p>63. Flood Mitigation Project (FMP) Details Geodatabase, FMP_Details:</p> <p>a. Please ensure that all NULL values are correct and revise as appropriate.</p>	<p>Detail geodatabase corrected and revised</p>
<p>SOW Task 6B</p>	
<p>64. Contributions and Impacts to Water Supply, Text: The Hidalgo County Drainage District Delta Watershed Project included in the 2021 Region M Regional Water Plan appears to include proposed construction of a new reservoir. Please confirm that this project should not be included in the Region 15 Regional Flood Plan.</p>	<p>This will be included in the amended plan.</p>
<p>SOW Task 9</p>	
<p>65. Flood Infrastructure Financing Analysis, Text: Please consider providing the supporting calculation and reference to supporting data for the following statement in the report “it is projected that \$67,000,000 of state and federal funding is needed.” (Page 9-11).</p>	<p>This will be included in the amended plan.</p>

U.S. Army Corps of Engineers

The following comments were received by the Regional Flood Planning Group via email on October 26, 2022, from Sonia Sams, Project Coordinator with the Water Resources Branch of the U.S. Army Corps of Engineers in Fort Worth, Texas. The comments received, as well as the provided responses are included in **Table E.1** below.

Table E.2 U.S. Army Corps of Engineers Comments on Region 15 Lower Rio Grande Regional Flood Planning Group’s Draft Regional Flood Plan

Comment Received	RFPG Response
<p>1. <i>Non regulatory regional flood control or drainage districts should be established and funded for rapidly growing urban areas such as DFW, Houston, San Antonio, etc. Responsibility would be to provide consistency, technical resources, funding and reviews in support of FME’s, FMS’s. These organizations would also implement or support implementation of FMP’s. These organizations would augment communities and counties that just don’t have the resources and expertise to manage flooding.</i></p> <p>Rapidly developing areas surrounding larger urban centers are at greater risk of having runoff patterns increasing because of development. These urban areas are comprised of many communities and unincorporated county areas. Many of the smaller communities are not funded or resourced to deal with the complexities of floodplain management and therefore there is a lack of or inconsistencies in floodplain management practices.</p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this suggestion for the Regional Flood Plan</p>
<p>2. <i>Clarify the early 2000’s state legislation that provide counties the authority to regulate floodplains to explicitly allow and encourage activities associated with floodplain management such as development of land use plans, regulatory authorities, e.g. permitting.</i></p> <p>Although state legislation was passed in the early 2000’s which gave counties the ability to regulate</p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this suggestion for the Regional Flood Plan.</p>

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Comment Received	RFPG Response
<p>floodplains, interpretation of these regulations varies widely from county to county. The legislature bill lacks implementation guidance in the form of administrative rules. If development is occurring in unincorporated areas, this development can dynamically impact flood risk.</p>	
<p>3. <i>Require the use of n-values and channel conditions which would likely result if the channel or project were not maintained. Exceptions would be golf courses or other areas where an organization exists which would maintain the channel in perpetuity. Disallow maintenance by marginal organizations such as home owners associations to justify acceptance of lower n-values as this is an unrealistic expectation.</i></p> <p>When channels are constructed, most often channel bed, banks and overbanks are cleared; however; with many miles of these channels, it is often difficult for communities to maintain those beds, banks and overbanks at their design conditions. Generally, there is a lack of channel maintenance to ensure flood conveyance areas, established as part of a development or improvement projects, to retain their design level n-values. This results in unexpected changes in channel conveyance and increased flooding. Channel maintenance is very expensive activity that can trigger environmental permitting requirements.</p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this suggestion for the Regional Flood Plan.</p>
<p>4. <i>No loss of valley storage to the 500-year level. Communities could allow redistribution of valley storage to allow interactions with natural areas but no loss of storage.</i></p> <p>Land development in upstream areas increases runoff in downstream areas. This happens because of increased impervious cover and decreased tree cover, and therefore less ability to absorb rainfall. Additionally, development, in most communities, encroaches into riparian areas and decreases the amount of storage available to accommodate flood</p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this suggestion for the Regional Flood Plan.</p>

Comment Received	RFPG Response
<p>waters. Just the main thread of the Trinity River though DFW stores more flood waters during of flood than any three of the USACE reservoirs that provide flood protection for DFW. The many other stream provide even more storage than the main stem. There is limited capacity in rivers and streams to convey floodwaters. This means that all areas above any given conveyance point have to store flood water until sufficient time has laps to pass the water away from the impacted area. The streams are where this water is stored and depleting these storage areas will impact DS areas.</p>	
<p>5. <i>Establish future land use plans for unincorporated areas associated with rapidly growing urban areas.</i></p> <p>Land development in upstream areas increases runoff in downstream areas. This happens because of increased impervious cover and decreased tree cover, and therefore less ability to absorb rainfall. Additionally, development, in most communities, encroaches into riparian areas and decreases the amount of storage available to accommodate flood waters. Just the main thread of the Trinity River though DFW stores more flood waters during of flood than any three of the USACE reservoirs that provide flood protection for DFW. The many other stream provide even more storage than the main stem. There is limited capacity in rivers and streams to convey floodwaters. This means that all areas above any given conveyance point have to store flood water until sufficient time has laps to pass the water away from the impacted area. The streams are where this water is stored and depleting these storage areas will impact DS areas.</p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this suggestion for the Regional Flood Plan.</p>
<p>6. <i>Use of ultimate development land use conditions in the development of future flows. Require use of future flows for regulation of floodplains and development of FMP's.</i></p> <p>Land development in upstream areas increases runoff in downstream areas. This happens because of increased impervious cover and decreased tree</p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this suggestion for the Regional Flood Plan.</p>

Comment Received	RFPG Response
<p>cover, and therefore less ability to absorb rainfall. Additionally, development, in most communities, encroaches into riparian areas and decreases the amount of storage available to accommodate flood waters. Just the main thread of the Trinity River though DFW stores more flood waters during of flood than any three of the USACE reservoirs that provide flood protection for DFW. The many other stream provide even more storage than the main stem. There is limited capacity in rivers and streams to convey floodwaters. This means that all areas above any given conveyance point have to store flood water until sufficient time has laps to pass the water away from the impacted area. The streams are where this water is stored and depleting these storage areas will impact DS areas.</p>	
<p>7. <i>Encourage storm shifting to validate 100-yr estimates and to provide a broader understanding of communities actual flood risk. Storms identified and cataloged as part of the GLO funded USACE led Texas Storm Study could be the primary source of storms to be shifted.</i></p> <p>Notes: Great deal of uncertainty in 100-yr estimates. Use of observed storms that approximately match depth duration data from NOAA Atlas 14 or other precipitation frequency sources validates 100-yr estimates. Additionally wet, dry and average conditions as well as conditions at the time the storm occurred can be presented. Additionally, communities have and can experience storms that exceed the 100-yr. While not regulatory, this information will provide additional hazard mitigation data so communities can address critical infrastructure impacts and be better prepared.</p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this suggestion for the Regional Flood Plan.</p>
<p>8. <i>Add detail to Watershed Hydrology Assessments (WHA) for communities within basins with completed WHA's. The WHA for the Trinity has been completed.</i></p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this suggestion for the Regional Flood Plan.</p>

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Comment Received	RFPG Response
<p>The WHA's, funded by FEMA, are considered the best available flood flow frequency estimates, e.g. 100-yr. These estimates consider the latest precipitation frequencies, the variations in watershed response and determine critical flood drivers by employing a wide range of sensitivity analysis for each computation point.</p>	
<p>9. <i>Update WHA's when future precipitation frequency estimates become available. Efforts to develop future precipitation frequency estimates for Texas are starting.</i></p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this suggestion for the Regional Flood Plan.</p>
<p>10. Establish regional efforts, for large urban centers to develop future land use data for all developing areas, not just incorporated areas, for use in developing future flood flow frequency estimates and future 100-yr (and other recurrence interval) hazard boundaries.</p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this suggestion for the Regional Flood Plan.</p>

Texas Parks & Wildlife Comments

The following comments were received by the Regional Flood Planning Group via email on October 27, 2022 from Marty Kelly, Water Resources Program Coordinator for the Texas Parks & Wildlife. The comments received, as well as the provided responses are included in **Table E.13** below.

Table E.3 Texas Parks & Wildlife Comments on Region 15 Lower Rio Grande Regional Flood Planning Group’s Draft Regional Flood Plan

Comment Received	RFPG Response
<p>1. TPWD emphasizes that the following flood risk management (FRM) concepts identified in the forementioned literature be incorporated into the RFP.</p> <ul style="list-style-type: none"> • Flood is a natural process that has many benefits to human and natural systems. • Promoting some flooding as desirable and making room for water promotes native species, maintains vital ecosystem services, and reduces the chance of flooding elsewhere.. • Natural landscapes and watersheds provide flood mitigation functions that should be promoted, protected, enhanced, and restored. • Prioritize risk reduction over flood control by focusing first on reducing loss of life and injury. • Utilize limited resources fairly. • Address flood risk using a portfolio approach to first implement non-structural (policy, land management, emergency management) followed by structural (grey and natural and nature-based) strategies. • Criteria for assessing project strategies should include a comprehensive suite of measures spanning economical, operational, societal, and environmental advantages and disadvantages assessments focusing on 	<p>The Region 15 Regional Flood Planning Group appreciates you providing this suggestion for the Regional Flood Plan.</p>

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Comment Received	RFPG Response
<p>economics alone (number of building, acres) should be avoided.</p>	
<p>2. Task 4B identification and evaluation of potential FMS’s potentially feasible FMS and FMP’s is meant to be part of chapter 5 rather than chapter 4. TPWD recommends moving task 4B to chapter 5.</p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this suggestion for the Regional Flood Plan.</p>
<p>3. Texas Conservation Act Plan (TCP) is a guiding document for conservation in the state of Texas, with the goals of realizing conservation benefits, preventing species listings, and preserving our natural heritage for future generations. Species of Greatest Conservation Need (SGCN) include numerous aquatic species such as fish, freshwater mussels, and salamanders. The TCAP Handbook (Texas Parks and Wildlife Department, 2012) includes six types of priority habitats, three of which are aquatic: water resources; riparian and floodplains; and caves and karst. Issues affecting these environments include environmental flows, impoundments and dam operations, and water quality issues (including stormwater runoff).</p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this suggestion for the Regional Flood Plan.</p>
<p>4. TPWD would like to encourage all the FMX (an FMP, FME, or FMS) proponents to consider stream crossing designs that allow for sediment transport and passage of aquatic organisms and do not impound water. Basically, designs that are invisible to the creek. This includes bridges that span the creek where possible or culverted crossings designed with the culvert(s) in the active channel area lower than those in the floodplain benches so that the flow in the channel is not overly spread out. The central/low-flow culvert(s) should be large enough to handle a 1.5-year flow without backing up water. The bottoms of these lower culverts should be set at least a foot below grade (i.e., recessed) to allow natural substrate to cover the culvert bottom and allow for aquatic organism passage. These lower, recessed culverts should be</p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this suggestion for the Regional Flood Plan.</p>

Comment Received	RFPG Response
<p>installed in the thalweg or deepest part of the channel and be aligned with the low flow channel (Clarkin et al., 2006).</p>	
<p>5. The Draft Lower Rio Grande Regional Flood Plan includes a number of channel improvement projects which may include widening, deepening, and straightening streams. Channelization and over-widening of streams slows flow, which increases deposition of sediment, decreases fish habitat, increases water temperatures, and can result in channel erosion. Streams in good condition naturally reach bankfull and start spilling onto the floodplain during a 1.5 to 2-year flood event. Widening and deepening a stream channel to force it to contain the 100-year flow negatively impacts the adjacent water table and riparian area and has geomorphic effects upstream and downstream of the modification. If channelization is necessary, constructing a two-stage channel with a low flow channel and a floodplain allows for the continued transport of sediment, habitat for aquatic wildlife, and can reduce maintenance (Rosgen 1996). TPWD encourages the RFPG to protect existing streams, riparian areas, and floodplains .</p> <p>The proposed Flood Management Evaluations, Plans, and Strategies (FMXs, all together) include numerous infrastructure projects that may affect the aquatic habitats that are prioritized in the TCAP for example the removal of low water crossings can benefit rare species such as mussels and fish if the crossing is replaced with a bridge or culvert that does not form a barrier to species movements conversely building dams and channelizing streams can conversely affect aquatic habitats and species.</p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this suggestion for the Regional Flood Plan.</p>

Sierra Club Lone Star Chapter Comments

The following comments were received by the Regional Flood Planning Group via email on October 31, 2022, from Alex Ortiz, Water Specialist for the Sierra Club Lone Star Chapter, and Cyrus Reed, Conservation Director for the same chapter. The comments received, as well as the provided responses are included in **Table E.14** below.

Table E.4 Sierra Club Lone Star Chapter Comments on Region 15 Lower Rio Grande Regional Flood Planning Group’s Draft Regional Flood Plan

Comment Received	RFPG Response
<p>2. Increase the acreage of publicly protected open space in critical flood risk areas that are reused for public benefit (from 300,000 acres in short term to 800,000 acres in long-term). Note: we would support higher goals.</p>	<p>The Region 15 Regional Flood Planning Group appreciates your support for increased acreage of publicly protected open space in critical flood risk areas that are reused for public benefit.</p>
<p>4. Reduce the number of structures within NFHL-Detailed Study Area and Existing Floodplain with 1% annual chance flood risk.</p> <p><i>To their credit the region is contemplating reducing the number of newly constructed critical infrastructure facilities in this area by 70% in the medium term and 100% in the long-term, which we</i></p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this flood protection goal for consideration.</p>

Comment Received	RFPG Response
<p><i>support, but some consideration to moving or buttressing existing structures is needed in the plan</i></p> <p>5. We would note that the RGV Region 15 might consider additional recommendation that many other regional groups are recommending, including: The RGVFPG should play a role in facilitating public information/public education activities in the Rio Grande Basin and provide support to local public agencies to promote a wider understanding of state and regional flood issues and the importance of flood preparedness and long-range regional flood planning and mitigation</p> <p><i>Increase the number of outreach and education activities, specifically targeting municipal floodplain managers throughout Region 15, hosted by Region 15 RFPG and available on the website.</i></p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this administrative recommendation for consideration. This recommendation is closely aligned with one of our Education and Outreach Goals:</p>
<p>6. We would note that the RGV Region 15 might consider additional recommendation that many other regional groups are recommending, including: The TWDB should use the project list in the adopted RFP and state flood plan (SFP) to help connect local communities to grant programs administered by federal or other state agencies;</p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this administrative recommendation for consideration.</p>
<p>7. We would note that the RGV Region 15 might consider additional recommendation that many other regional groups are recommending, including:</p> <ul style="list-style-type: none"> • The TWDB is encouraged to consider use of hybrid approaches that blend structural engineered projects and nature-based solutions for flood mitigation: <ul style="list-style-type: none"> ○ Incentivize voluntary buy-out programs, turning previously flooded properties/neighborhoods into stormwater parks as an alternative to large scale construction projects; and 	<p>The Region 15 Regional Flood Planning Group appreciates you providing this administrative recommendation for consideration.</p>

APPENDIX E: COMMENTS & RESPONSES TO THE DRAFT REGIONAL FLOOD PLAN

Comment Received	RFPG Response
<ul style="list-style-type: none"> ○ Provide training to state agencies, local governments, engineers, planners in the use of natural floodplain preservation/conservation. 	
<p>8. The Texas Legislature is urged to support adoption of the 2021 versions of International Building Code and International Residential Code as State Building Standards, and other standards such as the 2021 IPC and 2021 IECC, which will ensure new construction is more resilient</p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this legislative recommendation for consideration.</p>
<p>9. The Texas Legislature should provide counties with more powers to implement, enforce and inspect modern building codes to ensure new construction is meeting more resilient standards</p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this legislative recommendation for consideration</p>
<p>10. The Texas Legislature is urged to expand the use of the Economically Distressed Areas Program (EDAP) Funds to include residential drainage as an eligible use of EDAP funds as has been previously proposed. Because EDAP has been used for water and wastewater service grants throughout the RGV, assuring that those projects are combined with proper drainage to avoid future flooding is a key flood-proof strategy that would be uniquely beneficial for this region</p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this legislative recommendation for consideration.</p>
<p>11. The Texas Legislature should continue to provide funding to state agencies for flood planning initiatives, including providing technical support and assistance to county and city floodplain administrators or designees to support development of building standards, permitting support to verify new projects meet floodplain development requirements, and training</p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this legislative recommendation for consideration.</p>
<p>12. The Texas Legislature is urged to make funds available to support nature-based practices through land conservation, restoration programs, and participation in landowner incentive programs to encourage voluntary land stewardship practices to</p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this legislative recommendation for consideration.</p>

APPENDIX E: COMMENTS & RESPONSES TO THE DRAFT REGIONAL FLOOD PLAN

Comment Received	RFPG Response
<p>manage floodwaters by slowing runoff and dissipating flood energy to include riparian, wetland, forest, upland, and other habitat protection programs.</p> <ul style="list-style-type: none"> • Promote land coverage studies to effectively identify riparian corridors to protect for floodplain mitigation and erosion reduction. • Additional low interest programs to support voluntary city and county buy-back of lands for county parks and flood mitigation should also be included. 	
<p>13. We believe the region should consider expanding the definition of what is included in the definition of critical infrastructure</p>	
<p>14. Prepare minimum flood management standards, including identifying operations and maintenance best practices to maintain drainage structures</p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this suggestion for improving the Regional Flood Plan.</p>
<p>16. Develop public information campaigns to increase community knowledge of rules and regulations, flood-prone areas, and importance of protecting floodplains from encroachment.</p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this suggestion for improving the Regional Flood Plan</p>
	<p>The Region 15 Regional Flood Planning Group appreciates you providing this suggestion for improving the Regional Flood Plan.</p>

APPENDIX E: COMMENTS & RESPONSES TO THE DRAFT REGIONAL FLOOD PLAN

Comment Received	RFPG Response
<p>these models be developed so that future plans can be more exact.</p>	
<p>18. Apply higher-end sea level rise projections to assess future conditions analysis for Coastal Zones</p> <ul style="list-style-type: none"> • <i>We recommend using the intermediate-to-intermediate high projections for planning. We were unable to determine in the plan how sea level rise is being treated as it was not clear in the methodology</i> 	<p>The Region 15 Regional Flood Planning Group appreciates you providing this suggestion for improving the Regional Flood Plan.</p>
<p>19. Expand the types of structures included when assessing vulnerability of Critical Facilities and weigh these structures higher during the Flood Mitigation Needs assessment</p> <ul style="list-style-type: none"> • <i>Region 15 included schools, hospitals, police stations, and fire stations, electric and gas lines, Superfund sites, water and wastewater supply sites as critical facilities when determining vulnerability to flood hazards. ... Unlike some regions, Region 15 did not include chemical plants, refineries, chemical storage facilities, and oil and <u>gas</u> infrastructure as critical facilities...during the Flood Mitigation Needs Assessment in Chapter 4, Region 13 should weigh these additional facilities higher than hospitals, schools, fire stations, and police stations, as they can pose additional risks to the health and safety of communities when flooded.</i> 	<p>The Region 15 Regional Flood Planning Group appreciates you providing this suggestion for improving the Regional Flood Plan.</p>
<p>20. Region 15 should adopt Minimum Floodplain Management Regulations</p> <ul style="list-style-type: none"> • <i>Region 15 should require at least two minimum floodplain management regulations:</i> • <i>Compliance with Texas Water Code Section 16.3145 and</i> • <i>FEMA’s National Flood Insurance Program (NFIP) participation.</i> 	<p>The Region 15 Regional Flood Planning Group appreciates you providing this suggestion for improving the Regional Flood Plan</p>

APPENDIX E: COMMENTS & RESPONSES TO THE DRAFT REGIONAL FLOOD PLAN

Comment Received	RFPG Response
<ul style="list-style-type: none"> As these regulations are widespread across the region, and create a strong foundation for the region, we support the inclusion of these as minimum floodplain management regulations. 	
<p>21. Include a Goal to increase enforcement of Floodplain Ordinances</p> <p><i>The level of enforcement of floodplain management practices varied across Region 15. However, for the vast majority of counties and municipalities, the Region was not able to determine level of enforcement. We believe that Region 15 should include a goal for the region to increase knowledge of enforcement across the region, and to increase levels of enforcement, region wide.</i></p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this suggestion for improving the Regional Flood Plan.</p>
<p>22. Include impact to natural infrastructure in No Negative Impacts analysis</p> <p><i>Natural features and nature-based infrastructure provide significant flood mitigation benefits to neighboring communities. The analysis of “No Negative Impacts” should include impacts to natural infrastructure.</i></p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this suggestion for improving the Regional Flood Plan.</p>
<p>23. Include annual appropriations to FIF as a legislative recommendation</p> <ul style="list-style-type: none"> <i>We recommend that Region 15 include a legislative recommendation that the state should allocate funding for recurring biennial appropriations to the Flood Infrastructure Fund. Annual appropriations to FIF will ensure that the state can continue to invest in FMPs included in the regional flood plans. At least 7 regions analyzed have included this as a recommendation in their draft plans.</i> 	<p>The Region 15 Regional Flood Planning Group appreciates you providing this legislative recommendation for consideration.</p>
<p>24. Consider a specific section and measures on border security and minimizing the impacts of border security on flooding.</p>	<p>The Region 15 Regional Flood Planning Group appreciates you providing this recommendation for consideration.</p>

Comment Received	RFPG Response
<ul style="list-style-type: none"> <p><i>As is well documented, the decision by the federal government under multiple administrations (Bush, Obama, Trump, and Biden) to add border security, often without considering the impacts on local flooding has had devastating impacts along the US-Mexico border. It has also in some cases cut through important habitats and reduced the effectiveness of open space as a flood mitigation strategy. We believe that the Region 15 flood plan must address this issue which as is pointed out “disrupt preserves and natural areas, as well as the natural hydrology (Page 1-30).” However, the plan is silent on what actions need to be taken to mitigate these flood risks. Adding a plan - which of course must include new partners like Homeland Security - to address these risks, and require consultations for future border infrastructure will be important to the region.</i></p> 	

October 25, 2022

Jaime Salazar
Operations Manager
Hidalgo County Drainage District No. 1
902 N. Doolittle
Edinburg, TX 78542

RE: Texas Water Development Board Comments on Region 15 Lower Rio Grande RFPG's Draft Regional Flood Plan Contract No. 2101792500

Dear Mr. Salazar,

Texas Water Development Board (TWDB) staff has performed a review of the draft regional flood plan submitted by August 1, 2022, on behalf of the Region 15 Lower Rio Grande Regional Flood Planning Group (RFPG). The attached comments will follow this format:

- **LEVEL 1:** Comments and questions that must be satisfactorily addressed to meet specific statute, rule, or contract requirements; and,
- **LEVEL 2:** Comments and suggestions for consideration that may improve the readability and/or overall understanding of the regional flood plan

Please note that while Level 2 comments are provided for the planning group's consideration, Level 1 comments must be addressed prior to the submission of final Regional Flood Plans by the January 10, 2023, deadline.

It is expected that the data contained in all written report sections, tables, excel spreadsheets, and the geodatabase will be consistent with each other. In cases where there are any discrepancies in data, the geodatabase dataset will supersede other data and the TWDB will utilize the geodatabase dataset when developing the state flood plan.

TWDB review of the draft regional flood plans is comprised of many spot checks of data across several deliverables and is not an all-encompassing review. Please note that TWDB's review does not imply accuracy of the entire draft regional flood plan, and the RFPG is responsible for ensuring the completeness and accuracy of all data.

To facilitate efficient and timely completion, and Board approval, of your final regional flood plan, please provide your TWDB Regional Flood Planner with a draft of your response to these comments (e.g., informally via email) on the draft RFP as soon as possible. This will allow TWDB staff to provide preliminary feedback on proposed RFPG responses to assist you in meeting your RFPG's timeline for approval and submission to TWDB of the final plan by the deadline. It will also help to minimize the need for subsequent follow-ups after final regional flood plan submission to TWDB.

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Brooke T. Paup, Chairwoman | George B. Peyton V, Board Member
Jeff Walker, Executive Administrator

Title 31 TAC §361.50(c) requires the regional flood planning group to consider any written or oral Comment received from the public on the draft regional flood plan (RFP); and the EA's written comment on the draft RFP prior to adopting a final RFP. Section 361.50(d) requires the final adopted plan include summaries of all timely written and oral comments received, along with a response, for each, explaining any resulting revisions or why changes are not warranted. Copies of TWDB's Level 1 and 2 written comments and the RFPG's responses must be included in the final, adopted RFP. While the comments included in this letter represent TWDB's review to date, please anticipate the need to respond to additional comments or questions, as necessary, regarding data integrity related to the Board's State Flood Plan Database (that is built from the 15 regional databases), even after submission of the final plan to TWDB.

Standard to all RFPGs is the need to include certain content in the final RFPs that was not yet available at the time that drafts were prepared and submitted. In your final RFP, please be sure to incorporate in the final submitted plan, documentation, for example, that a public meeting to receive comments was held as required and that comments received on the draft RFP were considered in the development of the final plan [31 TAC §361.50(d)].

If you have any questions regarding these comments or would like to discuss your approach to addressing any of these comments, please do not hesitate to contact Megan Ingram at 512-475-1590 or via email at megan.ingram@twdb.texas.gov. TWDB staff are available to assist you in any way possible to ensure successful completion of your final regional flood plan.

Lastly, on behalf of TWDB, I would like to thank you, the sponsor, the RFPG members and the technical consultants for accomplishing this major milestone of a herculean effort and advancing the flood risk reduction mission in our state.

Sincerely,

Reem J. Zoun, PE, CFM, ENV SP
Director
Flood Planning

Attachment: TWDB Comments

Cc: Commissioner David Garza, RFPG Chair
Kristina Leal, Halff Associates, Inc.
Matt Nelson, TWDB
James Bronikowski, TWDB
Anita Machiavello, TWDB
Megan Ingram, TWDB

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October 25, 2022

**TWDB Comments on Region 15 Lower Rio Grande Regional Flood Planning Group's
Draft Regional Flood Plan**

Level 1: Comments and questions must be satisfactorily addressed to meet statutory, agency rule, and/or contract requirements.

General Comments

1. Please ensure that all “Submittal requirements” identified in each of the Exhibit C Guidance document sections are submitted in the final flood plan.
2. Please consider including bookmarks in the pdf of the reports to facilitate ease of navigation for readers.
3. Several maps appear to be missing depictions of major roadways, major streams and rivers, major reservoirs, and other required features (e.g., Exhibit C Map 3 appears to be missing major streams and rivers). Exhibit C Section 3.10 requires all maps to contain certain base map information depicting the RFPG boundary, counties, HUCs as applicable, major streams or rivers, major reservoirs as applicable, major watershed boundaries as applicable, major roadways, major cities or urban areas, and other features identified by the RFPG. Please reconcile.

SOW Task 1

4. Entities GIS Feature Class, *Entities*:
 - a. It appears that some fields contain invalid entries such as “Y” instead of “Yes” for the ‘POLSUB_FLG’ field. Please complete all required fields with valid entries per Exhibit D Table 3.
 - b. It appears that some fields are missing entries, including ‘ACTIVE’. Please complete all required fields with valid entries per Exhibit D Table 3 [31 TAC §361.30(4) & (5)].
5. Existing Flood Infrastructure Table (Exhibit C Table 1): Low water crossings (LWC) do not appear to be included in Table 1. A summary and location of all low water crossings in the region identified by local communities is required to be included in Table 1. At minimum, identified LWCs within the Low Water Crossing dataset provided in the [TWDB Flood Planning Data Hub](#) should be included. Please include all LWCs identified during the flood planning process in this table [Exhibit C Section 2.1].
6. Existing Flood Infrastructure GIS Feature Class, *ExFldInfraPol*: It appears that some fields contain invalid entries, including ‘NAME’ and ‘DESCR’. Please complete all required fields with valid entries per Exhibit D Table 5 [31 TAC §361.31 & Exhibit D 3.3].
7. Existing Flood Infrastructure GIS Feature Class, *ExFldInfraLn*: It appears that some fields contain invalid entries, including ‘NATBUILT’ and ‘NAME’. Please complete all required fields with valid entries per Exhibit D Table 6 [31 TAC §361.31 & Exhibit D 3.3].
8. Existing Flood Infrastructure GIS Feature Class, *ExFldInfraPt*:
 - a. Please include all low water crossings (LWCs) identified during the flood planning process in this feature layer. The *ExFldExpAll* feature class contains 240 LWCs, whereas the *ExFldInfraPt* feature class appears to contain no LWCs. Note: This is

- required in contrast to the optional *LWC* feature class [31 TAC §361.31 & Exhibit D 3.3].
- b. All low water crossings (LWC) in the region identified by local communities are required to be included in the *ExFldInfraPt* feature class. At minimum, identified LWCs within the Low Water Crossing dataset provided in the [TWDB Flood Planning Data Hub](#) should be included. Please reconcile [31 TAC §361.31 & Exhibit D 3.3].
 - c. It appears that some fields contain invalid entries, including 'DESCR'. Please complete all required fields with valid entries as referenced in Exhibit D Table 7 [31 TAC §361.31 & Exhibit D 3.3].
9. Existing Flood Infrastructure Map (Exhibit C Map 1): Low water crossings (LWC) do not appear to be included in Map 1. All LWCs in the region identified by local communities are required to be included in the *ExFldInfraPt* feature class and this should be reflected in Map 1. At minimum, identified LWCs within the Low Water Crossing dataset provided in the [TWDB Flood Planning Data Hub](#) should be included. Please reconcile [31 TAC §361.31 & Exhibit C 2.1].
 10. Existing Flood Projects GIS Feature Class, *ExFldProjs*: The polygons representing proposed and ongoing flood mitigation projects appear to follow county boundaries in all instances. Please ensure polygons reflect actual project boundaries, service areas, and/or contributing drainage areas as applicable [31 TAC §361.32].
 11. Existing Flood Projects Map (Exhibit C Map 2): The shaded areas representing proposed and ongoing flood mitigation projects appear to follow county boundaries in all instances. Please ensure these shaded areas align with the *ExFldProjs* feature class to reflect actual project boundaries, service areas, and/or contributing drainage areas as applicable [31 TAC §361.32].

SOW Task 2A

12. Existing Condition Flood Hazard Analysis, Text:
 - a. Please include total land areas (square miles) of each flood risk by flood risk type, county, region, and frequency as per guidance document (Exhibit C page 24): Submittal requirement number 2.
 - b. Please include a reference to Exhibit C Table 3 in the text, as per the guidance document (Exhibit C page 27). Once Task 2A Existing Condition Flood Risk Analyses is complete, RFPs must include a summary table with findings summarizing flood risk by county.
 - c. The Existing Hazard section does not appear to explicitly identify flood hazards specific to different types of flooding including riverine, coastal, urban, or other flooding. Please reconcile [31 TAC §361.33(a)].
13. Existing Condition Flood Hazard Map (Exhibit C Map 4): It appears that flood hazards specific to different types of flooding are not depicted. Please include identification of each type of flooding including riverine, coastal, urban, or other flooding as per guidance document (Exhibit C page 24): Submittal requirement number 1. This may be included as a supplemental map.
14. Existing Condition Flood Exposure, Text: The text of the Existing Condition Flood Exposure Analysis section does not appear to describe exposure of structures and populations explicitly in the 1% and 0.2% floodplains. Please reconcile [31 TAC §361.33(c)].
15. Existing Condition Flood Exposure Table (Exhibit C Table 3):

- a. It appears that the day population is duplicated in the night population field. Please correct these sets of population values as necessary.
 - b. There appear to be inconsistencies between Table 3 and the *ExFldExpAll* feature class. For example, counts for Residential Structures and Total Structures do not appear to match. Please ensure data consistency between all related deliverables [31 TAC §361.33 & Exhibit C 2.2.A.3].
16. Existing Condition Flood Vulnerability GIS Feature Class, *ExFldExpAll*:
- a. It appears that some fields are missing entries, including 'CRITICAL' Please complete all required fields with valid entries per Exhibit D Table 14 [31 TAC §361.33(c), (d) & Exhibit C 2.2.A.2].
 - b. It appears that some fields contain invalid entries, including 'CRIT_TYPE'. Please use the updated 'CRIT_TYPE' valid entry list: "Medical, Police, Fire, EMS, Shelter, School, Infrastructure, Water Treatment, Wastewater Treatment, Power Generation, Other" per the [Summary Update to Exhibit D](#) document available on the TWDB website.
17. Model Coverage GIS Feature Class, *ModelCoverage*:
- a. Please provide additional detail to the descriptions of the existing models (i.e. software, type, date completed, scenario modeled) in the 'MODEL_DESCR' field.
 - b. Please ensure that all entries within the 'MODEL_ID' field are 12 digits long per the [Summary Update to Exhibit D](#) document available on the TWDB website [31 TAC §361.33(b)(2)].

SOW Task 2B

18. Future Condition Flood Hazard Map (Exhibit C Map 8): It appears that flood hazards specific to different types of flooding are not depicted. Please include identification of each type of flooding including riverine, coastal, urban, or other flooding as per guidance document (Exhibit C page 33): Submittal requirement number 1. This may be included as a supplemental map.
19. Future Condition Flood Hazard Analysis, Text:
- a. Please include total land areas (square miles) of each flood risk by flood risk type, county, region, and frequency as per guidance document (Exhibit C page 33): Submittal requirement number 3.
 - b. Please include a reference to Exhibit C Table 5 in the text, as per the guidance document (Exhibit C page 35). Once Task 2B Future Condition Flood Risk Analyses is complete, RFPGs must include a summary table with findings summarizing flood risk by county.
 - c. The Future Hazard section does not appear to explicitly identify flood hazards specific to different types of flooding including riverine, coastal, urban, or other flooding. Please reconcile [31 TAC §361.33(a)].
20. Future Condition Flood Exposure Table (Exhibit C Table 5): It appears that the table does not contain information in the Possible Flood Prone Areas section. Please verify that this is correct and, if necessary, add data as appropriate [31 TAC §361.34 & Exhibit C 2.2.B.3].
21. Future Condition Flood Vulnerability GIS Feature Class, *FutFldExpAll*:
- a. It appears that some fields contain invalid entries, including 'CRIT_TYPE'. Please use the updated 'CRIT_TYPE' valid entry list: "Medical, Police, Fire, EMS, Shelter, School, Infrastructure, Water Treatment, Wastewater Treatment, Power Generation, Other" per the [Summary Update to Exhibit D](#) document available on the TWDB website.

- b. It appears that some fields are missing entries, including 'FLOOD_FREQ' and 'CRITICAL'. Please complete all required fields with valid entries per Exhibit D Table 14 [31 TAC §361.34(c); Exhibit D 3.6.2].
22. Future Condition Flood Vulnerability Map (Exhibit C Map 12): The map legend does not appear to clearly indicate that the map is depicting SVI values. Please reconcile.

SOW Task 3A

23. Existing Floodplain Management Practices Map (Exhibit C Map 13): The map does not appear to depict entities that regulate and enforce floodplain practices. The map should depict the areas with established floodplain management practices, the entities that regulate and enforce those floodplain practices, and locations that lack floodplain management as per guidance document (Exhibit C page 47): Submittal requirement number 4. Please reconcile [31 TAC §361.35 & Exhibit C 2.3.A].
24. Existing Floodplain Management Practices Table (Exhibit C Table 6): The text appears to include cities that do not match Appendix B, Table 6. For example, the text states that the Cities of Granejo and Progreso are not NFIP participants. However, they are both listed as NFIP participants in Table 6. Please reconcile as appropriate.

SOW Task 4B

25. Streams GIS Feature Class, *Streams*:
- a. It appears that some fields are missing entries, including 'STR_NAME'. Please complete all required fields with valid entries per Exhibit D Table 22. Please consider naming streams as "Tributary of XX" whenever the main channel is known.
 - b. Please ensure that entries within the 'STREAM_ID' field are nine digits long consisting of a two-digit region number followed by seven digits. Unique IDs must be accurate for the database to connect and work properly. Please refer to Exhibit D Table 2 or more recent updates for Unique ID guidance [Exhibit D 3.9].
26. Flood Management Evaluations (FME) Table (Exhibit C Table 12): The count of FMEs in the *FME* feature class (100) does not appear to match the count of FMEs in Table 12 (133). Please reconcile [31 TAC §361.38(i) & Exhibit D 3.10].
27. Flood Management Evaluations (FME) GIS Feature Class, *FME*: The count of FMEs in the *FME* feature class (100) does not appear to match the count of FMEs in Table 12 (133). Please reconcile [31 TAC §361.38(i) & Exhibit D 3.10].
28. Flood Management Evaluations (FME) Map (Exhibit C Map 16): Please revise the map based on revisions to the *FME* feature class and Table 12 as needed [31 TAC §361.38 & Exhibit D 3.10].
29. Flood Mitigation Projects (FMP) Table (Exhibit C Table 13):
- a. The count of FMPs in Table 13 (38) does not appear to match the count in the *FMP* feature class (36). Please reconcile.
 - b. The estimated project costs for some FMPs do not appear to match between the *FMP* feature class and Table 13. For example, FMP_IDs 153000001 and 153000003. Please reconcile.
30. Flood Mitigation Projects (FMP) GIS Feature Class, *FMP*:
- a. The count of FMPs in Table 13 (38) does not appear to match the count in the *FMP* feature class (36). Please reconcile.

- b. The estimated project costs for some FMPs do not appear to match between the *FMP* feature class and Table 13. For example, FMP_IDs 153000001 and 153000003. Please reconcile.
 - c. Please add the required field 'MODEL_ID' per the [Summary Update to Exhibit D](#) document available on the TWDB website. Leave NULL when the field is unknown.
 - d. It appears that some fields contain invalid entries, including 'EMER_NEED' and 'FMP_TYPE'. For example, "yes" instead of "Yes". Note that valid entries are case sensitive. Please complete all required fields with valid entries per Exhibit D Table 24.
 - e. It appears that some fields are missing entries, including 'RECUR_COST' and 'FUND'. Please complete all required fields with valid entries per Exhibit D Table 24. Leave NULL when the field is not applicable or unknown [31 TAC §361.38(c-e) & Exhibit D 3.11.1].
31. Flood Management Strategies (FMS) Table (Exhibit C Table 14):
- a. Table 14 should list "Non-Recurring, Non-Capital Costs" instead of "Reoccurring Non Capital Costs". Please revise.
 - b. Non-recurring, non-capital costs in Table 14 do not appear to match what is included in the *FMS* feature class. Please reconcile [31 TAC §361.38(d) & Exhibit C 2.4.B].
32. Flood Management Strategies (FMS) GIS Feature Class, *FMS*:
- a. It appears that some fields contain invalid entries, including 'EMER_NEED'. For example, "yes" instead of "Yes". Note that valid entries are case sensitive. Please complete all required fields with valid entries per Exhibit D Table 26.
 - b. It appears that some fields are missing entries, including 'RECUR_COST' and 'FUND'. Please complete all required fields with valid entries per Exhibit D Table 24. Leave NULL when the field is not applicable or unknown [31 TAC §361.38(d) & Exhibit D].
 - c. There appears to be a duplicate entry for each FMS in the *FMS* feature class. Please review and remove all duplicates.

SOW Task 5

33. Flood Management Evaluation (FME) Recommendations Table (Exhibit C Table 15): The count of FMEs in the *FME* feature class (100) does not appear to match the count of FMEs in Table 15 (133). Please reconcile [31 TAC §361.39 & Exhibit D 3.10].
34. Flood Management Evaluation (FME) Recommendations GIS Feature Class, *FME*: The count of FMEs in the *FME* feature class (100) does not appear to match the count of FMEs in Table 15 (133). Please reconcile [31 TAC §361.39(c), (f) & Exhibit D 3.10].
35. Flood Management Evaluation (FME) Recommendations Map (Exhibit C Map 19): Please revise the map based on revisions to the *FME* feature class and Table 15 as needed [31 TAC §361.39 & Exhibit D 3.10].
36. Flood Mitigation Project (FMP) Recommendations, Text:
- a. Each recommended FMP must be accompanied with an associated model or supporting documentation to show no negative impact. Please confirm that this was done and provide reference to supporting materials. As per the draft report (page 5-8), "A comparative assessment of pre-project and post-project conditions for the 1 percent ACE (100-year flood) was performed for each potentially feasible FMP based on their associated H&H models. The floodplain boundary extents, resulting WSELS,

- and peak discharge values were compared at pertinent locations to determine if the FMP conforms to the no negative impacts requirements.* For each recommended FMP, please identify in the plan how no negative impact was determined as required by the Exhibit C Section 3.6.A (page 108), either via a model or a study, and submit the associated model or include the study name in tabular format.
- b. The name of FMP_ID 153000012 (Southwest Pharr Drainage Mitigation Project) does not appear to match the associated name in Table 16 and the *FMP* feature class. Please reconcile [31 TAC §361.39 & Exhibit C 2.5.B].
37. Flood Mitigation Project (FMP) Recommendations GIS Feature Class, *FMP*:
- a. It appears that some fields contain invalid entries, including 'EMER_NEED' and 'FMP_TYPE'. For example, "yes" instead of "Yes". Note that valid entries are case sensitive. Please complete all required fields with valid entries per Exhibit D Table 24.
 - b. It appears that some fields are missing entries, including 'RECUR_COST', 'FUND', and 'PREPROJLOS'. Please complete all required fields with valid entries per Exhibit D Table 24. Leave NULL when the field is not applicable or unknown [31 TAC §361.39 & Exhibit D 3.11.1].
38. Flood Mitigation Project (FMP) Details Geodatabase, *FMP_Details*:
- a. *FMP_Details* was not provided in the geodatabase. Please ensure this is provided with the geodatabase submittal with the final regional flood plan [31 TAC §361.39, Exhibit D 3.11.3 & Exhibit C 3.10.C].
39. Flood Management Strategy (FMS) Recommendations Table (Exhibit C Table 17):
- a. Table 17 should list "Non-Recurring, Non-Capital Costs" instead of "Reoccurring Non Capital Costs".
 - b. Non-recurring, non-capital costs in Table 17 do not appear to match what is included in the *FMS* feature class. Please review and reconcile accordingly [31 TAC §361.39 & Exhibit C 2.5.C].
40. Flood Management Strategy (FMS) Recommendations GIS Feature Class, *FMS*:
- a. It appears that some fields contain invalid entries, including 'EMER_NEED'. For example, "yes" instead of "Yes". Note that valid entries are case sensitive. Please complete all required fields with valid entries per Exhibit D Table 26.
 - b. It appears that some fields are missing entries, including 'RECUR_COST', 'FUND', and 'PREPROJLOS'. Please complete all required fields with valid entries per Exhibit D Table 24. Leave NULL when the field is not applicable or unknown [31 TAC §361.39 & Exhibit D 3.10].

SOW Task 6A

41. Impacts of Regional Flood Plan, Text:
- a. Chapter 6 does not appear to explicitly state that the regional flood plan, when implemented, will not negatively affect neighboring areas located within or outside the flood planning region. Chapter 5 states "*the local sponsor will ultimately be responsible for proving the final project design has no negative flood impacts before initiating construction.*" Please consider updating this statement or including additional statements to meet this requirement [31 TAC §361.40 & Exhibit C 2.6.A].

- b. Chapter 6 does not appear to contain an analysis of overall impacts of the plan on the following required categories: environment, agriculture, erosion, and sedimentation. Please reconcile [31 TAC §361.40 & Exhibit C 2.6.A].

SOW Task 7

42. Flood Response Information and Activities, Text:

- a. Please include where more detailed information is available regarding recovery, as required [31 TAC §361.42 & Exhibit C 2.7].
- b. Please include a written summary of entities involved and actions taken or planned for recovery from past flood disasters in the region, as required [31 TAC §361.42 & Exhibit C 2.7].

SOW Task 9

43. Flood Infrastructure Financing, Text:

- a. Please include a description of the percentage of survey completions and whether an acceptable minimum survey completion was achieved, as required [Exhibit C Section 2.9].
- b. Table 19 does not appear to be included. Please reconcile [§361.44 & Exhibit C 2.9].

Level 2: Comments and suggestions for consideration that may improve the readability and overall understanding of the regional flood plan.

General Comments

- 44. Please consider including a complete table of contents for the entire regional flood plan.
- 45. For maps that display large amounts of data (e.g., Maps 4, 6, 8, and 10), please consider a region-wide map and accompanying map index as well as inset maps, as appropriate.

SOW Task 1

- 46. Existing Flood Infrastructure, Text: Please consider providing a description of how Low Water Crossings were identified within the text of Chapter 1.
- 47. Existing Flood Infrastructure Map (Exhibit C Map 1): Please consider modifying the relative colors and/or line thickness (e.g., of "Levee") to improve map legibility.
- 48. Existing Flood Projects Table (Exhibit C Table 2):
 - a. Existing Project IDs 15000028 and 15000029 have been awarded HMGP funds, but do not appear to have HMGP listed as a project funding source. Please consider including HMGP in the "Source of Funding" field for these projects.
 - b. Please consider including the City of McAllen's FMA Grant EMT-2018-FM-E002 drainage project that is currently in progress.
- 49. Existing Flood Projects GIS Feature Class, *ExFldProjs*:
 - a. Existing Project IDs 15000028 and 15000029 have been awarded HMGP funds, but do not appear to have HMGP listed as a project source. Please consider including HMGP in the 'FUND_SRC' field for these projects.

- b. Please consider including the City of McAllen's FMA Grant EMT-2018-FM-E002 drainage project that is currently in progress.

SOW Task 2A

- 50. Existing Condition Flood Hazard GIS Feature Class, *ExFldHazard*: There appears to be approximately 35 square miles of overlap in this feature class, particularly along the coast. Please verify accuracy of data and reconcile if necessary.
- 51. Existing Condition Gaps Map (Exhibit C Map 5): Municipal boundaries do not appear visible on the map. Please consider modifying the map elements (e.g., reordering the layers or changing symbology) to improve legibility.
- 52. Existing Condition Flood Vulnerability Map (Exhibit C Map 7):
 - a. Please consider increasing the size of the color dots within the legend to improve legibility.
 - b. Municipal boundaries and major roadways do not appear visible on the map. Please consider modifying the map elements (e.g., reordering the layers or changing symbology) to improve legibility.
 - c. Map 7 appears to depict all features within the SVI range of 0 to 1. Please consider only including features with SVI scores above 0.75 as required per guidance document (Exhibit C Page 27): Submittal requirement number 3.
 - d. Please consider adding a separate point symbology class for LWCs to improve map legibility.
- 53. Model Coverage, Text:
 - a. Please consider including a table with descriptions of local detailed studies shown in the *ModelCoverage* feature class and in Figure 2.4.
 - b. Please consider describing what "Non-Modernized" indicates in Figure 2.7.

SOW Task 2B

- 54. Future Condition Flood Vulnerability, Text: The text of the Future Condition Vulnerability Analysis section does not appear to provide detail of the resilience of communities located in flood-prone areas identified in the future condition flood exposure analysis, or the vulnerabilities of critical facilities to flooding by looking at factors such as proximity to a floodplain, proximity to other bodies of water, past flooding issues, emergency management plans, and location of critical systems like primary and back-up power. The text section instead relies on referencing relevant maps in the appendices. Please consider providing more detail in the text section of this chapter.
- 55. Future Condition Flood Vulnerability Map (Exhibit C Map 12):
 - a. Please consider increasing the size of the color dots within the legend to improve legibility.
 - b. Municipal boundaries and major roadways do not appear visible on the map. Please consider modifying the map elements (e.g., reordering the layers or changing symbology) to improve legibility.
 - c. Map 12 appears to depict all features within the SVI range of 0 to 1. Please consider only including features with SVI scores above 0.75 as required per guidance document (Exhibit C Page 35): Submittal requirement number 3.
 - d. Please consider adding a separate point symbology class for LWCs to improve map legibility.

SOW Task 3A

56. Existing Floodplain Management Practices Table (Exhibit C Table 6):
- a. The text appears to include cities that do not match Appendix B, Table 6. For example, the text states that the Cities of Granejo and Progreso are not NFIP participants. However, they are both listed as NFIP participants in Table 6. Please reconcile as appropriate.

SOW Task 4B

57. Flood Management Evaluations (FME), Text:
- a. For FMEs that potentially overlap with an existing TWDB-funded, FIF Category 1 study, please state how the FME will expand on the existing study.
 - b. For county-wide FMEs where most of the county falls outside of the RFPG boundary, please include justification of how the FME benefits the region and please coordinate with other RFPGs to make sure the efforts are not duplicated.
58. Flood Management Evaluations (FME) Map (Exhibit C Map 16): Please consider providing an inset map, or using another method, for certain cities to improve legibility of potentially smaller FMEs.

SOW Task 5

59. Flood Management Evaluation (FME) Recommendations, Text:
- a. For FMEs that potentially overlap with an existing TWDB-funded, FIF Category 1 study, please state how the FME will expand on the existing study.
 - b. For county-wide FMEs where most of the county falls outside of the RFPG boundary, please include justification of how the FME benefits the region and please coordinate with other RFPGs to make sure the efforts are not duplicated.
60. Flood Management Evaluation (FME) Recommendations Table (Exhibit C Table 15): Please consider documenting existing or ongoing BLE and TWDB-funded, FIF Category 1 studies.
61. Flood Management Evaluation (FME) Recommendations GIS Feature Class, *FME*:
- a. Please consider populating 'MODEL_DESC' field for clarity on existing studies to be used.
 - b. Please make sure to document existing or ongoing BLE and TWDB-funded, FIF Category 1 studies.
62. Flood Mitigation Project (FMP) Recommendations Map (Exhibit C Map 20): Please consider revising this map to more clearly depict the two recommended FMPs displayed on the map.
63. Flood Mitigation Project (FMP) Details Geodatabase, *FMP_Details*:
- a. Please ensure that all NULL values are correct and revise as appropriate.

SOW Task 6B

64. Contributions and Impacts to Water Supply, Text: The Hidalgo County Drainage District Delta Watershed Project included in the 2021 Region M Regional Water Plan appears to include proposed construction of a new reservoir. Please confirm that this project should not be included in the Region 15 Regional Flood Plan.

SOW Task 9

65. Flood Infrastructure Financing Analysis, Text: Please consider providing the supporting calculation and reference to supporting data for the following statement in the report “it is projected that \$67,000,000 of state and federal funding is needed.” (Page 9-11).

RFPG Comments Regarding Legislative Recommendations, Regulatory and Administrative Recommendations and State Flood Planning Recommendations		
Name	Flood Plan Recommendations	Comments
Jerry Cotter	Table 8.1 Legislative	
	Non regulatory regional flood control or drainage districts should be established and funded for rapidly growing urban areas such as DFW, Houston, San Antonio, etc. Responsibility would be to provide consistency, technical resources, funding and reviews in support of FME's, FMS's. These organizations would also implement or support implementation of FMP's. These organizations would augment communities and counties that just don't have the resources and expertise to manage flooding.	Rapidly developing areas surrounding larger urban centers are at greater risk of having runoff patterns increasing because of development. These urban areas are comprised of many communities and unincorporated county areas. Many of the smaller communities are not funded or resourced to deal with the complexities of floodplain management and therefore there is a lack of or inconsistencies in floodplain management practices.
	Clarify the early 2000's state legislation that provide counties the authority to regulate floodplains to explicitly allow and encourage activities associated with floodplain management such as development of land use plans, regulatory authorities, e.g. permitting.	Although state legislation was passed in the early 2000's which gave counties the ability to regulate floodplains, interpretation of these regulations varies widely from county to county. The legislative bill lacks implementation guidance in the form of administrative rules. If development is occurring in unincorporated areas, this development can dynamically impact flood risk.
Jerry Cotter	Table 8.2 Regulatory	
	Require the use of n-values and channel conditions which would likely result if the channel or project were not maintained. Exceptions would be golf courses or other areas where an organization exists which would maintain the channel in perpetuity. Disallow maintenance by marginal organizations such as home owners associations to justify acceptance of lower n-values as this is an unrealistic expectation.	When channels are constructed, most often channel bed, banks and overbanks are cleared; however; with many miles of these channels, it is often difficult for communities to maintain those beds, banks and overbanks at their design conditions. Generally, there is a lack of channel maintenance to ensure flood conveyance areas, established as part of a development or improvement projects, to retain their design level n-values. This results in unexpected changes in channel conveyance and increased flooding. Channel maintenance is very expensive activity that can trigger environmental permitting requirements.
	No loss of valley storage to the 500-year level. Communities could allow redistribution of valley storage to allow interactions with natural areas but no loss of storage.	Land development in upstream areas increases runoff in downstream areas. This happens because of increased impervious cover and decreased tree cover, and therefore less ability to absorb rainfall. Additionally, development, in most communities, encroaches into riparian areas and decreases the amount of storage available to accommodate flood waters. Just the main thread of the Trinity River though DFW stores more flood waters during of flood than any three of the USACE reservoirs that provide flood protection for DFW. The many other stream provide even more storage than the main stem. There is limited capacity in rivers and streams to convey floodwaters. This means that all areas above any given conveyance point have to store flood water until sufficient time has lapsed to pass the water away from the impacted area. The streams are where this water is stored and depleting these storage areas will impact DS areas.
	Establish future land use plans for unincorporated areas associated with rapidly growing urban areas.	"
	Use of ultimate development land use conditions in the development of future flows. Require use of future flows for regulation of floodplains and development of FMP's.	"
Jerry Cotter	Table 8.3 State Flood Planning Recommendations	
	None	
	Potential FMS	
	Encourage storm shifting to validate 100-yr estimates and to provide a broader understanding of communities actual flood risk Storms identified and cataloged as part of the GLO funded USACE led Texas Storm Study could be the primary source of storms to be shifted.	Notes: Great deal of uncertainty in 100-yr estimates. Use of observed storms that approximately match depth duration data from NOAA Atlas 14 or other precipitation frequency sources validates 100-yr estimates. Additionally wet, dry and average conditions as well as conditions at the time the storm occurred can be presented. Additionally, communities have and can experience storms that exceed the 100-yr. While not regulatory, this information will provide additional hazard mitigation data so communities can address critical infrastructure impacts and be better prepared.
	Add detail to Watershed Hydrology Assessments (WHA) for communities within basins with completed WHA's. The WHA for the Trinity has been completed.	The WHA's, funded by FEMA, are considered the best available flood flow frequency estimates, e.g. 100-yr. These estimates consider the latest precipitation frequencies, the variations in watershed response and determine critical flood drivers by employing a wide range of sensitivity analysis for each computation point.
	Update WHA's when future precipitation frequency estimates become available. Efforts to develop future precipitation frequency estimates for Texas are starting.	
	Establish regional efforts, for large urban centers to develop future land use data for all developing areas, not just incorporated areas, for use in developing future flood flow frequency estimates and future 100-yr (and other recurrence interval) hazard boundaries.	

October 27, 2022



Life's better outside.®

Region 15 Lower Rio Grande Regional Flood Planning Group
Hidalgo County Drainage District No. 1
902 N Doolittle Road
Edinburg, TX 78242

Re: 2023 Lower Rio Grande Regional Flood Plan

Commissioners

Arch "Beaver" Aplin, III
Chairman
Lake Jackson

Dick Scott
Vice-Chairman
Wimberley

James E. Abell
Kilgore

Oliver J. Bell
Cleveland

Paul L. Foster
El Paso

Anna B. Galo
Laredo

Jeffery D. Hildebrand
Houston

Robert L. "Bobby" Patton, Jr.
Fort Worth

Travis B. "Blake" Rowling
Dallas

Lee M. Bass
Chairman-Emeritus
Fort Worth

T. Dan Friedkin
Chairman-Emeritus
Houston

Carter P. Smith
Executive Director

Dear Mr. David A. Garza,

In 2019 Senate Bills 7 and 8 established a regional and state flood planning process for Texas, aimed at better managing flood risk to reduce loss of life and property. As part of the process, Texas Parks and Wildlife Department (TPWD) was identified as a member of the regional flood planning groups (Texas Water Code Sec. 16.062). The mission of TPWD is to manage and conserve the natural and cultural resources of Texas and its ability to provide opportunities of hunting, fishing, and outdoor recreation for the use and enjoyment of present and future generations. TPWD values this opportunity to contribute to the flood planning process with the goal of enhancing flood risk management and achieving beneficial flood mitigation outcomes. Toward this effort TPWD members serve a dual role of supporting the voting membership in development of the plans and representing the natural resource interests of the state.

TPWD applauds the Lower Rio Grande Regional Flood Planning Group for their efforts in completing the inaugural regional flood plan (RFP) especially considering the abbreviated timeline. Through the exceptional efforts of the RFPG, this plan will be a meaningful tool for reducing flood impacts to society, especially in those disastrous events that cause loss of life and injury. Because this represents the initial region-wide plan, it has the potential to be precedent setting for subsequent iterations. As such, it is important this plan recognizes the role nature and nature-based solutions can play in flood risk management and promotes opportunities to protect, enhance and restore the flood mitigation benefits provided by natural landforms.

TPWD is supportive of the planning process outlined by the Texas Water Development Board (TWDB) because it aims to achieve an integrative flood risk management (FRM) approach that prioritizes risk reduction through implementation of floodplain management, land use regulations, policy, and a balanced use of grey and natural and nature-based (NNBS) flood mitigation measures that are formed by inclusive participation at all levels of society. TPWD believes this integrative approach when implemented holistically will achieve the maximum benefits for society and natural ecosystems while minimizing environmental impacts. Recent published works on FRM and NNBS (Bridges et al 2021, Glick et al 2020, World Wildlife Fund 2016, Sayers et al 2013) support TWDB integrative flood management approach and provide extensive resources for flood planners.



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Commissioners

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Carter P. Smith
Executive Director

In the interest of achieving the state's flood risk management goals while protecting the state's fish and wildlife resources, TPWD reviewed regional flood plans based on the TWDB guidance principals as described in 31 Texas Administrative Code Chapters 361 and 362. Special focus was provided on the following subset of guidance principals due to its relevance to fish and wildlife management.

- Does the draft flood plan use the best available science, data, models, and flood risk mapping?
- Does the draft flood plan consider the potential upstream and downstream effects, including environmental, of potential flood management strategies (and associated projects) of neighboring areas?
- Does the draft flood plan include strategies and projects that provide for a balance of structural and non-structural flood mitigation measures, including projects that use nature-based features that lead to long-term mitigation of flood risk?
- Does the draft flood plan consider natural systems and beneficial functions of floodplains, including flood peak attenuation and ecosystem services?
- Does the draft flood plan encourage flood mitigation design approaches that work with, rather than against, natural patterns and conditions of floodplains?
- Does the draft flood plan seek to not cause long-term impairment to the designated water quality as shown in the state water quality management plan as a result of a recommended flood management strategy or project?
- Does the draft flood plan consider benefits of flood management strategies to water quality, fish and wildlife, ecosystem function, and recreation, as appropriate?
- Does the draft flood plan minimize adverse environmental impacts and conform with adopted environmental flow standards?
- Does the draft flood plan consider multi-use opportunities such as green space, parks, water quality, or recreation, portions of which could be funded, constructed, and or maintained by additional, third-party project participants?

Additionally, TPWD emphasizes that the following FRM concepts identified in the forementioned literature be incorporated into the RFP.

- Flood is a natural process that has many benefits to human and natural systems.
- Promoting some flooding as desirable and making room for water promotes native species, maintains vital ecosystem services, and reduces the chance of flooding elsewhere.
- Natural landscapes and watersheds provide flood mitigation functions that should be promoted, protected, enhanced, and restored.
- Prioritize risk reduction over flood control by focusing first on reducing loss of life and injury.
- Utilize limited resources fairly.
- Address flood risk using a portfolio approach to first implement non-structural (policy, land management, emergency management) followed by structural (grey and natural and nature-based) strategies.
- Criteria for assessing projects strategies should include a comprehensive suite of measures spanning economical, operational, societal, and environmental

- advantages and disadvantages. Assessments focusing on economics alone (number of buildings, acres) should be avoided.

Lower Rio Grande Regional Flood Plan Comments

Task 4B, Identification and Evaluation of Potential FMEs, Potentially Feasible FMSs, and FMPs, is meant to be part of Chapter 5 rather than Chapter 4. TPWD recommends moving Task 4B to Chapter 5.

Texas Conservation Action Plan (TCAP) is a guiding document for conservation in the state of Texas, with the goals of realizing conservation benefits, preventing species listings, and preserving our natural heritage for future generations. Species of Greatest Conservation Need (SGCN) include numerous aquatic species such as fish, freshwater mussels, and salamanders. The TCAP handbook (Texas Parks and Wildlife Department, 2012) includes six types of priority habitats, three of which are aquatic: water resources; riparian and floodplains; and caves and karst. Issues affecting these environments include environmental flows, impoundments and dam operations, and water quality issues (including stormwater runoff).

The Draft Lower Rio Grande Regional Flood Plan (LRGFP) calculated and mapped flood risk analysis for both 1% and 0.2% annual chance storm events for current and future conditions. A model of the current conditions risk of flooding was created by compiling local knowledge, United States Geological Survey (USGS) gage information, San Antonio River Authority (SARA) data, National Flood Hazard Layer (NFHL) data, FEMA Base Level Engineering data, Fathom data, and National Oceanic and Atmospheric Administration (NOAA) Atlas-14 rainfall data. TPWD appreciates and supports the use of the best available science and most relevant data.

The goals of the Draft LRGRFP include education and outreach, improving flood warning and readiness, increasing the number of flood studies, increasing the prevention of flooding, and supporting flood infrastructure projects. TPWD encourages the inclusion of the ecological and societal benefits of flooding in any education program and appreciates the repeated mention of nature-based solutions in the education and outreach goals of the LRGRFP.

The LRGRFP identified 38 potentially feasible Flood Management Projects (FMPs), 133 potentially feasible Flood Management Evaluations (FMEs), and 51 potentially feasible Flood Management Strategies (FMSs). It appears that most of the recommended FMPs are infrastructure based with only one nature-based solution being put forward. TPWD appreciates that the Draft XRF acknowledges the gap in flood risk and mitigation in relation to nature-based infrastructure in the region. TPWD understands that the goal of the RFP is to mitigate floods to reduce risk to life and property but would like to encourage the use of nature-based solutions where possible. The Draft LRGRFP states that none of the projects or strategies are anticipated to have negative downstream effects.

TPWD would like to encourage all the FMX (an FMP, FME, or FMS) proponents to consider stream crossing designs that allow for sediment transport and passage of aquatic organisms and do not impound water. Basically, designs that are invisible to the creek. This includes bridges that span the creek where possible or culverted crossings designed with the culvert(s) in the active channel area lower than those in the floodplain benches so that the flow in the channel is not overly spread out. The central/low-flow culvert(s) should be large enough to handle a 1.5-year flow without backing up water. The bottoms of these lower culverts should be set at least a foot below grade (i.e., recessed) to allow natural substrate to cover the culvert bottom and to allow for aquatic organism passage. These lower, recessed culverts should be installed in the thalweg or deepest part of the channel and be aligned with the low flow channel (Clarkin et al., 2006).

The Draft Lower Rio Grande Regional Flood Plan includes a number of channel improvement projects which may include widening, deepening, and straightening streams. Channelization and over-widening of streams slows flow, which increases deposition of sediment, decreases fish habitat, increases water temperatures, and can result in channel erosion. Streams in good condition naturally reach bankfull and start spilling onto the floodplain during a 1.5 to 2-year flood event. Widening and deepening a stream channel to force it to contain the 100-year flow negatively impacts the adjacent water table and riparian area and has geomorphic effects upstream and downstream of the modification. If channelization is necessary, constructing a two-stage channel with a low-flow channel and a floodplain allows for the continued transport of sediment, habitat for aquatic wildlife, and can reduce maintenance (Rosgen 1996). TPWD encourages the RFPG to protect existing streams, riparian areas, and floodplains.

The proposed Flood Management Evaluations, Plans, and Strategies (FMXs, all together) include numerous infrastructure projects that may affect the aquatic habitats that are prioritized in the TCAP. For example, the removal of low-water crossings can benefit rare species such as mussels and fish if the crossing is replaced with a bridge or culvert that does not form a barrier to species movement. Conversely, building dams and channelizing streams can adversely affect aquatic habitats and species.

October 27, 2022

Page 5

Thank you for your consideration of these comments. TPWD looks forward to continuing to work with the planning group to develop flood plans that protect life and property but are also beneficial to the environment. Please contact me at (512) 389 – 8214 or at Marty.Kelly@TPWD.Texas.gov or Willy Cupit at (956)-350-4491 or at Willy.Cupit@TPWD.Texas.gov if you have any questions or comments.

Sincerely,

A handwritten signature in black ink that reads "Marty Kelly". The signature is written in a cursive style with a long horizontal flourish extending to the right.

Marty Kelly
Water Resources Program Coordinator

MK:wc

References

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SIERRA CLUB

LONE STAR CHAPTER

To: Jaime Salazar, Hidalgo County Drainage District No. 1, Region 15 RFGP Sponsor

Delivered via email to Jaime.salazar@hcdd1.org

October 31st, 2022

Comments on Region 15 Regional Flood Planning Group

The Lone Star Chapter of the Sierra Club is pleased to offer these brief comments on the proposed Lower Rio Grande Valley Region 15 Regional Flood Plan. We are generally supportive of the plan, though we believe it could be strengthened with some additional attention to the need to incorporate open space-green infrastructure, adopt minimum floodplain regulations, consider improved enforcement, implementation of modern building codes, and focused legislative recommendations. We would also note that the plan ignores how to address the impacts of border security infrastructure on current and future flooding.

Stretching from West Texas and the Pecos River to the Confluence of the Conchos River in Mexico with the Rio Grande, to the Lower Rio Grande Valley proper, Region 15 is a “thin” stretch of generally arid lands, but that can be subject to flash flooding from upstream events, as well as Gulf hurricanes and tropical storms. Climate change and extremes are making this situation worse. Combined with a general urbanization of the landscape as farming land is converted to subdivisions, as well as recent efforts by the federal government (and state government in certain cases) to increase border securitization (often to the detriment of open space/native habitats) through the use of fences, walls, and other structures, flooding can be severe and deadly. Indeed, the plan finds that over 50,000 acres of cropland and 100,000 acres of rangeland have been converted from 1997 to 2017, in general to serve the growing population through urbanization and more rural subdivisions. Indeed, despite its rural nature, Region 15 is

now the state's sixth most populated area with nearly 2,000,000 persons. It is worth noting as the draft report does point out that this population has a high Social Vulnerability Index due largely to lower incomes, lower job opportunities, and worse health outcomes, meaning this population is particularly vulnerable to flooding and other disasters. Indeed, 12 of the 14 counties in the region had an SVI over 0.75 when overlaying CDC data. Since the TWDB considers a level over 0.75 as a threshold for areas highly vulnerable to natural disasters, it indicates a real issue of social vulnerability.

In addition, the increasing use of lands for transmission electric and gas lines and renewable energy power projects is another relatively new land use that can also impact flood events, particularly during construction, and having best management practices is key to flooding. It is also worth noting issues involving residential drainage in residential subdivisions, at times caused by the filling in of resacas and other native habitat features as well as the types of soils found in the region. This combination of generally semi-arid climatic conditions, punctuated by extreme weather events and upstream impacts makes the work of the Regional Flood Plan process of utmost importance. As a conservation organization with a local regional group located in the Rio Grande Valley as well as several staff members, we appreciate the hours of effort taken by the regional flood group, local governments and the TPWD and other state agency staff.

Background

State legislation enabling the Regional Flood Plan process provided guidelines and deliverables to be accomplished by each flood planning group, with regional plans becoming the basis of a state flood plan. These plans are developed through the creation and identification of projects to be considered for future funding. Enabling legislation also directed the Texas Water Development Board (TWDB) to identify and evaluate natural flood mitigation features and include Nature Based Solutions (NBS) among proposed flood mitigation projects.

Region 15, along with all the other Regional Flood Planning Groups (RFPGs) have had to work under a tight timeline during the initial planning round – and we appreciate the work the Region has put into making a holistic flood plan.

In particular, the Lone Star Chapter are encouraged by the following recommendations and goals included in Region 15's draft Regional Flood Plan:

- *Administrative Recommendations:*
 - Flooding does not recognize jurisdictional boundaries. Remove barriers that prevent jurisdictions from working together to provide regional flood mitigation solutions and regional detention across jurisdictional boundaries.

- Flood planning alternatives should include options that do not cause irreparable damage to coastal habitats.
- The Regional Flood Plan should include tools and resources to continuously include all significant impacts on the watersheds and floodplain management.
- Funding for projects in Historically Disadvantaged Communities or Areas of Persistent Poverty should be allocated a minimum amount of future funding, so they are not competing against more fortunate communities.

Legislative Recommendations:

- Add legislative ability to allow counties the opportunity to establish and assess drainage (stormwater) utility fees. Legislation is needed to allow counties and others with flood control responsibilities to establish drainage (stormwater) utilities and collect fees for these services. Extend Local Government Code, Title 13, Subtitle A, Chapter 552 to allow counties the opportunity to establish and collect drainage utilities/fees.
- Provide alternative revenue-generating sources of funding. Expand eligibility for and use of funding for stormwater and flood mitigation solutions (Local, State, Federal, Public/Private Partnerships, etc.)
- Expand eligibility for and use of funding for stormwater and flood mitigation solutions (Local, State, Federal, Public/Private Partnerships, etc.).

Administrative Goals:

- Increase the number of nature-based flood risk reduction projects (from 20% to 30 percent in short-term to 40% to 50% in long term). **Note: we support higher goals and would suggest 30 percent in short term and 50 to 60 percent for long-term.**
- Reduce the number of newly constructed vulnerable facilities within the existing future 1% annual chance floodplain event;
- Increase community access routes to critical facilities and evacuation routes
- Develop a regionally coordinated warning and emergency response program
- Increase the number of flood gauges in the region
- Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHS in the region
- Develop and maintain an operational stormwater asset management plan (by the percent of entities that utilize such plans to 40-50 percent in the short term)
- Reduce the number of structures that have been subject to repeated flooding events through property buyouts (to \$10 million in short-term). Note - we support higher goals.

- Increase the acreage of publicly protected open space in critical flood risk areas that are reused for public benefit (from 300,000 acres in short term to 800,000 acres in long-term). **Note: we would support higher goals.**
- Increase the number of entities that adopt higher than NFIP minimum standards to 40-50% in short-term (Note we would support higher goals)

While we are supportive of these administrative and legislative recommendations and administrative goals, we would note that the RGV Region 15 might consider additional recommendation that many other regional groups are recommending, including:

- The RGVFPG should play a role in facilitating public information/public education activities in the Rio Grande Basin and provide support to local public agencies to promote a wider understanding of state and regional flood issues and the importance of flood preparedness and long-range regional flood planning and mitigation;
 - The TWDB should use the project list in the adopted RFP and state flood plan (SFP) to help connect local communities to grant programs administered by federal or other state agencies; and
 - The TWDB is encouraged to consider use of hybrid approaches that blend structural engineered projects and nature-based solutions for flood mitigation: a) Incentivize voluntary buy-out programs, turning previously flooded properties/neighborhoods into stormwater parks as an alternative to large scale construction projects; and b) Provide training to state agencies, local governments, engineers, planners in the use of natural floodplain preservation/conservation.
- *Legislative Recommendations. We would support additional recommendations to the legislature such as:*
 - *The Texas Legislature is urged to support adoption of the 2021 versions of International Building Code and International Residential Code as State Building Standards, and other standards such as the 2021 IPC and 2021 IECC, which will ensure new construction is more resilient;*
 - *The Texas Legislature should provide counties with more powers to implement, enforce and inspect modern building codes to ensure new construction is meeting more resilient standards;*
 - *The Texas Legislature is urged to expand the use of the Economically Distressed Areas Program (EDAP) Funds to include residential drainage as an eligible use of EDAP funds as has been previously proposed. Because EDAP has been used for water and wastewater service grants throughout the RGV, assuring that those*

projects are combined with proper drainage to avoid future flooding is a key flood-proof strategy that would be uniquely beneficial for this region.

- The Texas Legislature should continue to provide funding to state agencies for flood planning initiatives, including providing technical support and assistance to county and city floodplain administrators or designees to support development of building standards, permitting support to verify new projects meet floodplain development requirements, and training; and
- The Texas Legislature is urged to make funds available to support nature based practices through land conservation, restoration programs, and participation in landowner incentive programs to encourage voluntary land stewardship practices to manage floodwaters by slowing runoff and dissipating flood energy to include riparian, wetland, forest, upland, and other habitat protection programs. Promote land coverage studies to effectively identify riparian corridors to protect for floodplain mitigation and erosion reduction. Additional low interest programs to support voluntary city and county buy-back of lands for county parks and flood mitigation should also be included.

- *Adopted Flood Protection Goals:*

- Reduce the number of structures within NFHL-Detailed Study Area and Existing Floodplain with 1% annual chance flood risk;

According to Table 2.10, the amount of land subject to a 1% flood risk is expected to increase by 29% in future years while the amount of area subject to a 0.2% flood risk is expected to increase by 24%. While the region can not protect all land from future flood risk, having a goal of limiting the number of structures subject to flood risk is imperative. To their credit the region is contemplating reducing the number of newly constructed critical infrastructure facilities in this area by 70% in the medium term and 100% in the longterm, which we support, but some consideration to moving or buttressing existing structures is needed in the plan. In addition, as discussed below, we believe the region should consider expanding the definition of what is included in the definition of critical infrastructure.

- Prepare minimum flood management standards, including identifying operations and maintenance best practices to maintain drainage structures;
- Increase nature-based practices through land conservation and restoration programs and participation in landowner incentive programs to encourage voluntary land stewardship practices to manage floodwaters, slow runoff and dissipate flood energy to include riparian, wetland, forest, upland, and other habitat protection programs; and

- Develop public information campaigns to increase community knowledge of rules and regulations, flood-prone areas, and importance of protecting floodplains from encroachment.

The process and initial regional planning round has highlighted several areas of concern regarding the evaluation of natural flood mitigation features for their level of function and the incorporation of nature based solutions into flood control strategies.

Equity and nature-based solutions will need to be woven into every facet of this program and incorporated into future policies and strategies in order to empower community collaboration and leverage the state's vast network of natural ecosystems in building resilient communities. The following **comments and recommendations specific to Region 15** seek to better ensure an equitable flood plan, and one that centers natural infrastructure and nature-based projects. We recognize that the region will not be able to address some comments provided in the current planning cycle, however it is our hope that during subsequent rounds these comments will be taken into consideration.

We would note that the plan in general relies principally on traditional flood control methods. As an example, of the 85 identified flood control projects listed in the draft flood plan, 77 of them are structural projects, and only 2 are stand-alone nature-based projects. While this is simply the reality of what is being proposed in the region, we would note that the benefits of incorporating nature-based solutions now will pay off in the long run.

1. Consider alternative methodologies to assess future conditions analysis

According to *Information included in rules and scope of work* subsection (pg. 29), RFPs shall perform a future condition flood hazard analysis to determine the location of both 1% annual chance and 0.2% annual chance flood events. The TWDB allows several methods, and Region 15 chose Method 2, which utilizes the existing condition 0.2 percent ACE flood hazard area as a proxy for the future 1 percent ACE flood hazard area (using a horizontal buffer). While we understand the use of this proxy method, which led to coastal and other buffers, as pointed out, there are large data gaps, and no hydrological or floodplain mapping exists in the LRGV, meaning it is a very inexact process. Thus, we would suggest that between now and the next flood plan, that these models be developed so that future plans can be more exact.

II. Apply higher-end sea level rise projections to assess future conditions analysis for Coastal Zones

Currently, the future conditions for Region 15 are based on a relatively low scenario of sea level rise. Indeed, as reported, the Port Isabel gauge has already experienced a sea level rise of 9.87 inches. Adopting an expectation that sea level rise will only continue in the low range is inappropriate. This is an extremely conservative estimate, and most projections show confidence in an intermediate to intermediate high increase in sea levels. We recommend using the intermediate to intermediate high projections for planning. We were unable to determine in the plan how sea level rise is being treated as it was not clear in the methodology.

III. Expand the types of structures included when assessing vulnerability of Critical Facilities and weigh these structures higher during the Flood Mitigation Needs assessment

Region 15 included schools, hospitals, police stations, and fire stations, electric and gas lines, Superfund sites, water and wastewater supply sites as critical facilities when determining vulnerability to flood hazards. We appreciate the inclusion of electric and gas lines and water and wastewater treatment plants. Unlike some regions, Region 15 did not include chemical plants, refineries, chemical storage facilities, and oil and gas infrastructure as critical facilities. We believe that these other facilities need to be included in order to have a proper understanding of the Region 15's flood risk. Additionally, during the Flood Mitigation Needs Assessment in Chapter 4, Region 13 should weigh these additional facilities higher than hospitals, schools, fire stations, and police stations, as they can pose additional risks to the health and safety of communities when flooded.

IV. Region 15 should adopt Minimum Floodplain Management Regulations

Region 15 should require at least two minimum floodplain management regulations: compliance with Texas Water Code Section 16.3145 and FEMA's National Flood Insurance Program (NFIP) participation. As these regulations are widespread across the region, and create a strong foundation for the region, we support the inclusion of these as minimum floodplain management regulations.

V. Include a Goal to increase enforcement of Floodplain Ordinances

The level of enforcement of floodplain management practices varied across Region 15. However, for the vast majority of counties and municipalities, the Region was not able to determine level of enforcement. We believe that Region 15 should include a goal for the region

to increase knowledge of enforcement across the region, and to increase levels of enforcement, region-wide.

VI. Include impact to natural infrastructure in No Negative Impacts analysis

Natural features and nature-based infrastructure provide significant flood mitigation benefits to neighboring communities. The analysis of “No Negative Impacts” should include impacts to natural infrastructure.

VII. Include annual appropriations to FIF as a legislative recommendation

We recommend that Region 15 include a legislative recommendation that the state should allocate funding for recurring biennial appropriations to the Flood Infrastructure Fund. Annual appropriations to FIF will ensure that the state can continue to invest in FMPs included in the regional flood plans. At least 7 regions analyzed have included this as a recommendation in their draft plans.

IX. Consider a specific section and measures on border security and minimizing the impacts of border security on flooding.

As is well documented, the decision by the federal government under multiple administrations (Bush, Obama, Trump and Biden) to add border security, often without considering the impacts on local flooding has had devastating impacts along the US-Mexico border. It has also in some cases cut through important habitats and reduced the effectiveness of open space as a flood mitigation strategy. We believe that the Region 15 flood plan must address this issue which as is pointed out “disrupt preserves and natural areas, as well as the natural hydrology (Page 1-30).” However, the plan is silent on what actions need to be taken to mitigate these flood risks. Adding a plan - which of course must include new partners like Homeland Security - to address these risks, and require consultations for future border infrastructure will be important to the region.

We appreciate the work the Region is doing to help better plan for and protect our communities from flooding. Further, we appreciate the opportunity to submit these comments.

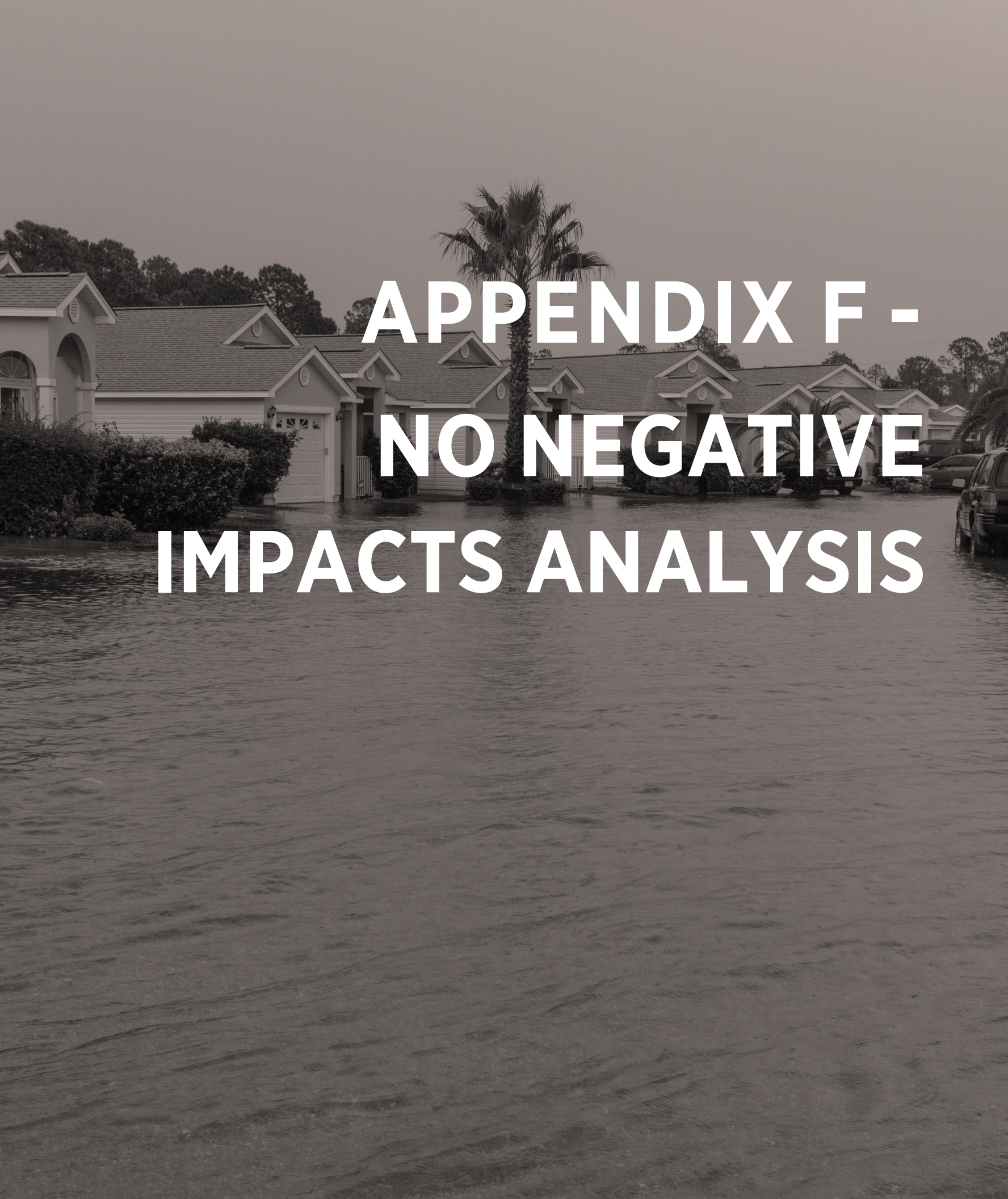
Sincerely,

Alex Ortiz

Water Resources Specialist
Sierra Club Lone Star Chapter
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Cyrus Reed

Conservation Director
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cyrus.reed@sierraclub.org

A black and white photograph of a residential street where the houses and a central palm tree are partially submerged in floodwater. The water level is high, reaching up to the windows and the lower branches of the palm tree. The houses are modern, single-story structures with gabled roofs and arched doorways. A dark SUV is partially visible on the right side of the street, also in the water. The sky is overcast and grey.

**APPENDIX F -
NO NEGATIVE
IMPACTS ANALYSIS**

MEMORANDUM

TO: Kristina Leal. PE CFM

DATE: 01/09/2023

FROM: Scot Laun

AVO: 43797

EMAIL: slaun@halff.com

SUBJECT: Down Stream Impact for Recommended Pharr Project for RFPG

A no negative impact analysis and review was completed for two recommended FMPs, North Pharr Mitigation Project and Southwest Pharr Drainage Mitigation Project. These projects were analyzed in the 2020 Master Drainage Plan for the City of Pharr but did not explicitly indicate if there were downstream impacts. This memo is to provide the support to show there are no downstream impacts as a result of the proposed projects.

The process used to review the existing analysis was to utilize the flood depth rasters that were created to show the resulting depths of flow for existing conditions and various design storms for the proposed projects. The 1% Annual Chance Storm (100-yr) was used as the downstream impact comparison as per the technical guidelines. The flood depth rasters were created by subtracting the existing ground terrain file from the water surface elevations modeled in the computer simulation. The resulting existing conditions depth raster was then subtracted from the proposed project depth raster to see where they differed. The results of the raster math will show any rise from the proposed conditions.

From the technical guidance, the following requirements for a 2D model are met to establish no negative impacts:

- Stormwater does not increase inundation in areas beyond the public right-of-way, project property, or easement.
- Stormwater does not increase inundation of storm drainage networks, channels, and roadways beyond design capacity.
- Maximum increase of 2D Water Surface Elevations must round to 0.3 feet (< 0.35ft) measured at each computational cell.

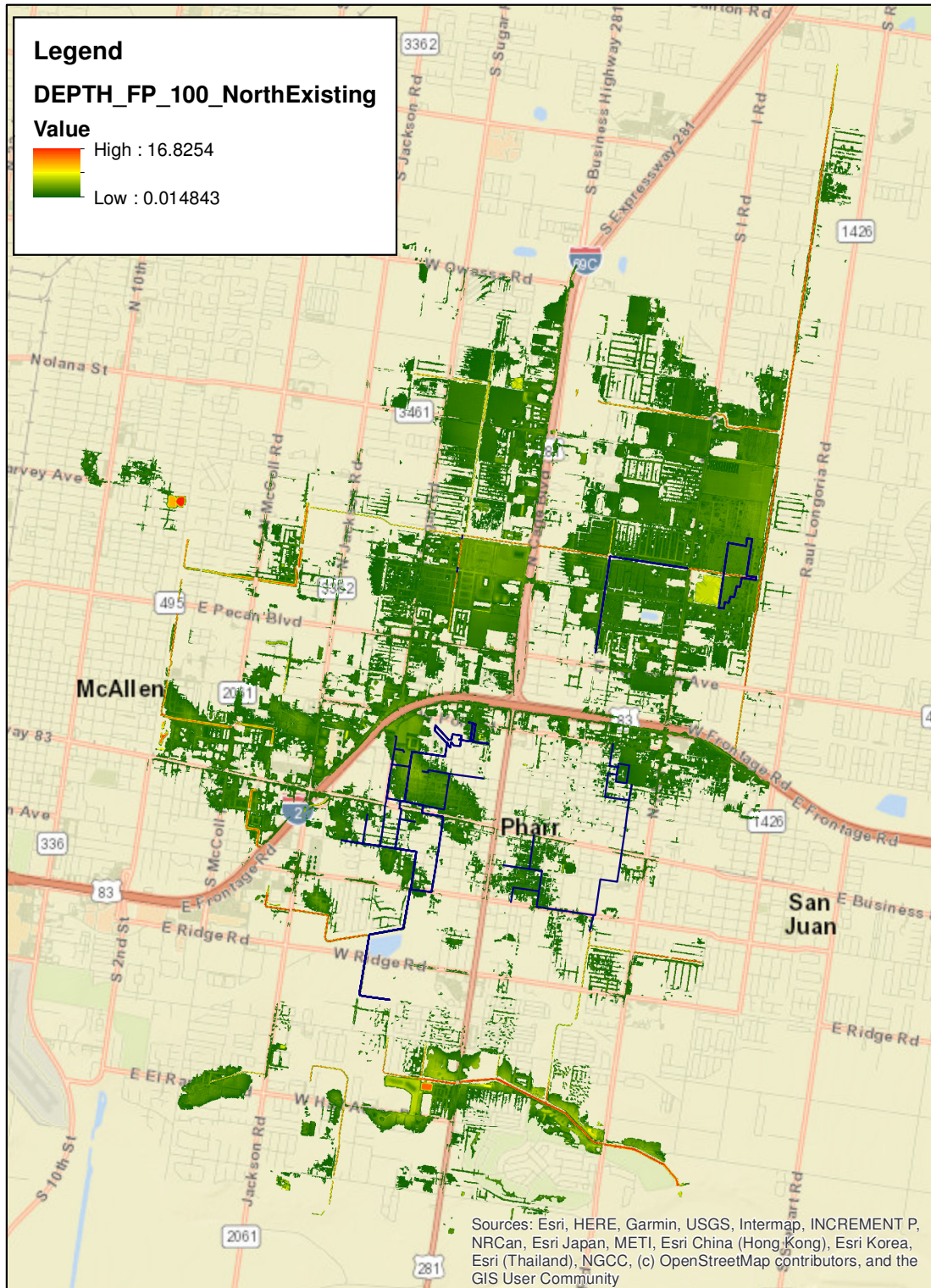
North Pharr Mitigation Project (Project 10)

Proposed project consists of:

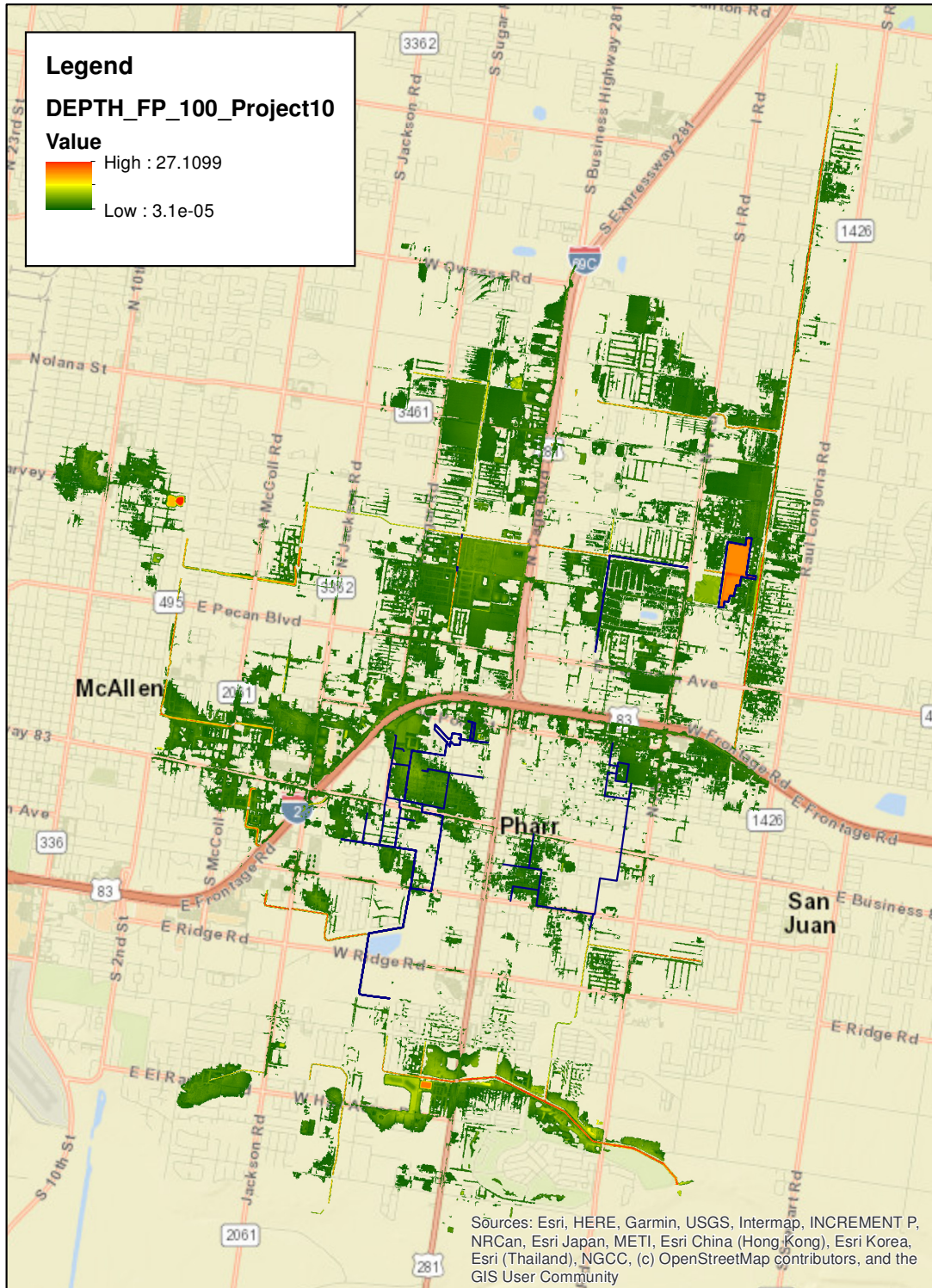
- Construct 3400-linear feet of channel improvements on the ditch running from south to north along North Fir Street
- 2800-linear feet of channel improvements on the Pharr-McAllen Lateral Ditch up to North I road.
- Install culvert improvements, 2 – 8

The results of the flood depth raster analysis show there are no adverse impacts from the proposed project. As evidenced by the following three figures, the only locations that show a rise in WSEL are within the project boundaries of the ditches and detention.

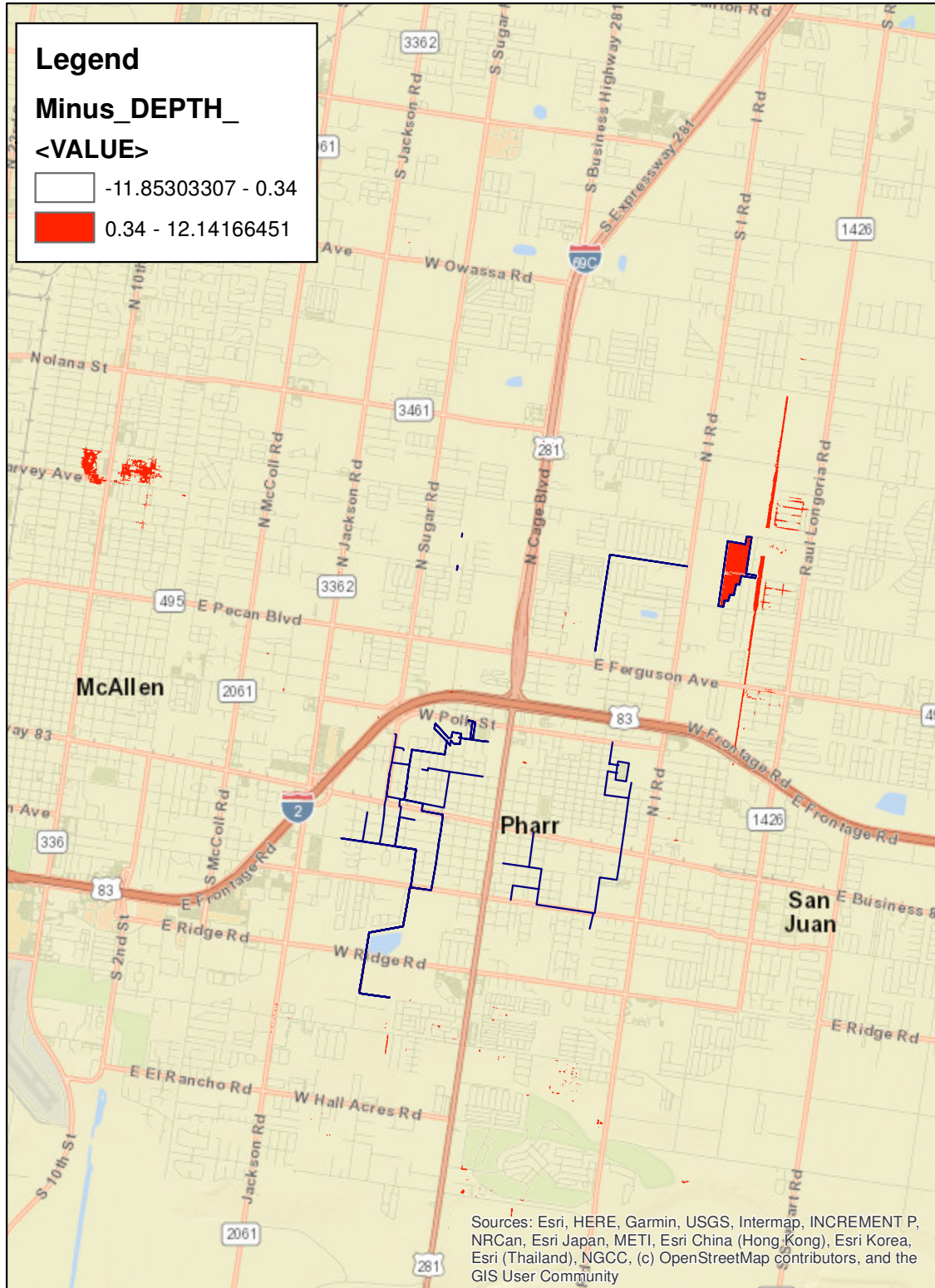
The following figures show the Existing 1% Annual Chance Depth raster, Proposed 1% Annual Chance Depth raster, and the resulting rises identified by the raster subtraction calculation. There is a small smattering of rises (very small rises) scattered about the area, but these few locations are attributed to the modeling stability and are not connected to any rise that would be attributable to the project.



North Pharr Mitigation Project – Existing Conditions 1% Annual Chance Floodplain



North Pharr Mitigation Project – Proposed Conditions 1% Annual Chance Floodplain



North Pharr Mitigation Project –1% Annual Chance Water Surface Increases



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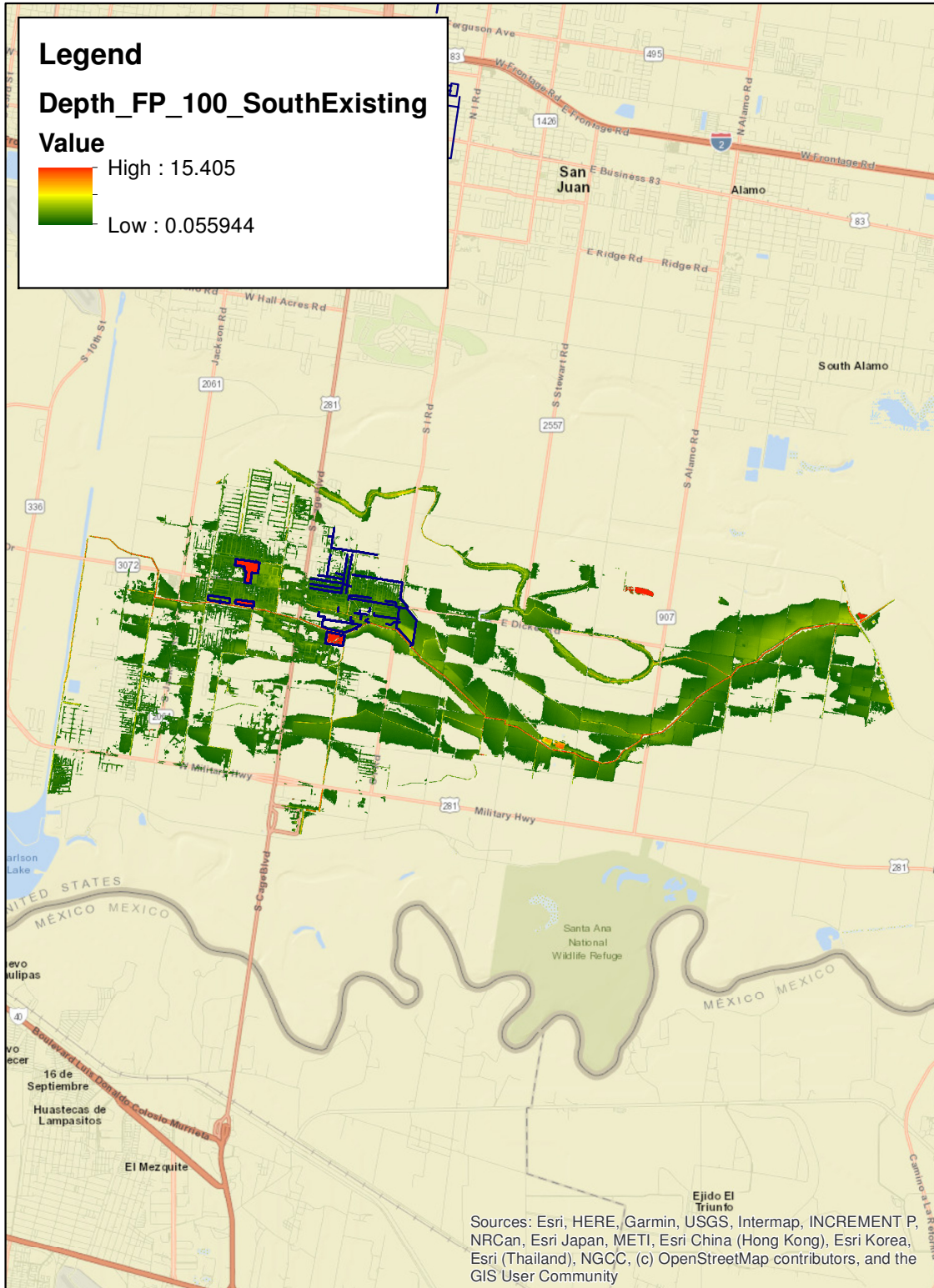
Southwest Pharr Drainage Mitigation Project (Project 4)

Proposed project consists of constructing four regional detention facilities (RDF):

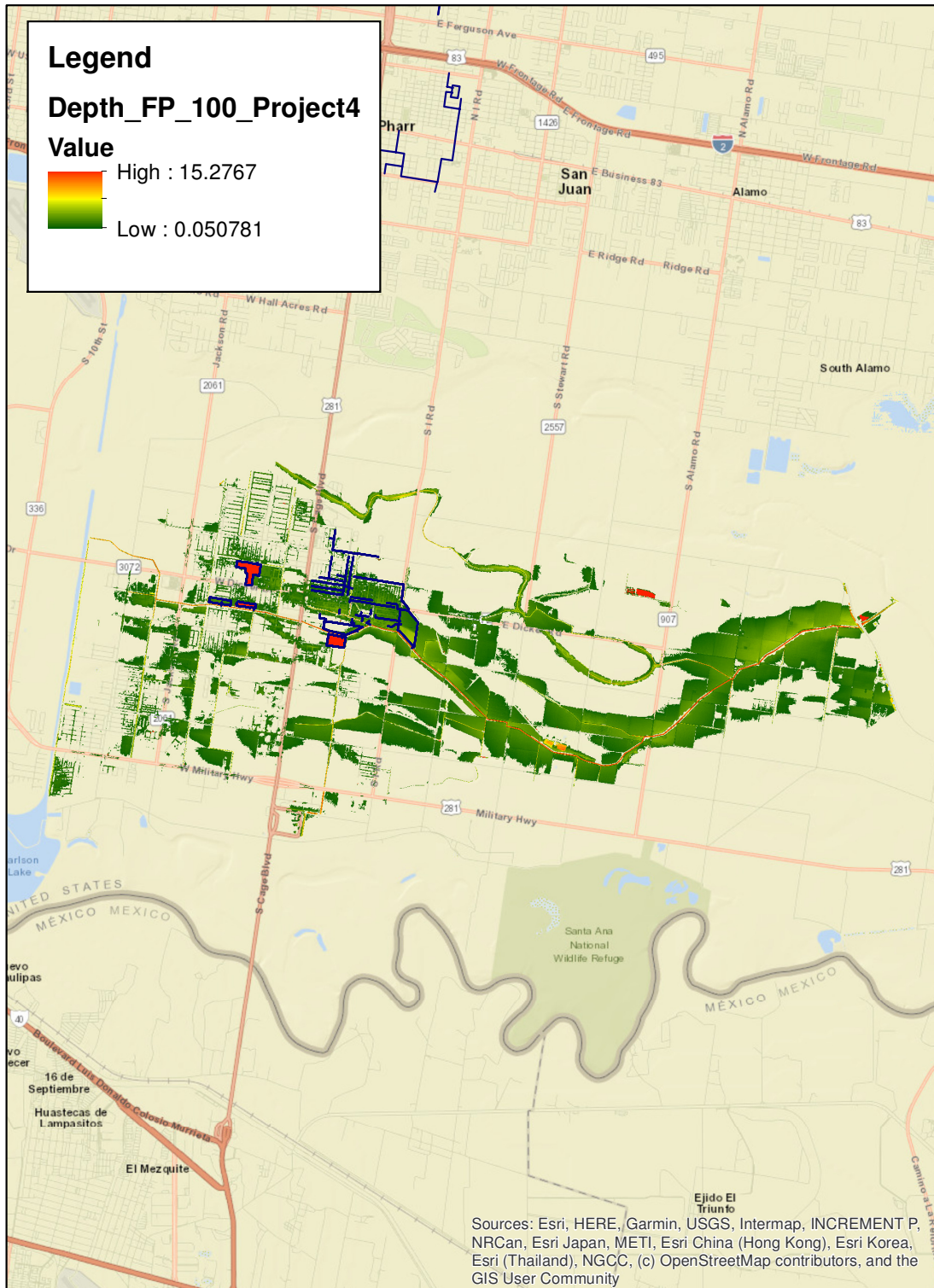
- RDF 1 has a footprint of 19.75-acres and is a lateral detention facility located between Dicker and Thomas Road west of Highway 281 and near Carmen Anaya Elementary.
- RDF 2 has a footprint of 7.4-acres

The results of the flood depth raster analysis show there is no adverse impact from the proposed project. As evidenced by the following three figures, the only locations that show a rise in WSEL are within the project boundaries of the ditches and detention.

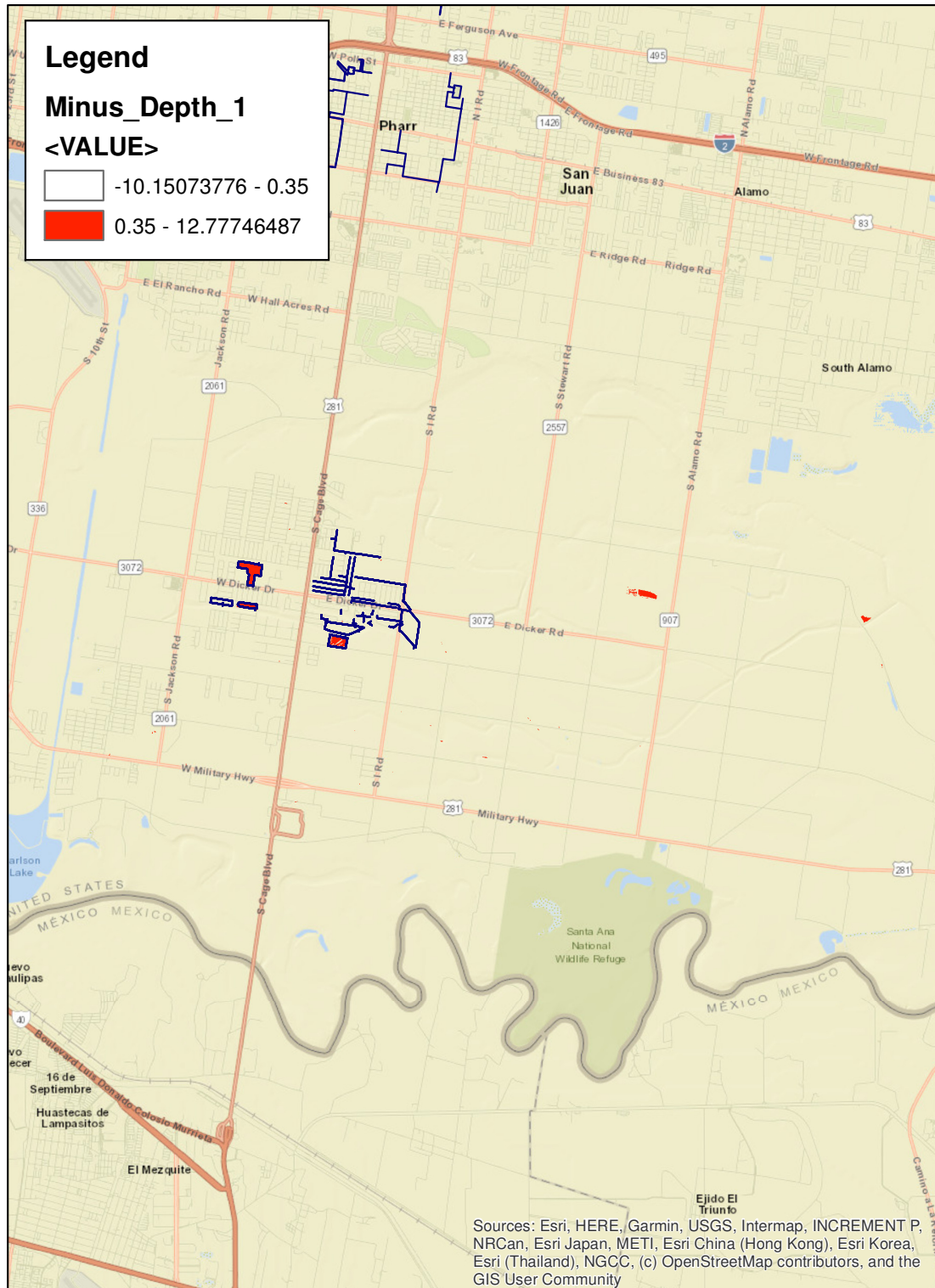
The following figures show the Existing 1% Annual Chance Depth raster, Proposed 1% Annual Chance Depth raster, and the resulting rises identified by the raster subtraction calculation. There is a small smattering of rises (very small rises) scattered about the area, but these few locations are attributed to the modeling stability and are not connected to any rise that would be attributable to the project.



South Pharr Drainage Mitigation Project – Existing Conditions 1% Annual Chance Floodplain



South Pharr Drainage Mitigation Project – Proposed Conditions 1% Annual Chance Floodplain



South Pharr Drainage Mitigation Project – 1% Annual Chance Water Surface Increases



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No Negative Impact Determination Summary

The following table summarizes the no negative impact determination that was performed.

Region Number	FMP ID	FMP Name	FMP Meets ALL No Negative Impacts Requirements from Exhibit C Section 3.6.A (Yes/ No)	Negative Impact Description	Planning level Mitigation Plan (Yes/ No)	Mitigation Plan Description	No Negative Impact Determination (Yes/No)	Basis of No Negative Impact Determination (Model, Study, Engineering Judgement)	Model ID	Model Name	Model Submitted	Study Name and Location	Engineer of Record (Optional)	Engineering Judgement Description
15	153000011	North Pharr Mitigation Project	Yes	n/a	No	n/a	Yes	Study and Model	150000000002	Pharr Master Drainage Plan	Y	Pharr Master Drainage Plan, Pharr, TX	Half	3
15	153000012	Pharr - San Juan Regional Detention Facility	Yes	n/a	No	n/a	Yes	Study and Model	150000000002	Pharr Master Drainage Plan	Y	Pharr Master Drainage Plan, Pharr, TX	Half	3



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