

An aerial photograph of a high school stadium during a flood. The football field is the central focus, with yard lines and numbers clearly visible. The field is surrounded by a red running track. In the background, there are bleachers, a scoreboard, and a building. The surrounding area is flooded, with water reaching the edges of the stadium and nearby residential areas. The sky is overcast.

# FLOOD MANAGEMENT STRATEGIES (FMSs) FACT SHEETS



## Bayview Action #19

FMS ID: 152000001

### FMS Description

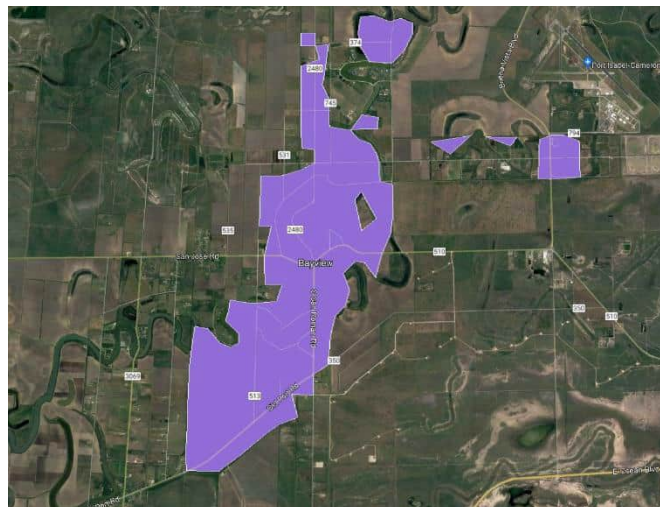
Upgrade the Town's website to include local information on hazards, risks, mitigation, protective actions, and applicable ordinances

### Strategy Type

- Education and Outreach Activities     
  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:	\$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     
  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

## Bayview Action #9

FMS ID: 152000004

## FMS Description

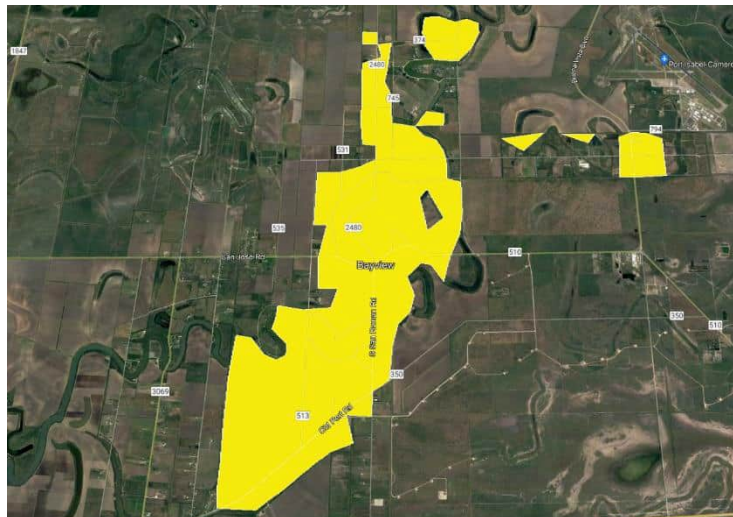
Participate in the National Flood Insurance Program

## 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
- 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.)



### 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



## Brownsville Public Utilities Board Action #8

FMS ID: 152000006

### FMS Description

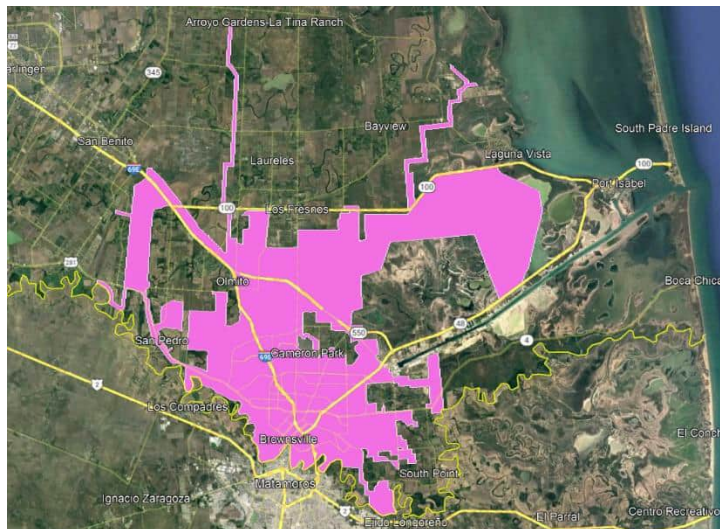
Develop program to annually remove buildup of silt in area Resacas that become cutoff from the river and contribute to flooding during severe flood or hurricane event

### Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- 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:	\$20,000	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:	2016	Entity with Oversight	Brownsville
Time to complete?	2018	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

## 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

## City Of Brownsville Action #2

FMS ID: 152000007

### FMS Description

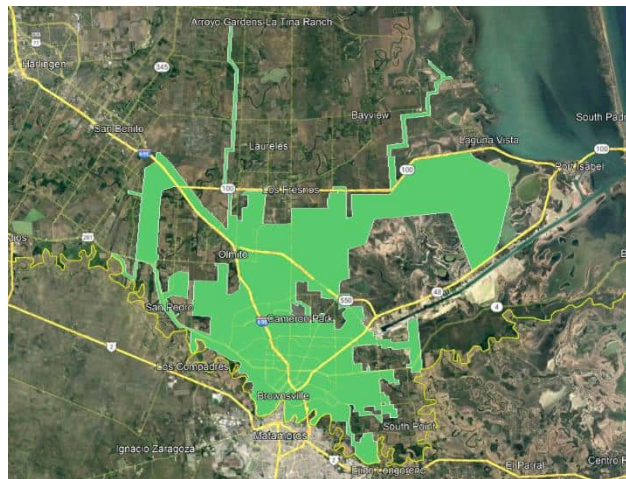
Join the Community Rating System program to reduce risk and flood insurance premiums to residents

### Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- 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
- 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.)



### 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
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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



## 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.)



### 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.)



### 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
- 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.)



### 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
- 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.)



### 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
- 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.)



### 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 #25

FMS ID: 152000014

### FMS Description

Implement early warning system for residents to notify of natural disasters; three warning sirens would be installed

### 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.)



### 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:	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

### 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 #1

FMS ID: 152000015

## FMS Description

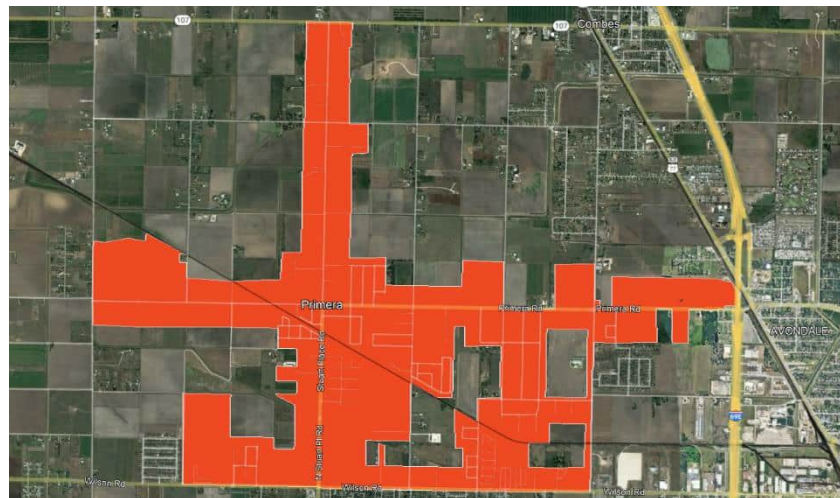
Amend subdivision ordinances to require retention or detention ponds in any new subdivision

## 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:	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

## 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 #10

FMS ID: 152000016

## FMS Description

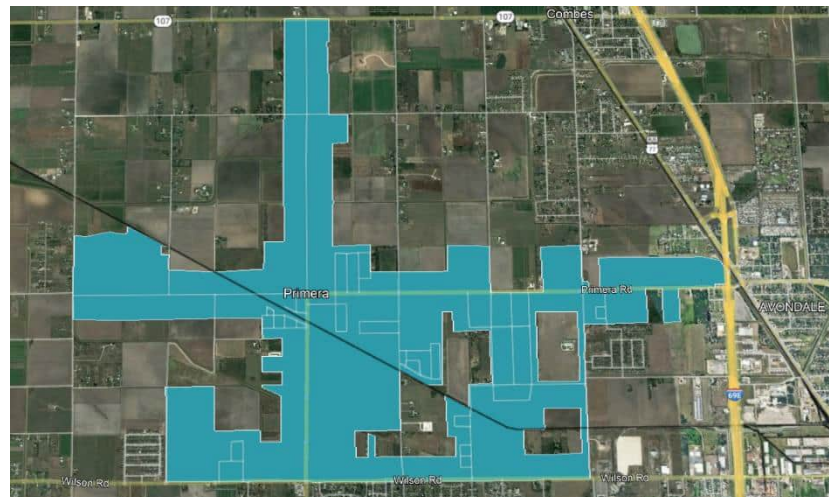
Adopt higher floodplain standards such as freeboard and cumulative substantial damage

## 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

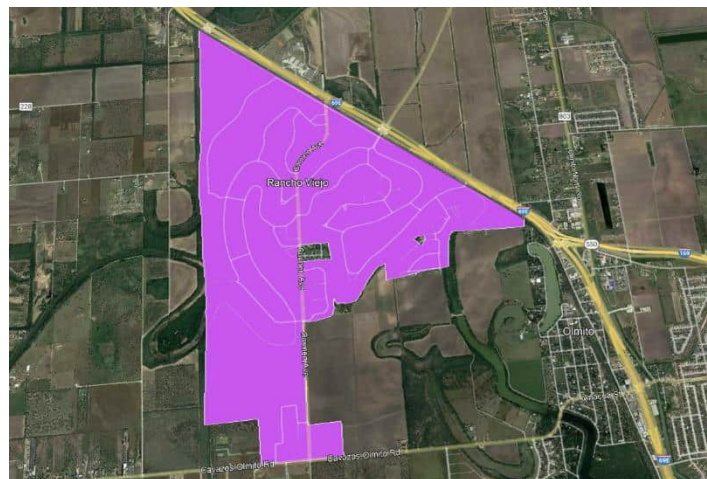
Adopt the International Building Code (IBC) and International Residential Code (IRC); revise and update regulatory floodplain maps; adopt higher standards in floodplain ordinances including freeboard, no-rise in the floodplain, cumulative substantial damage, etc.

### 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

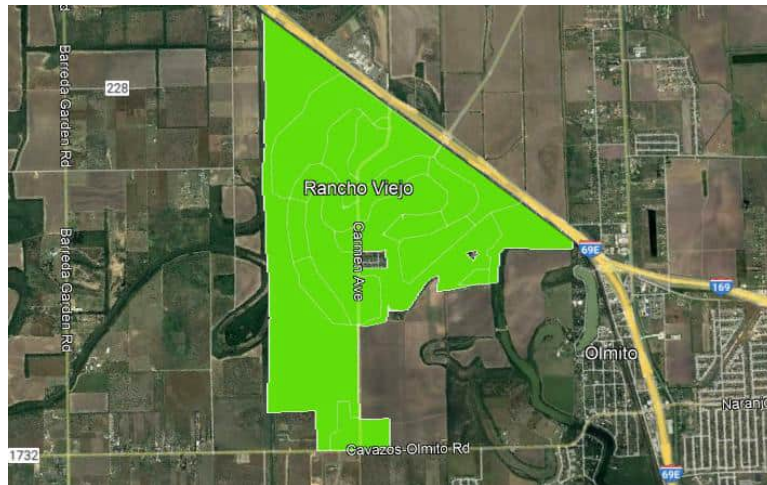
Update website with maps and information including StormReady data and links; Mail educational brochures to residents in hazard-prone areas on mitigation measures to reduce damages

### 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





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 #13

FMS ID: 152000022

### FMS Description

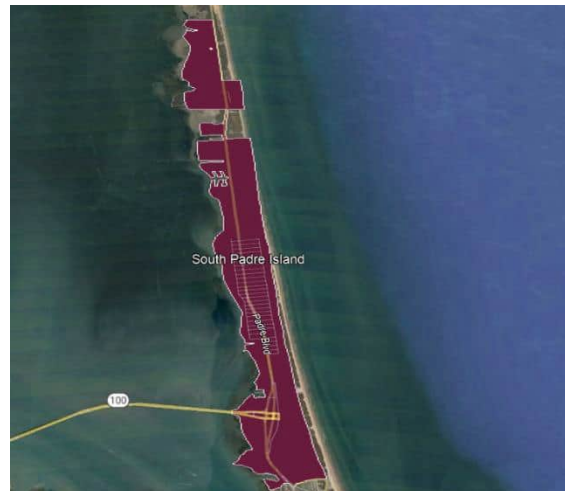
Adopt higher floodplain standards in local floodplain ordinance

### 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

## South Padre Island Action #3

FMS ID: 152000023

### FMS Description

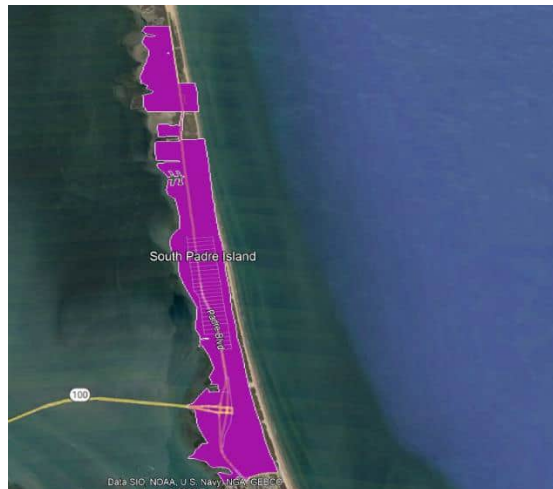
Adoption erosion control ordinance and prohibit development in high-hazard areas

### 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

## Alamo #4-1.1

FMS ID: 152000024

### FMS Description

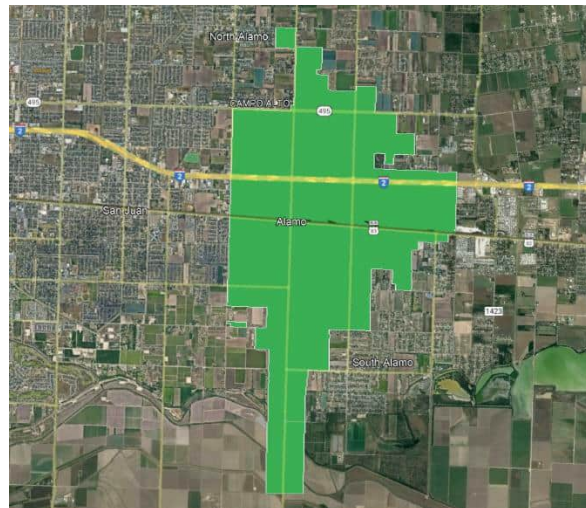
Alamo Pd Will Create A Working Evacuation List For Emergency Situations. Prioritize Flood Prone Areas

### 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

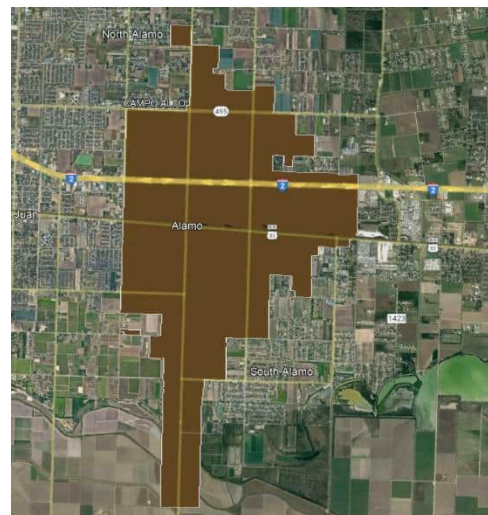
Implement Program To Provide Links To Weather Alerts And Departmental Phone Listings With Contact Personnel For Residents.

### Strategy Type

- Education and Outreach Activities     
  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:	\$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

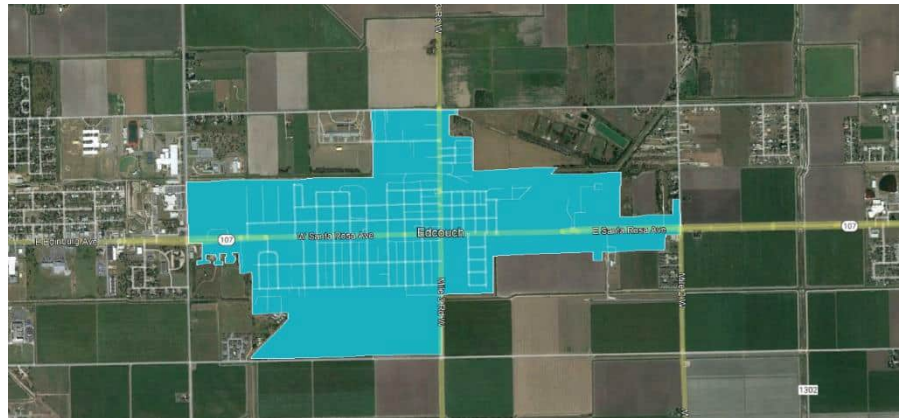
Develop Procedures For Mass Notifications To Citizens And Merchants During Natural Hazard Incident. Solicit Bids For System. Purchase Emergency Notification System And Install Distribute Information On New System And Conduct Training

## Strategy Type

- Education and Outreach Activities     
  Regulatory and Guidance     
  Flood Preparedness Programs  
 Protected Areas     
  Development Standards     
  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:	\$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

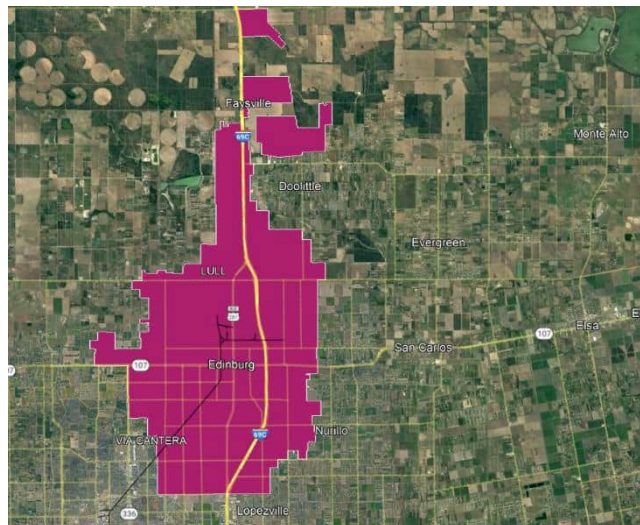
Implement Reverse 9-1-1 System

### 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.)



### 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





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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- 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

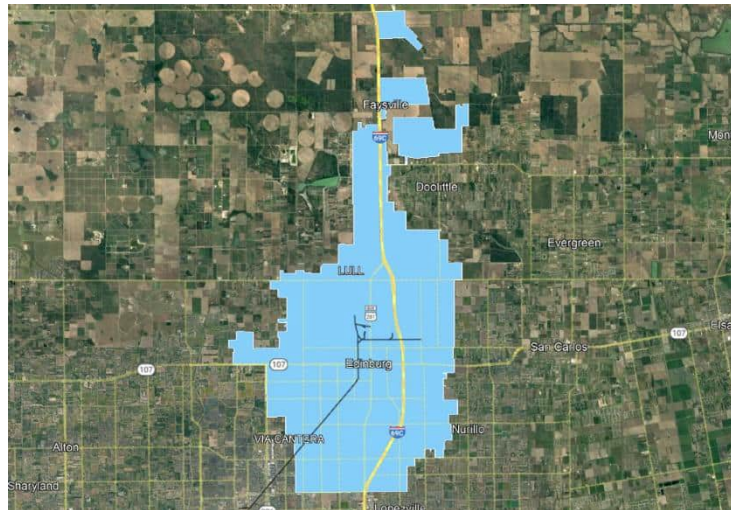
Develop Procedures For Mass Notifications To Citizens And Merchants During Natural Hazard Incident. Solicit Bids For System. Purchase Emergency Notification System And Install Distribute Information On New System And Conduct Training

## 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           # 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

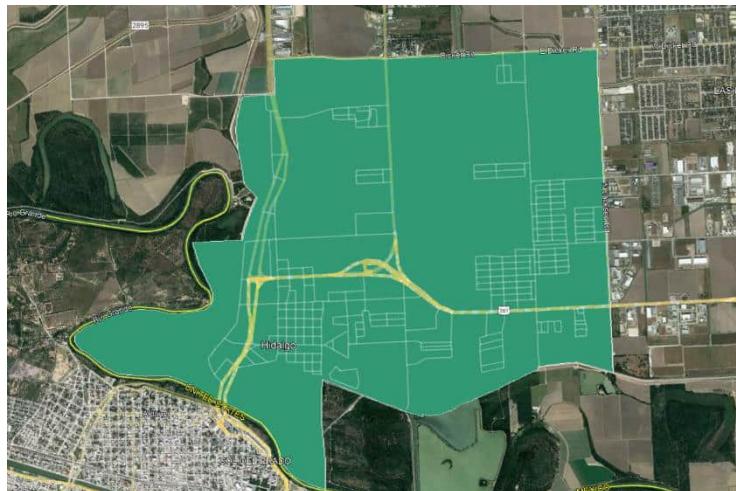
Implement Program To Provide Links To Weather Alerts And Departmental Phone Listings With Contact Personnel For Residents.

## Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

## Strategy Area

City/ Cities Hidalgo  
 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:	\$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
- Regulatory and Guidance
- Flood Preparedness Programs
- Protected Areas
- Development Standards
- Other:

### Strategy Area

City/ Cities

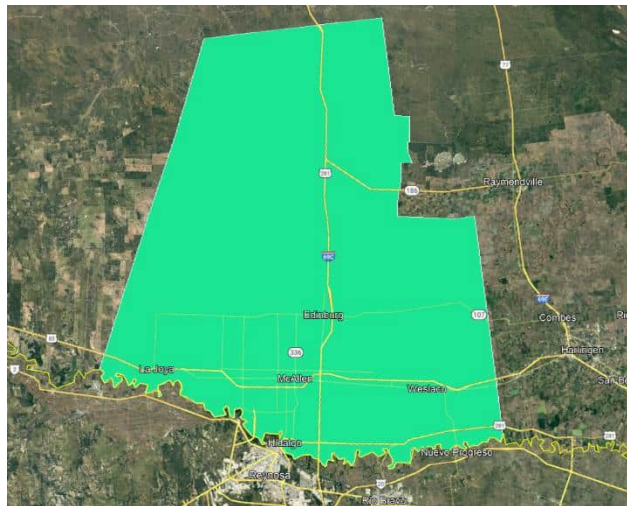
County/ Counties Hidalgo

HUC 8 12110207

12110231

HUC 12

Study Area (sq. mi.)



### Emergency Need

Yes  No

### Known Flood Risk

History of Flooding? Yes  No

Population at Risk Yes  No

Roadways flooded Yes  No

Critical Facilities Impacted Yes  No

Notes:

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

### 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

Population at Risk Yes  No

Roadways flooded Yes  No

Critical Facilities Impacted Yes  No

Notes:

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

### 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> | Frequency of flooding:     |  |
| 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:                       |   |                            |  |

### 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

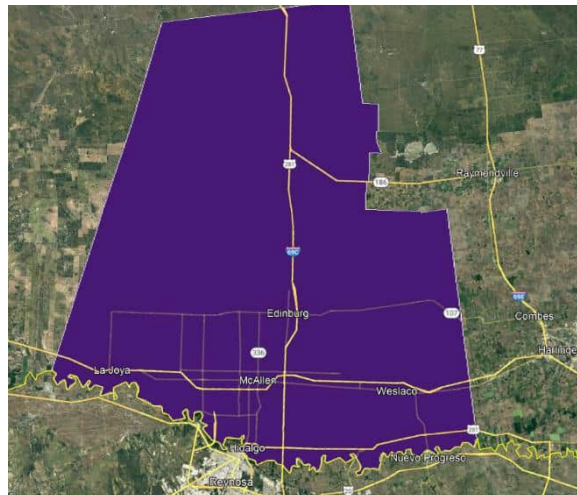
County/ Counties Hidalgo

HUC 8 12110207

12110213

HUC 12

Study Area (sq. mi.)



### Emergency Need

Yes  No

### Known Flood Risk

- |                              |   |                            |  |
|------------------------------|---|----------------------------|--|
| History of Flooding?         | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Frequency of flooding:     |  |
| 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:

### 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     
  Regulatory and Guidance     
  Flood Preparedness Programs  
 Protected Areas     
  Development Standards     
  Other:

### Strategy Area

City/ Cities

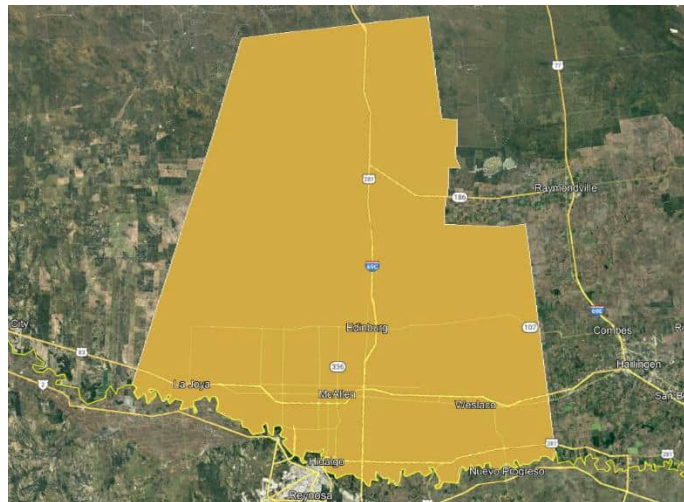
County/ Counties Hidalgo

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

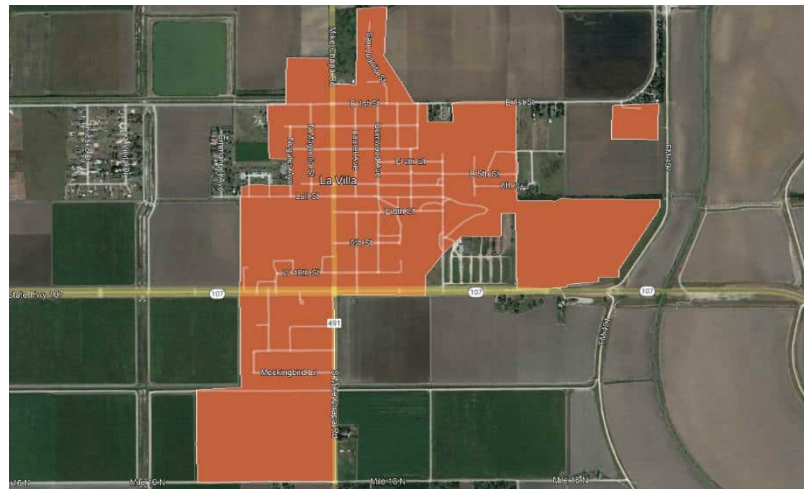
Implement Program To Provide Links To Weather Alerts And Departmental Phone Listings With Contact Personnel For Residents.

## 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

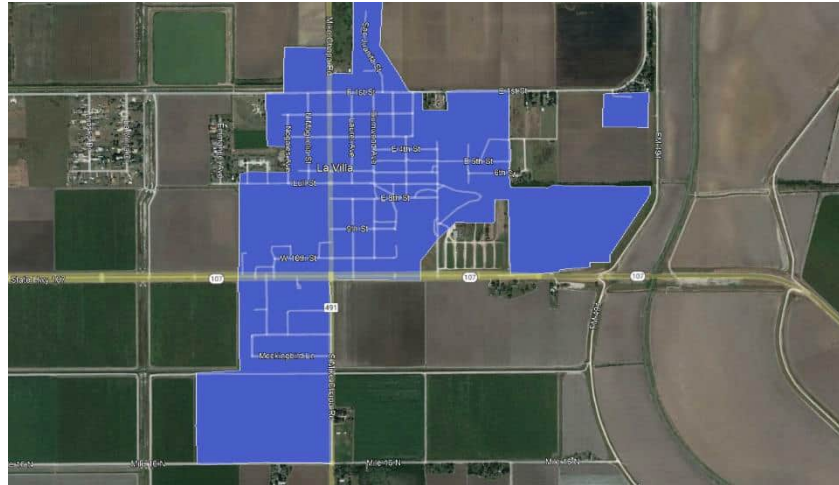
Develop Procedures For Mass Notifications To Citizens And Merchants During Natural Hazard Incident. Solicit Bids For System. Purchase Emergency Notification System And Install Distribute Information On New System And Conduct Training

### 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





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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- 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

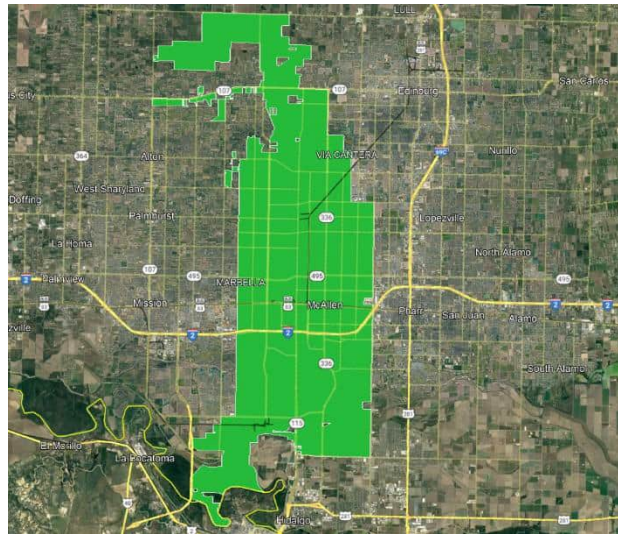
Develop Emergency Notification Awareness System For Traveling Public Via Transportation System In The Event of Severe Weather In McAllen

### 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Frequency of flooding:	
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:

### 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
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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

## McAllen #1-2.1

FMS ID: 152000042

## FMS Description

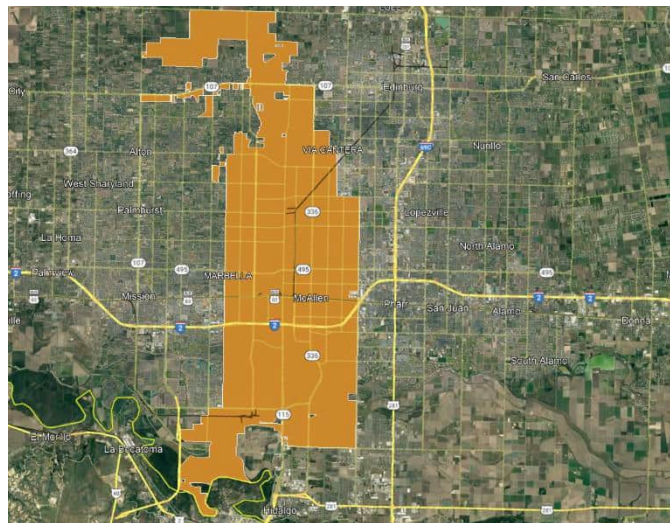
Provide A Means of Disseminating Emergency Information To The Citizens of McAllen

## 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

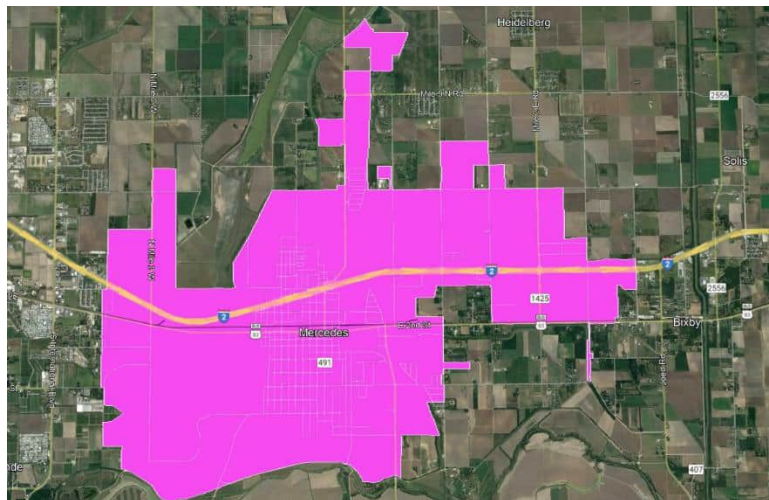
Develop Procedures For Mass Notifications To Citizens And Merchants During Natural Hazard Incident. Solicit Bids For System. Purchase Emergency Notification System And Install Distribute Information On New System And Conduct Training

### 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

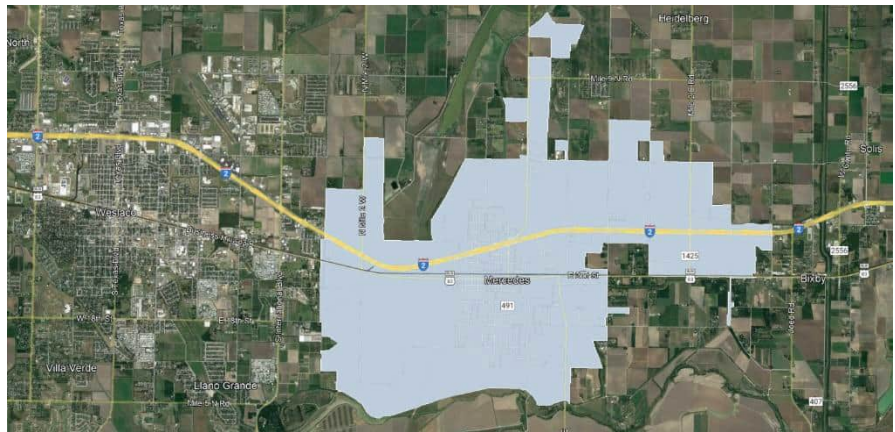
Implement Program To Provide Links To Weather Alerts And Departmental Phone Listings With Contact Personnel For Residents.

### 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





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
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- 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 #7-1.1

FMS ID: 152000046

## FMS Description

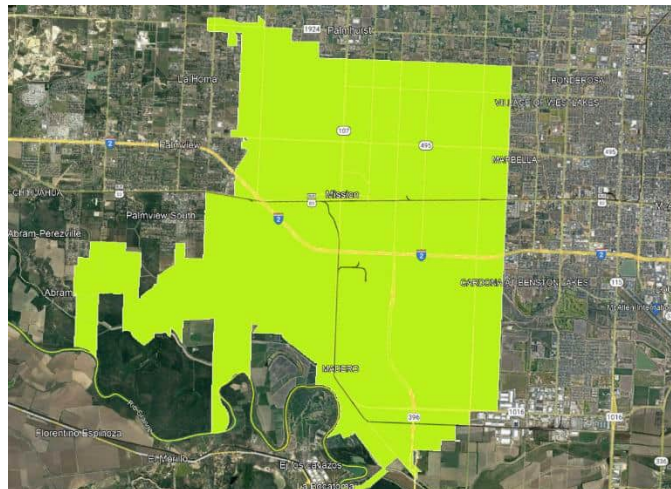
Implement Program To Provide Links To Weather Alerts And Departmental Phone Listings With Contact Personnel For Residents.

## Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

## Strategy Area

City/ Cities 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:	\$8,500	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

## Palmview #5-1.1

FMS ID: 152000047

## FMS Description

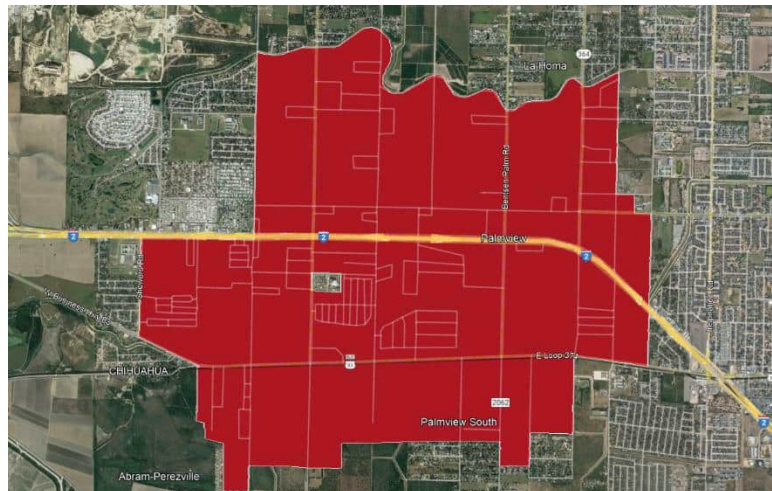
Implement Program To Provide Links To Weather Alerts And Departmental Phone Listings With Contact Personnel For Residents.

## 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.)



## 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

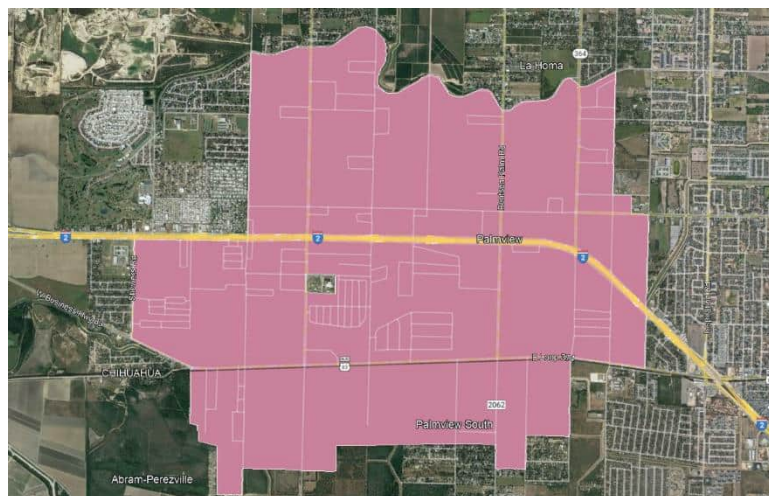
Develop Procedures For Mass Notifications To Citizens And Merchants During Natural Hazard Incident. Solicit Bids For System. Purchase Emergency Notification System And Install Distribute Information On New System And Conduct Training.

## 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
- 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 #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

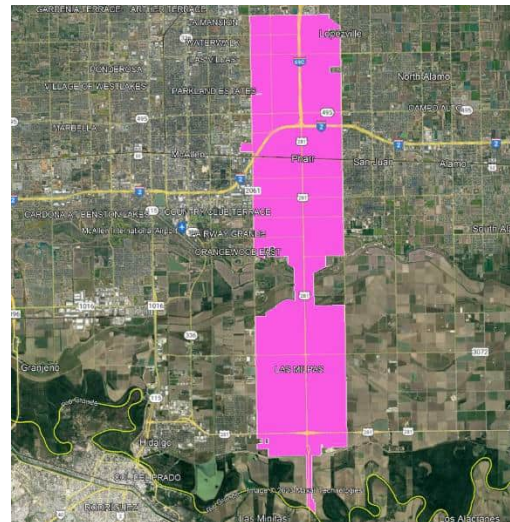
City/ Cities

County/ Counties Hidalgo

HUC 8 12110208

HUC 12

Study Area (sq. mi.)



## Emergency Need

Yes  No

## Known Flood Risk

- |                              |   |                            |  |
|------------------------------|---|----------------------------|--|
| History of Flooding?         | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Frequency of flooding:     |  |
| 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:

## 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
- 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 #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 <input checked="" type="checkbox"/> No <input type="checkbox"/> | Frequency of flooding:     |  |
| 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:

## 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
- 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 #4-1.2

FMS ID: 152000051

### FMS Description

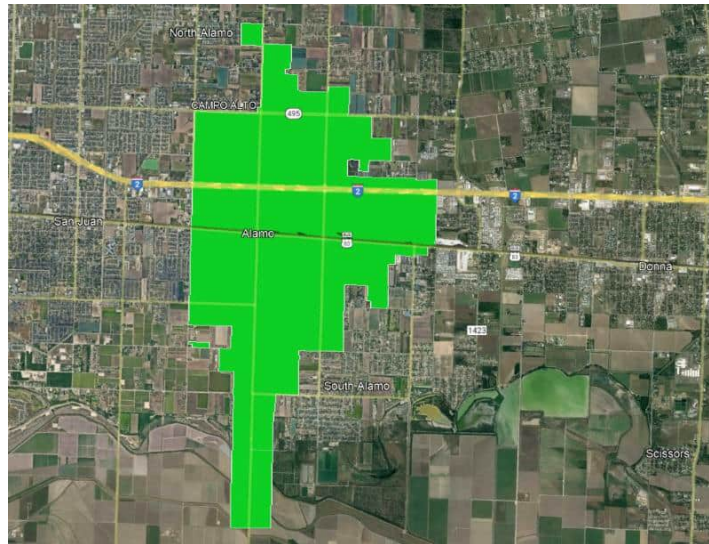
Provide Traffic Control And Evacuation Assistance During Emergency Situations

### 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:	\$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
- 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 Hazard Mitigation Plan Action #2

FMS ID: 152000052

### FMS Description

Develop needs assessment to identify and fund improvements to flood proof critical facilities such as lift stations and treatment plants.

### Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

### Strategy Area

- City/ Cities County Wide
- County/ Counties Starr County
- HUC 8
- 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 flooding:
- # of structures inundated
- Miles inundated?
- Agricultural Land impacted Yes  No

### Strategy Costs

Total Cost:	20,000,000	Study Sponsor:	Starr County
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Starr County
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

## Starr County Hazard Mitigation Plan Action #6

FMS ID: 152000053

### FMS Description

Building a shelter within a community to serve for flood situations in Rio Grande City.

### Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

### Strategy Area

City/ Cities Rio Grande City  
 County/ Counties Starr  
 HUC 8  
 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 flooding:  
 # of structures inundated  
 Miles inundated?  
 Agricultural Land impacted Yes  No

### Strategy Costs

Total Cost:	\$4,000,000	Study Sponsor:	Starr County
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Rio Grande City
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

## Starr County Hazard Mitigation Plan Action #10

FMS ID: 152000054

### FMS Description

Retrofit community center as shelter for flooding events. (Roma)

### Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

### Strategy Area

City/ Cities Roma  
 County/ Counties Starr  
 HUC 8  
 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:	\$1,000,000	Study Sponsor:	Starr County
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Roma
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



## Starr County Hazard Mitigation Plan Action #19

FMS ID: 152000055

### FMS Description

Develop maintenance schedule for creeks within jurisdiction

### Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

### Strategy Area

- City/ Cities County Wide
- County/ Counties Starr
- HUC 8
- 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 flooding:
- # of structures inundated
- Miles inundated?
- Agricultural Land impacted Yes  No

### Strategy Costs

Total Cost:	\$335,000	Study Sponsor:	Starr County
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Roma
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

## City of Laguna Vista - Laguna Vista Establish/Join Drainage District

FMS ID: 152000056

### FMS Description

Secure funding to become/join drainage district

### Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

### Strategy Area

City/ Cities Laguna Vista  
 County/ Counties Cameron  
 HUC 8  
 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 of flooding:	
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:

### Strategy Costs

Total Cost:	\$174,750	Study Sponsor:	City of Laguna Vista
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	City of Laguna Vista
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

## Willacy County Drainage District - Re-negotiate El Sauz contractual agreement

FMS ID: 152000057

### FMS Description

Re-negotiate agreement with El Sauz Ranch to facilitate more outfall volume

### Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

### Strategy Area

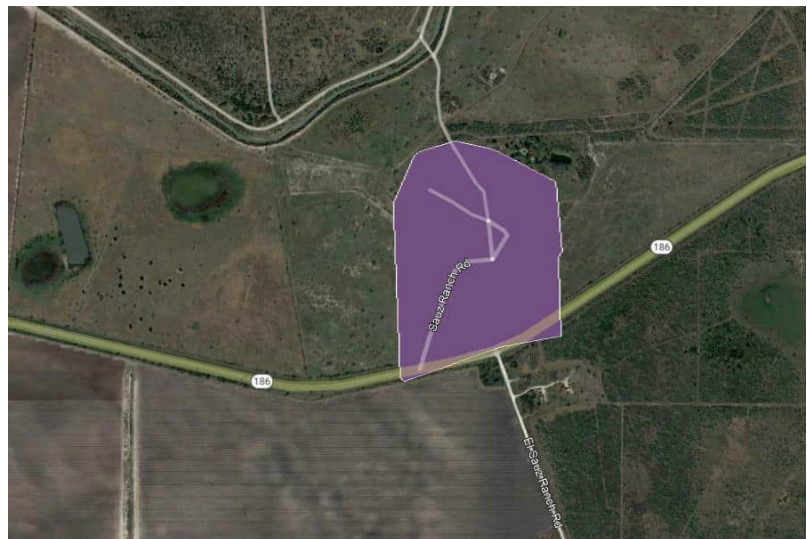
City/ Cities County Wide

County/ Counties Willacy

HUC 8

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 of flooding:     |  |
| 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:

### Strategy Costs

Total Cost:	\$2,500,000	Study Sponsor:	Willacy County Drainage District
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Willacy County Drainage District
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

## Cameron County Drainage District No. 5 - Cameron County Levee Certification

FMS ID: 152000058

### FMS Description

Coordinate with all on-going FIFs in Cameron County, provide a summary analysis for internal drainage and submit Levee Certification to FEMA. Utilize IBWC data for application. Manage review process and coordinate between County, IBWC, and FEMA.

### Strategy Type

- Education and Outreach Activities
- Regulatory and Guidance
- Flood Preparedness Programs
- Protected Areas
- Development Standards
- Other:

### Strategy Area

City/ Cities County Wide  
County/ Counties Cameron  
HUC 8  
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 flooding:  
 # of structures inundated  
 Miles inundated?  
 Agricultural Land impacted Yes  No

### Strategy Costs

Total Cost:	\$250,000	Study Sponsor:	Cameron County Drainage District No. 5
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Cameron County Drainage District No. 5
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
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## 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

## Sewer Manhole Rainguards

FMS ID: 152000059

### FMS Description

Installation of rainguards in existing manholes will keep rainwater from entering sewer collection system.

### 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  
 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:	\$200,000	Study Sponsor:	City of Edcouch
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	City of Edcouch
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



## City of Progreso - Progreso Storm Ditch improvement Equipment

FMS ID: 152000060

### FMS Description

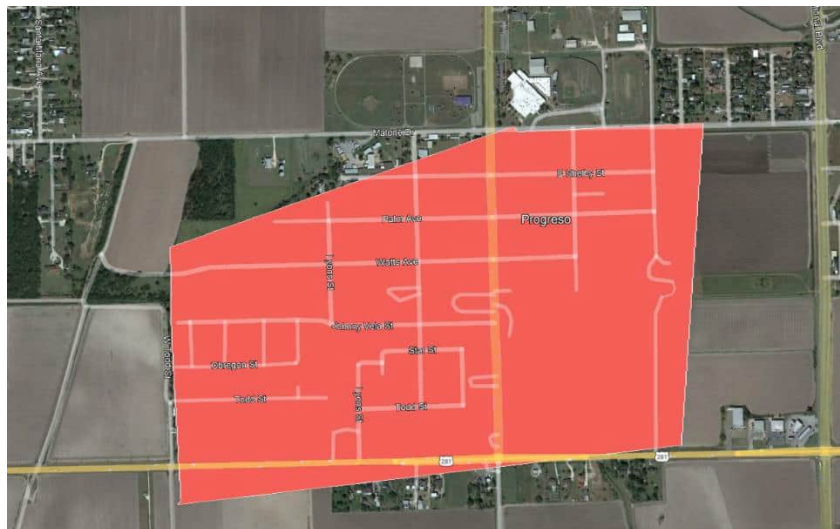
Develop maintenance plan and identify funding strategy to acquire heavy equipment (dozer, long reach excavator) for ditch cleaning operations

### Strategy Type

- Education and Outreach Activities
- Regulatory and Guidance
- Flood Preparedness Programs
- Protected Areas
- Development Standards
- Other:

### Strategy Area

City/ Cities Progreso  
 County/ Counties Hidalgo  
 HUC 8  
 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:	\$390,280	Study Sponsor:	City of Progreso
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	City of Progreso
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
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## 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

## City of Indian Lake - Indian lake Drainage Infrastructure Funding Study

FMS ID: 152000061

### FMS Description

Develop Plan for funding for future drainage infrastructure

### 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  
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:	\$250,000	Study Sponsor:	City of Indian Lake
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	City of Indian Lake
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

## Cameron County Drainage District No.1 - San Martin Lake dredging

FMS ID: 152000062

### FMS Description

Develop plan to fund and dredge lake to increase storage capacity

### Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

### Strategy Area

City/ Cities    Brownsville  
 County/ Counties    Cameron  
 HUC 8  
 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 of flooding:	
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:

### Strategy Costs

Total Cost:	\$1,196,000	Study Sponsor:	Cameron County Drainage District No.1
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Cameron County Drainage District No.1
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;



## 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
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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



## 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



## Willacy County Drainage District No.1 - WCDD1 pump station improvements

FMS ID: 152000065

### FMS Description

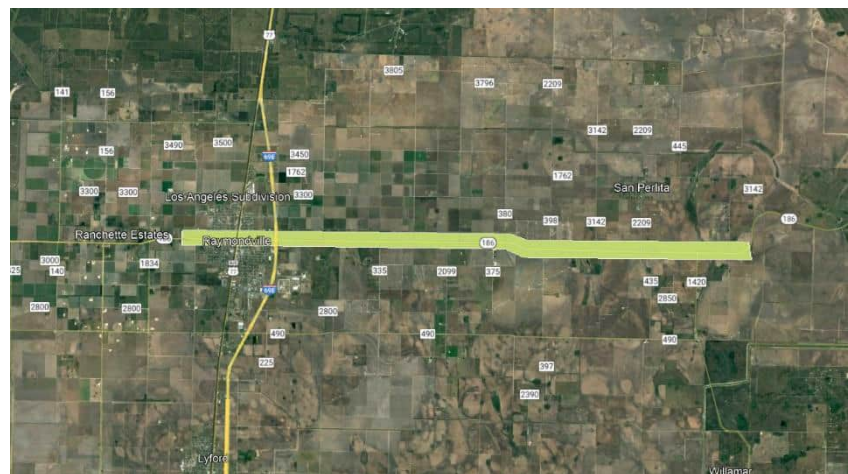
Perform assessment of pump station to make it flood proof and resilient.

### Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

### Strategy Area

City/ Cities County Wide  
County/ Counties Willacy  
HUC 8  
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:	\$2,100,000.00	Study Sponsor:	Willacy County Drainage District
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Willacy County Drainage District
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;

## 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

## City of Harlingen – Flood Warning System, Planning, Operation & Maintenance

FMS ID: 152000066

### FMS Description

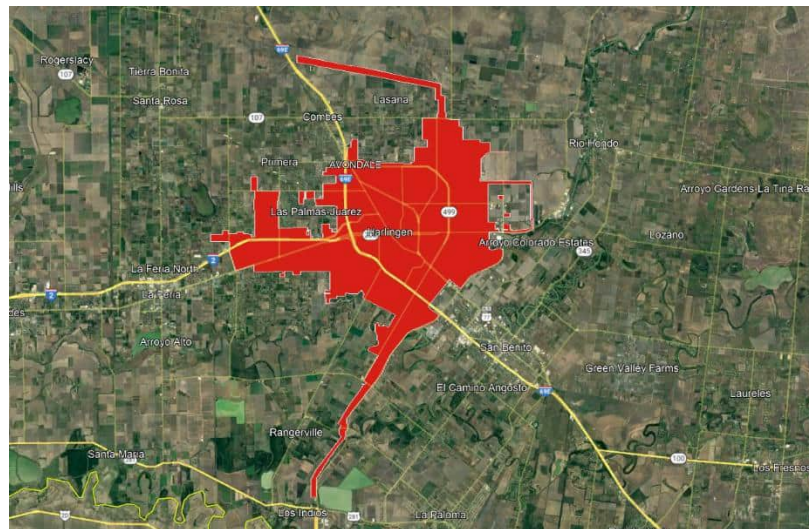
Develop and Implement a Flood warning system, planning, operation & Maintenance plan

### Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

### Strategy Area

City/ Cities Harlingen  
 County/ Counties Cameron  
 HUC 8 12110208  
 HUC 12  
 Study Area (sq. mi.) 40.4



### 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:	\$5,000,000.00	Study Sponsor:	Willacy County Drainage District
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Willacy County Drainage District
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;

## 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



## City of Edinburg - Planning, Operation & Maintenance

FMS ID: 152000067

### FMS Description

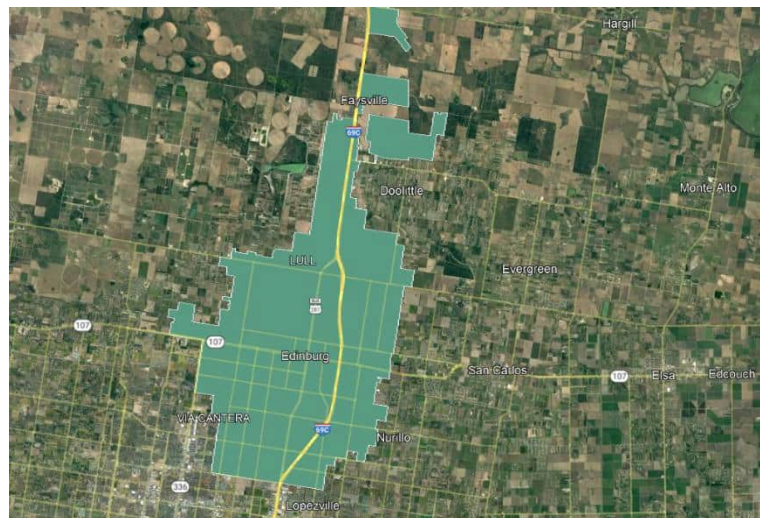
Develop and Implement a planning, operation & Maintenance plan

### 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.) 44.7



### 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:	\$5,000,000.00	Study Sponsor:	Willacy County Drainage District
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Willacy County Drainage District
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;



## 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

## City of La Villa - Planning, Operation & Maintenance

FMS ID: 152000068

### FMS Description

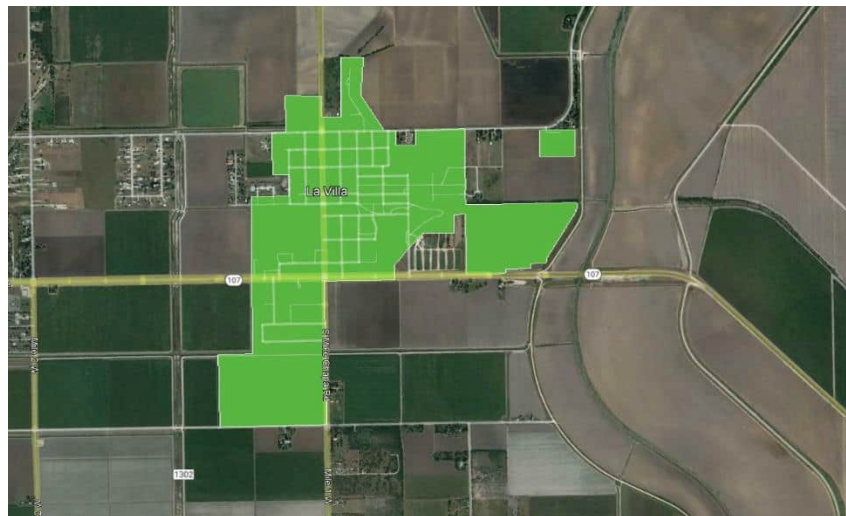
Develop and Implement a planning, operation & Maintenance plan

### 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.) 0.72



### 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:	\$5,000,000.00	Study Sponsor:	Willacy County Drainage District
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Willacy County Drainage District
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;

## 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

## City of Mission - Planning, Operation & Maintenance

FMS ID: 152000069

### FMS Description

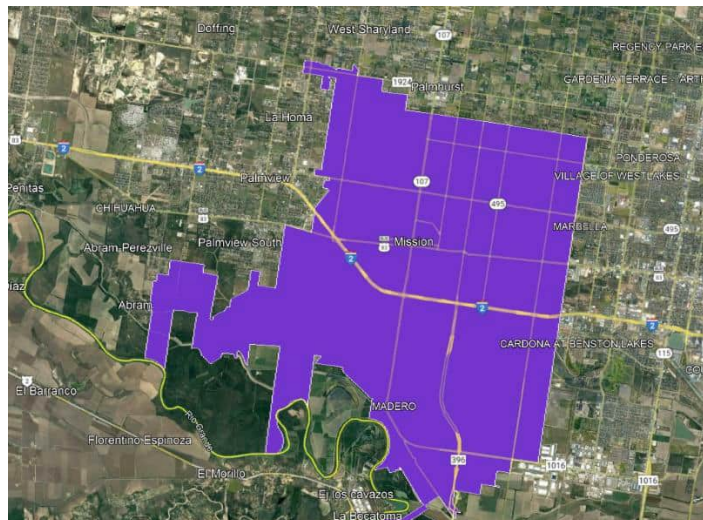
Develop and Implement a planning, operation & Maintenance plan

### 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.) 36.3



### 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:	\$5,000,000.00	Study Sponsor:	Willacy County Drainage District
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Willacy County Drainage District
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;

## 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



## City of Primera - Planning, Operation & Maintenance

FMS ID: 152000070

### FMS Description

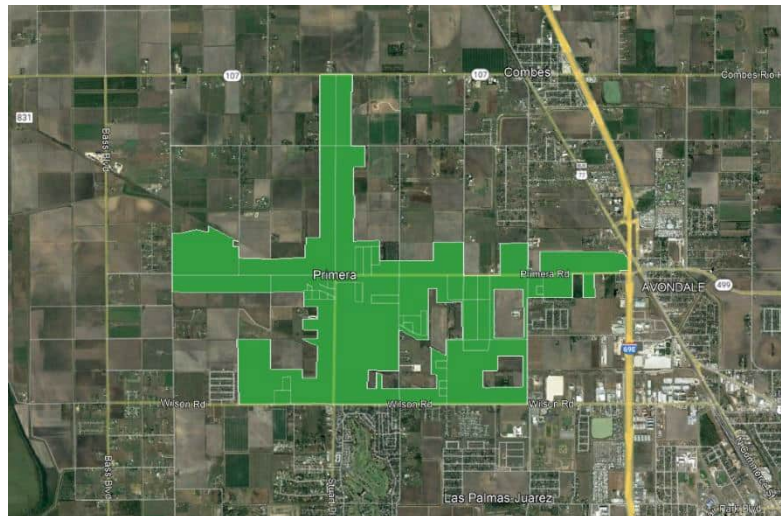
Develop and Implement a planning, operation & Maintenance plan

### Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

### Strategy Area

City/ Cities    Primera  
 County/ Counties    Cameron  
 HUC 8    12110208  
 HUC 12  
 Study Area (sq. mi.)    2.7



### 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 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:

### Strategy Costs

Total Cost:	\$5,000,000.00	Study Sponsor:	Willacy County Drainage District
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Willacy County Drainage District
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;

## 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
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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 La Joya – Flood Warning System, Planning, Operation & Maintenance

FMS ID: 152000072

### FMS Description

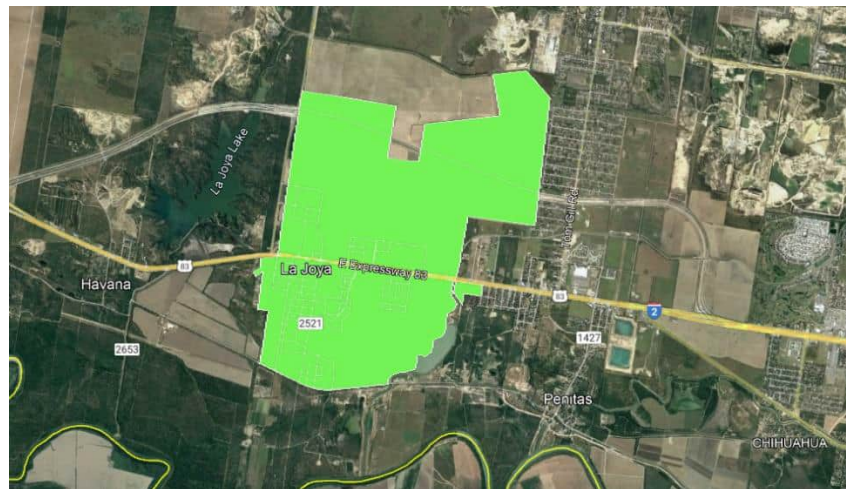
Develop and Implement a Flood warning system, planning, operation & Maintenance plan

### Strategy Type

- Education and Outreach Activities     
  Regulatory and Guidance     
  Flood Preparedness Programs  
 Protected Areas     
  Development Standards     
  Other:

### Strategy Area

City/ Cities La Joya  
 County/ Counties Hidalgo  
 HUC 8 12110208  
 HUC 12  
 Study Area (sq. mi.) 10.8



### 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:	\$5,000,000.00	Study Sponsor:	Willacy County Drainage District
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Willacy County Drainage District
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;



## 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

## City of Los Fresnos – Flood Warning System, Planning, Operation & Maintenance

FMS ID: 152000073

### FMS Description

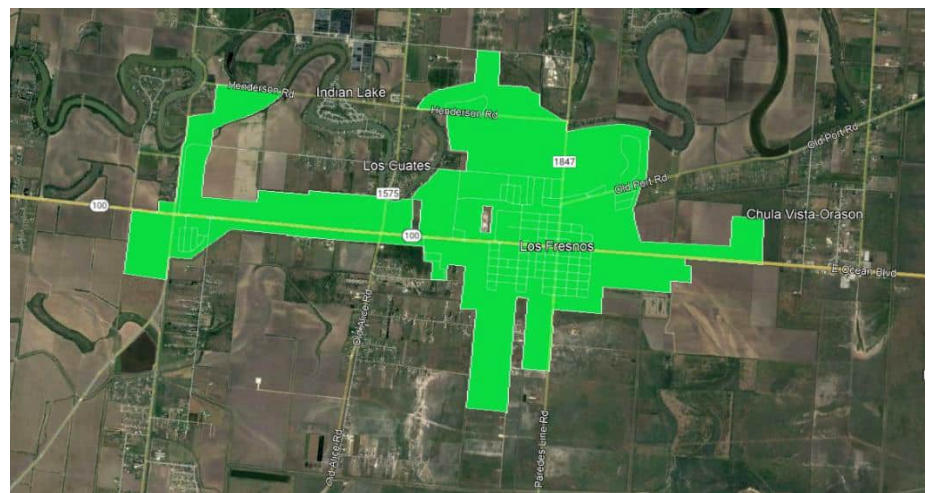
Develop and Implement a Flood warning system, planning, operation & Maintenance plan

### Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

### Strategy Area

City/ Cities Los Fresnos  
 County/ Counties Cameron  
 HUC 8 12110208  
 HUC 12  
 Study Area (sq. mi.) 4.1



### 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:	\$5,000,000.00	Study Sponsor:	Willacy County Drainage District
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Willacy County Drainage District
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;

## 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
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- 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 Mercedes - Planning, Operation & Maintenance

FMS ID: 152000074

### FMS Description

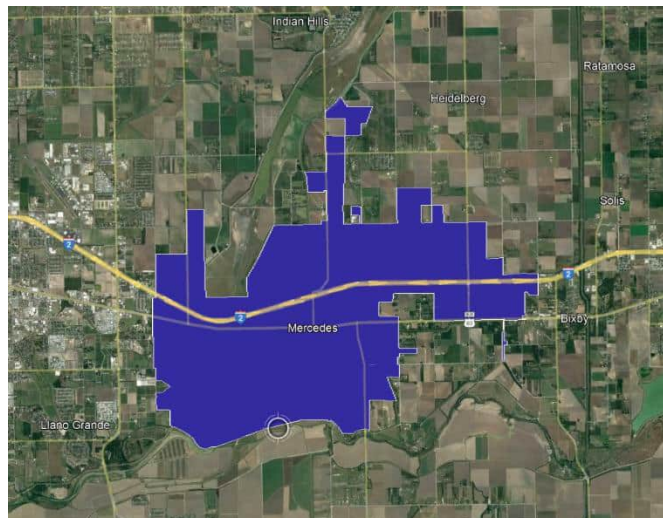
Develop and Implement a planning, operation & Maintenance plan

### 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 100000000  
 HUC 12  
 Study Area (sq. mi.) 27



### 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:	\$5,000,000.00	Study Sponsor:	Willacy County Drainage District
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Willacy County Drainage District
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;

## 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
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- 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
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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

## City of Palmview - Planning, Operation & Maintenance

FMS ID: 152000076

### FMS Description

Develop and Implement a planning, operation & Maintenance plan

### 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.) 0.6



### 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 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:

### Strategy Costs

Total Cost:	\$5,000,000.00	Study Sponsor:	Willacy County Drainage District
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Willacy County Drainage District
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;

## 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



## City of San Benito – Flood Warning System, Planning, Operation & Maintenance

FMS ID: 152000077

### FMS Description

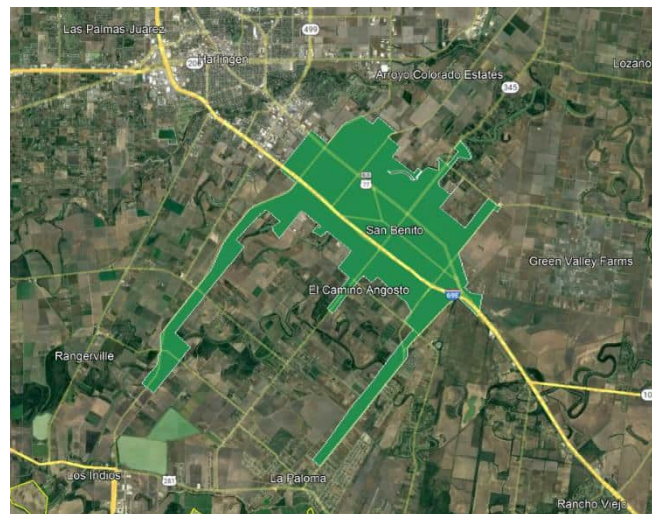
Develop and Implement a Flood warning system, planning, operation & Maintenance plan

### 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.) 16.4



### 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:	\$5,000,000.00	Study Sponsor:	Willacy County Drainage District
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Willacy County Drainage District
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;



## 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

## City of San Juan – Flood Warning System, Planning, Operation & Maintenance

FMS ID: 152000078

### FMS Description

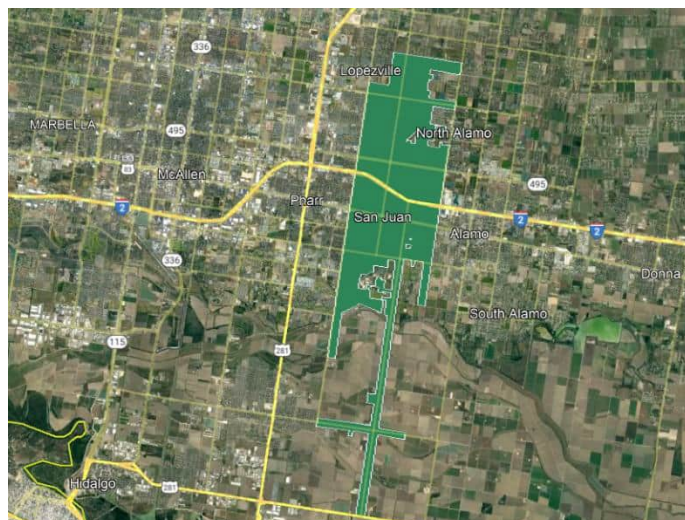
Develop and Implement a Flood warning system, planning, operation & Maintenance plan

### Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

### Strategy Area

City/ Cities San Juan  
 County/ Counties Hidalgo  
 HUC 8 12110208  
 HUC 12  
 Study Area (sq. mi.) 11.9



### 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:	\$5,000,000.00	Study Sponsor:	Willacy County Drainage District
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Willacy County Drainage District
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;

## 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

## City of Weslaco – Flood Warning System, Planning, Operation & Maintenance

FMS ID: 152000079

### FMS Description

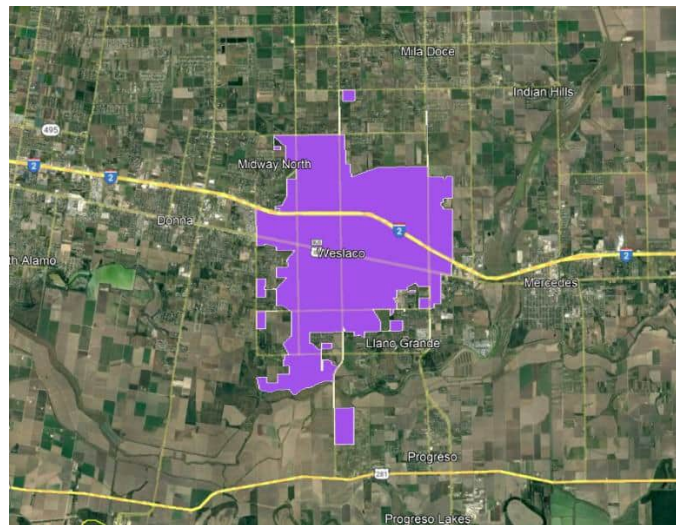
Develop and Implement a Flood warning system, planning, operation & Maintenance plan

### Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

### Strategy Area

City/ Cities    Weslaco  
County/ Counties    Hidalgo  
HUC 8    12110208  
HUC 12  
Study Area (sq. mi.)    16.4



### 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:	\$5,000,000.00	Study Sponsor:	Willacy County Drainage District
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Willacy County Drainage District
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;

## 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



## City of Alamo - Planning, Operation & Maintenance

FMS ID: 152000080

### FMS Description

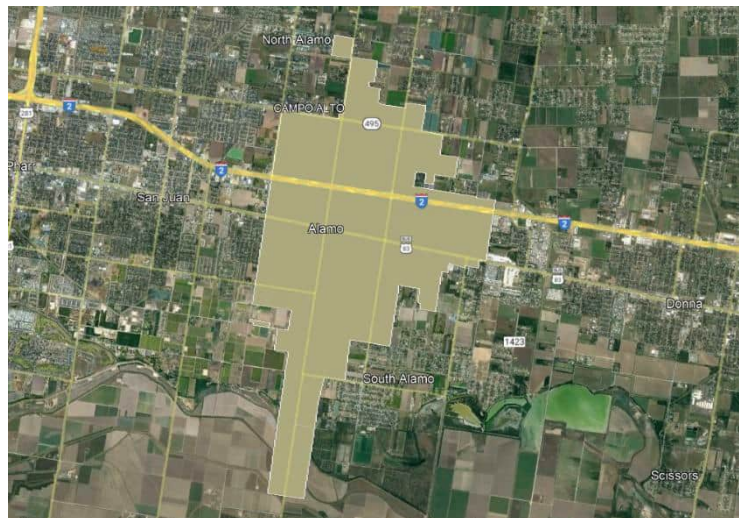
Develop and Implement a planning, operation & Maintenance plan

### 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.) 7.5



### 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:	\$5,000,000.00	Study Sponsor:	Willacy County Drainage District
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Willacy County Drainage District
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;

## 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

## City of Alton – Flood Warning System, Planning, Operation & Maintenance

FMS ID: 152000081

### FMS Description

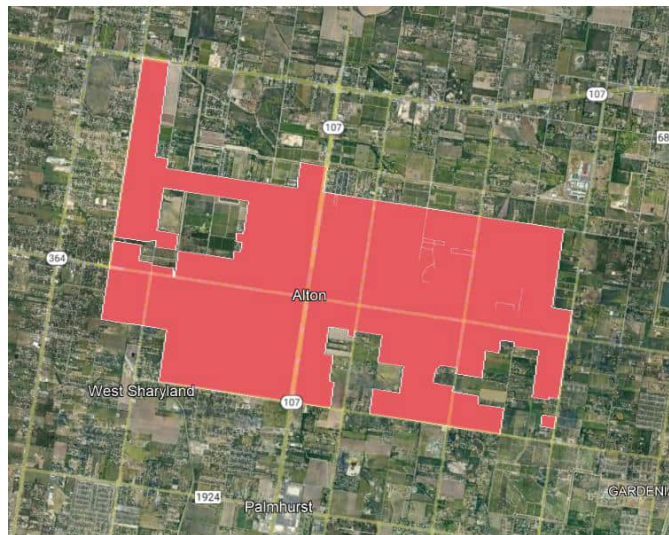
Develop and Implement a Flood warning system, planning, operation & Maintenance plan

### Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

### Strategy Area

City/ Cities Alton  
 County/ Counties Hidalgo  
 HUC 8 12110208  
 HUC 12  
 Study Area (sq. mi.) 7.2



### 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:	\$5,000,000.00	Study Sponsor:	Willacy County Drainage District
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Willacy County Drainage District
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;

## 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

## City of Brownsville – Flood Warning System, Planning, Operation & Maintenance

FMS ID: 152000082

### FMS Description

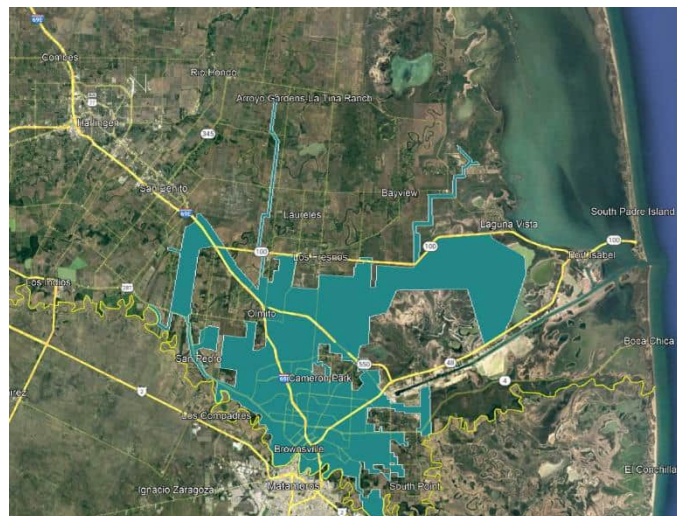
Develop and Implement a Flood warning system, planning, operation & Maintenance plan

### Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

### Strategy Area

City/ Cities     Brownsville  
 County/ Counties     Cameron  
 HUC 8     12110208  
 HUC 12  
 Study Area (sq. mi.)     145.9



### 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 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:

### Strategy Costs

Total Cost:	\$5,000,000.00	Study Sponsor:	Willacy County Drainage District
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Willacy County Drainage District
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;



## 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

## Cameron County – Flood Warning System, Planning, Operation & Maintenance

FMS ID: 152000083

### FMS Description

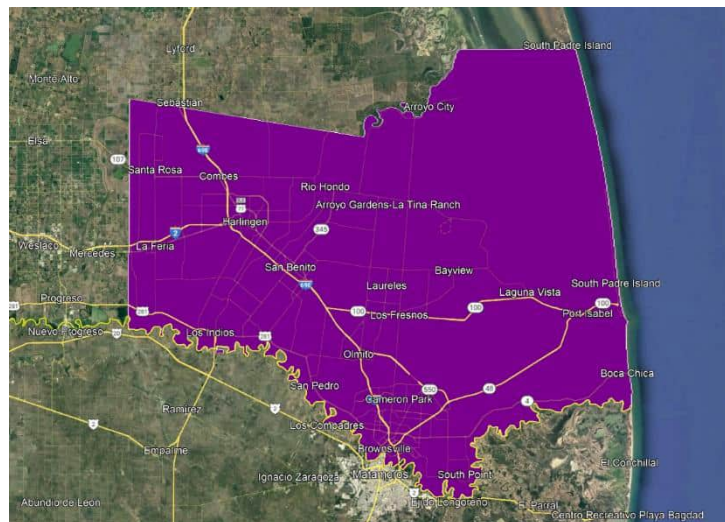
Develop and Implement a Flood warning system, planning, operation & Maintenance plan

### Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

### Strategy Area

City/ Cities  
County/ Counties Cameron  
HUC 8 12110208  
HUC 12  
Study Area (sq. mi.) 1276



### 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:	\$5,000,000.00	Study Sponsor:	Willacy County Drainage District
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Willacy County Drainage District
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;

## 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
- 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 Donna – Flood Warning System, Planning, Operation & Maintenance

FMS ID: 152000085

### FMS Description

Develop and Implement a Flood warning system, planning, operation & Maintenance plan

### Strategy Type

- Education and Outreach Activities     
  Regulatory and Guidance     
  Flood Preparedness Programs  
 Protected Areas     
  Development Standards     
  Other:

### Strategy Area

City/ Cities Donna  
 County/ Counties Hidalgo  
 HUC 8 12110208  
 HUC 12  
 Study Area (sq. mi.) 14.4



### 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:	\$5,000,000.00	Study Sponsor:	Willacy County Drainage District
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Willacy County Drainage District
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;

## 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 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

## City of Elsa – Flood Warning System, Planning, Operation & Maintenance

FMS ID: 152000086

### FMS Description

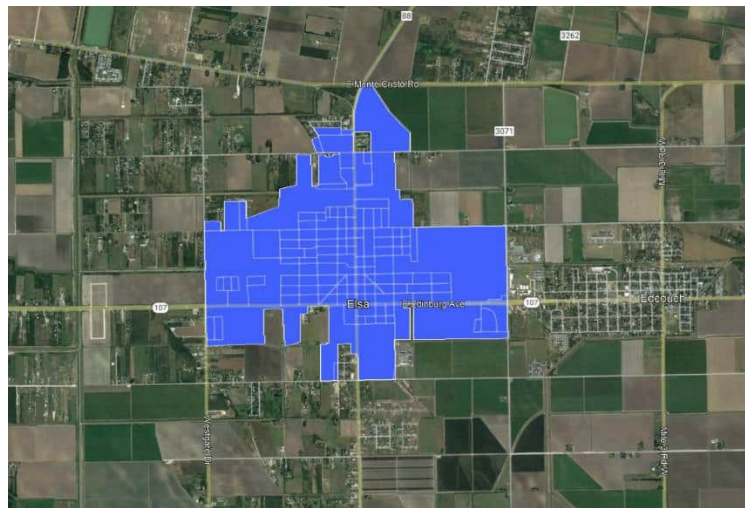
Develop and Implement a Flood warning system, planning, operation & Maintenance plan

### Strategy Type

- Education and Outreach Activities
- Protected Areas
- Regulatory and Guidance
- Development Standards
- Flood Preparedness Programs
- Other:

### Strategy Area

City/ Cities Elsa  
 County/ Counties Hidalgo  
 HUC 8 12110208  
 HUC 12  
 Study Area (sq. mi.) 2.0



### 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:	\$5,000,000.00	Study Sponsor:	Willacy County Drainage District
Non-reoccurring Non-capital Cost (include in Total above):	\$1,000	<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	Willacy County Drainage District
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;

## 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
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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