

Section 20: Mitigation Actions

Laguna Vista – Action #25	
Proposed Action:	Install cameras at critical infrastructure locations and major areas in the Town
BACKGROUND INFORMATION	
Site and Location:	Town-wide critical infrastructure locations
Risk Reduction Benefit (Current Cost/Losses Avoided):	Monitoring prevents possible terrorism
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Terrorism
Effect on new/existing buildings:	Reduce risk to new and existing structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$10,000
Potential Funding Sources:	Local Funds; Other Grants
Lead Agency/Department Responsible:	Town of Laguna Vista / Emergency Management
Implementation Schedule:	Within 24 months of plan adoption pending funding
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 4; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 4; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

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Laguna Vista – Action #26	
Proposed Action:	Plan trees and vegetation along public ROW and easements to provide shaded areas for relief from extreme heat and lower temperatures
BACKGROUND INFORMATION	
Site and Location:	Town-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	Provides shade and lowers temperatures, reduce energy consumption
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations; Structure and Infrastructure Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat
Effect on new/existing buildings:	Reduces temperature at existing/new structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$25,000
Potential Funding Sources:	HMGP; Local Funds; Other Grants
Lead Agency/Department Responsible:	Town of Laguna Vista / Public Works
Implementation Schedule:	Within 24 months of plan adoption pending funding
Incorporation into Existing Plans:	Comprehensive Plan

COMMENTS:
Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5

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Laguna Vista – Action #27	
Proposed Action:	Education outreach program for residents with information on drought impacts, restrictions, and water conservation measures
BACKGROUND INFORMATION	
Site and Location:	Town-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	Makes residents aware of potential hazard, risk, water conservation measures required or recommended, and possible means to reduce the impacts of prolonged drought conditions
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought
Effect on new/existing buildings:	Reduce usage at new and existing structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$1,000
Potential Funding Sources:	HMGP; Local Funds; Other Grants
Lead Agency/Department Responsible:	Town of Laguna Vista / Administration
Implementation Schedule:	Within 24 months of plan adoption pending funding
Incorporation into Existing Plans:	Public Awareness Planning

COMMENTS:
Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5

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Laguna Vista – Action #28	
Proposed Action:	Remove dead and downed trees to decrease fire fuels in Wildland Urban Interface (WUI) areas
BACKGROUND INFORMATION	
Site and Location:	Town-wide WUI
Risk Reduction Benefit (Current Cost/Losses Avoided):	Natural landform protection and reduced risk of loss of property due to wildfire
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Natural Systems Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Effect on new/existing buildings:	Reduce fire risk to new and existing structures
Priority (High, Moderate, Low):	Low
Estimated Cost:	\$25,000
Potential Funding Sources:	Texas Forest Service; FireWise; HMPG
Lead Agency/Department Responsible:	Town of Laguna Vista / Public Works
Implementation Schedule:	Within 48 months of plan adoption pending funding
Incorporation into Existing Plans:	CWPP

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

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Laguna Vista – Action #29	
Proposed Action:	Install sprinkler systems at all public buildings and common areas and implement watering schedule
BACKGROUND INFORMATION	
Site and Location:	Town-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	Reduce risk of foundation shifts and cracks
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Expansive Soils; Wildfire
Effect on new/existing buildings:	Reduce risk on new and existing structures
Priority (High, Moderate, Low):	Low
Estimated Cost:	\$10,000 per location
Potential Funding Sources:	HMGP; Local Funds; Other Grants; CDBG
Lead Agency/Department Responsible:	Town of Laguna Vista / Public Works
Implementation Schedule:	Within 48 months of plan adoption pending funding
Incorporation into Existing Plans:	Comprehensive Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

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Laguna Vista – Action #30	
Proposed Action:	Educate the general public on benefits of utilizing sprinkler system or watering around foundation and sidewalks to prevent expansive soils from cracking concrete
BACKGROUND INFORMATION	
Site and Location:	Town-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	Reduce chances of concrete cracking, thus saving money and damage to structures
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Expansive Soils; Wildfire
Effect on new/existing buildings:	Reduce risk to new and existing structures
Priority (High, Moderate, Low):	Low
Estimated Cost:	\$1,000
Potential Funding Sources:	HMGP; Local Funds; Other Grants
Lead Agency/Department Responsible:	Town of Laguna Vista / Administration
Implementation Schedule:	Within 48 months of plan adoption pending funding
Incorporation into Existing Plans:	Public Awareness Planning

COMMENTS:
Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5

Section 20: Mitigation Actions

Los Fresnos

Los Fresnos – Action #1	
Proposed Action:	Educate public of potential hazards due to reservoir breach and mitigation measures to reduce damages. Include education for water conservation measures following a breach and adopt policy to implement water restrictions following an event.
BACKGROUND INFORMATION	
Site and Location:	Water Reservoir 801 S Nogal
Risk Reduction Benefit (Current Cost/Losses Avoided):	Reduce the potential loss of water and water shortage for residents
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness; Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Low
Estimated Cost:	\$5,000
Potential Funding Sources:	HMGP; General Funds
Lead Agency/Department Responsible:	City of Los Fresnos / Public Works, Administration
Implementation Schedule:	Within 48 months of plan adoption pending funding
Incorporation into Existing Plans:	Emergency Action Plan

COMMENTS:
Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5

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Los Fresnos – Action #2	
Proposed Action:	Purchase and install an early warning system to reduce damages from a dam breach.
BACKGROUND INFORMATION	
Site and Location:	Water Reservoir 801 S Nogal
Risk Reduction Benefit (Current Cost/Losses Avoided):	Reduce the potential loss of life, injury and response time to reduce loss of water storage or breach
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure
Effect on new/existing buildings:	Reduce damage to property
Priority (High, Moderate, Low):	Low
Estimated Cost:	\$50,000
Potential Funding Sources:	HMGP; General Funds; NRCS
Lead Agency/Department Responsible:	City of Los Fresnos / Public Works
Implementation Schedule:	Within 48 months of plan adoption pending funding
Incorporation into Existing Plans:	EAP

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

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Los Fresnos – Action #3	
Proposed Action:	Visually monitor reservoir banks for erosion or possible failure with a camera system and fencing; mitigate erosion damage as necessary when it is identified.
BACKGROUND INFORMATION	
Site and Location:	Water Reservoir 801 S Nogal
Risk Reduction Benefit (Current Cost/Losses Avoided):	Reduce the potential loss of water storage or breach
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure
Effect on new/existing buildings:	Reduce risk of loss of water to existing structures
Priority (High, Moderate, Low):	Low
Estimated Cost:	\$50,000
Potential Funding Sources:	HMGP; General Funds; NRCS
Lead Agency/Department Responsible:	City of Los Fresnos / Public Works
Implementation Schedule:	Within 48 months of plan adoption pending funding
Incorporation into Existing Plans:	EAP

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

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Los Fresnos – Action #4	
Proposed Action:	Implement program to promote water conservation by landscaping with low water usage plants at all public buildings and new residential development
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	Reduces the use of water
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought
Effect on new/existing buildings:	Reduce drought impact on existing/new buildings
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$5,000
Potential Funding Sources:	HMGP; General Funds
Lead Agency/Department Responsible:	City of Los Fresnos / Administration
Implementation Schedule:	Within 24 months of plan adoption pending funding
Incorporation into Existing Plans:	Local Ordinances, Comprehensive Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

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Los Fresnos – Action #5	
Proposed Action:	Construct facilities to reclaim wastewater to be potable water
BACKGROUND INFORMATION	
Site and Location:	Water and Wastewater Plants
Risk Reduction Benefit (Current Cost/Losses Avoided):	Significantly reduce fresh water usage; lower quantity of water needed, saving thousands of gallons daily
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought
Effect on new/existing buildings:	Reduce water usage at new/existing buildings
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	TDB
Potential Funding Sources:	HMGP; CDBG
Lead Agency/Department Responsible:	City of Los Fresnos / Public Works
Implementation Schedule:	Within 24 months of plan adoption pending funding
Incorporation into Existing Plans:	Comprehensive Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 1; Technically Feasible = 3; Administratively Possible = 5; Politically Acceptable = 1; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

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Los Fresnos – Action #6	
Proposed Action:	Install sprinkler systems at all public buildings and common areas and implement watering schedule
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	Reduce risk of foundation shifts and cracks
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Expansive Soils; Wildfire
Effect on new/existing buildings:	Reduce risk on new and existing structures
Priority (High, Moderate, Low):	Low
Estimated Cost:	\$10,000 per location
Potential Funding Sources:	HMGP; CDBG; General Funds
Lead Agency/Department Responsible:	City of Los Fresnos / Public Works
Implementation Schedule:	Within 48 months of plan adoption pending funding
Incorporation into Existing Plans:	Comprehensive Plan; Public Works

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

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Los Fresnos – Action #7	
Proposed Action:	Educate the general public on benefits of utilizing sprinkler system or watering around foundation and sidewalks to prevent expansive soils from cracking concrete
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	Reduce chances of concrete cracking thus saving money and damage to structures
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Expansive Soils; Wildfire
Effect on new/existing buildings:	Reduce risk to new and existing structures
Priority (High, Moderate, Low):	Low
Estimated Cost:	\$5,000
Potential Funding Sources:	HMGP; General Funds; Private Funds; Developers
Lead Agency/Department Responsible:	City of Los Fresnos / Public Works
Implementation Schedule:	Within 48 months of plan adoption pending funding
Incorporation into Existing Plans:	Public Works; Comprehensive Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

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Los Fresnos – Action #8	
Proposed Action:	To provide an education brochure on the effects of extreme heat and measures citizens should take to protect themselves from injury or illness
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	Educating the public on how to protect themselves from the extreme heat will save loss of life and reduce health risks
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$5,000
Potential Funding Sources:	HMGP; General Funds
Lead Agency/Department Responsible:	City of Los Fresnos / Emergency Management
Implementation Schedule:	Within 24 months of plan adoption pending funding
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

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Los Fresnos – Action #9	
Proposed Action:	Plant trees and vegetation along public ROW and easements to provide shade and reduce temperatures
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	Provides shade and lowers temperatures, reduces energy consumption
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure; Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat
Effect on new/existing buildings:	Reduces temperature and existing/new structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$25,000
Potential Funding Sources:	HMGP; General Funds
Lead Agency/Department Responsible:	City of Los Fresnos / Public Works
Implementation Schedule:	Within 24 months of plan adoption pending funding
Incorporation into Existing Plans:	Comprehensive Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

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Los Fresnos – Action #10	
Proposed Action:	Implement a tree trimming program that routinely cleans tree limbs hanging in ROW and easements; Survey and remove hazardous trees from drainage systems that have the potential to damage power lines and/or impede flow of water and create dam effects during flood/wind events
BACKGROUND INFORMATION	
Site and Location:	City-wide – ROW and Easements Drainage Problems: Drainage Ditch South of Highway 100 causes Flooding on Streets East Fifth Street East Sixth Street East Seventh Street East Eighth Street East Ninth Street East Tenth Street South Nogal Street Causes Flooding on Streets West First Street West Second Street West Third Street Valle Alto Street & Bougainvillea Street Jacqueline Street & North Canal Street Drain Pipe Collapse Olmo Street from West Eighth Street to West Tenth Street Holly Lane Drain Under Canal Pasto Drive at California Road Drain Under Canal Resaca Escondido Drain Pipe Collapse Resaca Crossings Too Low Henderson Road East Side Henderson Road West Side Whipple Road West Side
Risk Reduction Benefit (Current Cost/Losses Avoided):	Reduce the risk of power outages; reduces damage to homes and vehicles; reduces debris and flood depths in drainage areas
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations; Natural System Protection

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MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Wind; Flood; Hurricane
Effect on new/existing buildings:	Protect new and existing property
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$100,000
Potential Funding Sources:	HMGP; General Funds
Lead Agency/Department Responsible:	City of Los Fresnos / Public Works
Implementation Schedule:	Within 24 months of plan adoption pending funding
Incorporation into Existing Plans:	Emergency Operation Plan; Local Ordinances

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies)</p> <p>Socially Acceptable = 3; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 3; Legal = 5; Economically Sound = 5; and Environmentally Sound = 3</p>

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Los Fresnos – Action #11	
Proposed Action:	Develop and conduct public awareness program related to tree maintenance at commercial and residential home sites
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	To help prevent loss of life, property, utilities, and the loss of manpower to restore services
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Wind; Hurricane
Effect on new/existing buildings:	Reduce damage to new and existing structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$5,000
Potential Funding Sources:	HMGP; Insurance Companies; General Funds
Lead Agency/Department Responsible:	City of Los Fresnos / Emergency Management
Implementation Schedule:	Within 24 months of plan adoption pending funding
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

Section 20: Mitigation Actions

Los Fresnos – Action #12	
Proposed Action:	Implement early warning system currently in use by expanding into areas currently not covered by system in-place
BACKGROUND INFORMATION	
Site and Location:	City Hall; Rode Grounds; Public Works Department’ LFCISD Board Training Room; Los Fresnos United High School; Cuates Lift Station
Risk Reduction Benefit (Current Cost/Losses Avoided):	Reduces risk to residents – reduces cost of loss to property owners; Advance notification reduces loss of life and property
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood; Extreme Wind; Hurricane; Tornado
Effect on new/existing buildings:	Reduce damages to new and existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	\$125,000
Potential Funding Sources:	HMGP; General Funds
Lead Agency/Department Responsible:	City of Los Fresnos / Public Works / Emergency Management
Implementation Schedule:	Within 12 months of plan adoption pending funding
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

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Los Fresnos – Action #13	
Proposed Action:	Upgrade culverts and install drainage improvements at various locations (below) to increase capacity and reduce risk of flood damages. Purchase trailer mounted water trash pump to reduce or eliminate flooding
BACKGROUND INFORMATION	
Site and Location:	Drainage Improvement locations: Drainage Ditch South of Highway 100 causes Flooding on Streets East Fifth Street East Sixth Street East Seventh Street East Eighth Street East Ninth Street East Tenth Street South Nogal Street Causes Flooding on Streets West First Street West Second Street West Third Street Valle Alto Street & Bougainvillea Street Jacqueline Street & North Canal Street Drain Pipe Collapse Olmo Street from West Eighth Street to West Tenth Street Holly Lane Drain Under Canal Pasto Drive at California Road Drain Under Canal Resaca Escondido Drain Pipe Collapse Resaca Crossings Too Low Henderson Road East Side Henderson Road West Side Whipple Road West Side
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Reduces risk to structures through increased storm water runoff capacity and reduced flood depths
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure Project

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MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on new/existing buildings:	Reduce flooding to new and existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	\$10,000,000
Potential Funding Sources:	HMGP; General Funds; Drainage Fee
Lead Agency/Department Responsible:	City of Los Fresnos / Public Works / Emergency Management
Implementation Schedule:	Within 12 months of plan adoption pending funding
Incorporation into Existing Plans:	Drainage/Master Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

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Los Fresnos – Action #14	
Proposed Action:	Elevate or acquire and demolish flood-prone structures
BACKGROUND INFORMATION	
Site and Location:	Various Floodplain Locations
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Eliminate or reduce flood risk to structures located in the floodplain; reduce injury and loss of lives from flooding
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Natural Systems Protection; Structure and Infrastructure Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood; Hurricane; Extreme Wind
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	\$1,000,000
Potential Funding Sources:	HMGP; General Funds; CDBG
Lead Agency/Department Responsible:	City of Los Fresnos / Emergency Management
Implementation Schedule:	Within 12 months of plan adoption pending funding
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

Section 20: Mitigation Actions

Los Fresnos – Action #15	
Proposed Action:	Conduct a Hail Storm Safety Education Program that includes a community campaign to reduce losses during hail events and protect citizens from injury
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	Reduce loss by educating residents on how to make better informed decisions
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hail
Effect on new/existing buildings:	Reduce risk to new and existing structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$5,000
Potential Funding Sources:	HMGP; General Funds
Lead Agency/Department Responsible:	City of Los Fresnos / Emergency Management
Implementation Schedule:	Within 24 months of plan adoption pending funding
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

Section 20: Mitigation Actions

Los Fresnos – Action #16	
Proposed Action:	Build and/or secure shelters for police and fire emergency response vehicles and trailers by constructing additional bays and covered parking areas for fleet vehicles at Fire Station, City Hall, and Police Station
BACKGROUND INFORMATION	
Site and Location:	East Ocean Boulevard
Risk Reduction Benefit (Current Cost/Losses Avoided):	Reduce the loss of public property
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hail; Extreme Wind, Hurricane
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$250,000
Potential Funding Sources:	HMGP; General Funds
Lead Agency/Department Responsible:	City of Los Fresnos / Administration
Implementation Schedule:	Within 24 months of plan adoption pending funding
Incorporation into Existing Plans:	Annual Budget, Capital Improvement Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

Section 20: Mitigation Actions

Los Fresnos – Action #17	
Proposed Action:	Update Emergency Management Plan pertaining to hazardous materials and pipeline failure
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	Reduce the risk of loss of life and property
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hazardous Materials; Pipeline Failure
Effect on new/existing buildings:	Reduce risk to new and existing buildings
Priority (High, Moderate, Low):	High
Estimated Cost:	\$50,000
Potential Funding Sources:	General Funds; Other Grants
Lead Agency/Department Responsible:	City of Los Fresnos / Emergency Management
Implementation Schedule:	Within 12 months of plan adoption pending funding
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

Section 20: Mitigation Actions

Los Fresnos – Action #18	
Proposed Action:	Train personnel on identifying the different hazardous materials and to inform public of dangers
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	Reduce the risk to residents through education
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hazardous Materials
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	\$20,000
Potential Funding Sources:	General Funds; Other Grants
Lead Agency/Department Responsible:	City of Los Fresnos / Emergency Management
Implementation Schedule:	Within 12 months of plan adoption pending funding
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5

Section 20: Mitigation Actions

Los Fresnos – Action #19	
Proposed Action:	Educate and awareness program on the threat of Hurricanes and how to mitigate damages to residential structures
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	To help the public make better informed decisions; reduce the risk of loss of life and property through pre-vent mitigation actions
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricane
Effect on new/existing buildings:	Reduce risk to new and existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	\$5,000
Potential Funding Sources:	HMGP; General Funds
Lead Agency/Department Responsible:	City of Los Fresnos / Emergency Management
Implementation Schedule:	Within 12 months of plan adoption pending funding
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

Section 20: Mitigation Actions

Los Fresnos – Action #20	
Proposed Action:	Construct a combined emergency operations center and first responder safe room
BACKGROUND INFORMATION	
Site and Location:	East Ocean Boulevard
Risk Reduction Benefit (Current Cost/Losses Avoided):	Protect emergency personnel so they will be able to protect the city
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricane; Tornado; Hail; Extreme Wind
Effect on new/existing buildings:	Build building to withstand 200 MPH winds
Priority (High, Moderate, Low):	High
Estimated Cost:	\$1,000,000
Potential Funding Sources:	HMGP; CDBG; General Funds
Lead Agency/Department Responsible:	City of Los Fresnos / Administration
Implementation Schedule:	Within 12 months of plan adoption pending funding
Incorporation into Existing Plans:	Comprehensive Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

Section 20: Mitigation Actions

Los Fresnos – Action #21	
Proposed Action:	Provide education to residents of location of pipelines and emergency procedures during a hazard event
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	Make residents aware of the dangers of pipelines reducing risk to residents during and after an event
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Pipeline Failure
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Low
Estimated Cost:	\$5,000
Potential Funding Sources:	General Funds; Other Grants
Lead Agency/Department Responsible:	City of Los Fresnos / Emergency Management
Implementation Schedule:	Within 48 months of plan adoption pending funding
Incorporation into Existing Plans:	Emergency Response Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

Section 20: Mitigation Actions

Los Fresnos – Action #22	
Proposed Action:	Relocate gas lines to outside city limits or to less populated areas
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	Reduce damage to life and property
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Pipeline Failure
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Low
Estimated Cost:	\$5,000,000
Potential Funding Sources:	General Funds; Other Grants
Lead Agency/Department Responsible:	City of Los Fresnos / Emergency Management
Implementation Schedule:	Within 48 months of plan adoption pending funding
Incorporation into Existing Plans:	Comprehensive Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

Section 20: Mitigation Actions

Los Fresnos – Action #23	
Proposed Action:	Install cameras at critical infrastructure locations and in major areas in the city to monitor suspicious activity
BACKGROUND INFORMATION	
Site and Location:	City-wide critical facilities
Risk Reduction Benefit (Current Cost/Losses Avoided):	Monitoring prevents possible terrorism
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Terrorism
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$10,000
Potential Funding Sources:	General Funds
Lead Agency/Department Responsible:	City of Los Fresnos / Emergency Management
Implementation Schedule:	Within 24 months of plan adoption pending funding
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

Section 20: Mitigation Actions

Los Fresnos – Action #24	
Proposed Action:	Keep residents aware of potential threats through social media; create network for reporting suspicious activities
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	Increasing awareness through education will help residents be more aware of their surroundings
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Terrorism
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$5,000
Potential Funding Sources:	General Funds; Other Grants
Lead Agency/Department Responsible:	City of Los Fresnos / Emergency Management
Implementation Schedule:	Within 24 months of plan adoption pending funding
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

Section 20: Mitigation Actions

Los Fresnos – Action #25	
Proposed Action:	Become a “StormReady” community to reduce risk and damage caused by hail, tornado, hurricane, and extreme wind events
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	Assist residents in preparing, mitigation risk to hail, tornado, and thunderstorms
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hail, Tornado, Hurricane; Extreme Wind
Effect on new/existing buildings:	Reduce damage to new/existing structures
Priority (High, Moderate, Low):	Low
Estimated Cost:	\$20,000
Potential Funding Sources:	HMGP; General Funds
Lead Agency/Department Responsible:	City of Los Fresnos / Emergency Management
Implementation Schedule:	Within 48 months of plan adoption pending funding
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

Section 20: Mitigation Actions

Los Fresnos – Action #26	
Proposed Action:	Install shutters on glass windows and doors to protect critical facilities during tornadoes, severe hail and thunderstorm events, and Hurricane
BACKGROUND INFORMATION	
Site and Location:	Key critical facilities within the City
Risk Reduction Benefit (Current Cost/Losses Avoided):	Reduce continued glass replacement and repairs; reduce possible injury to county staff and residents due to flying glass during severe weather events
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hail, Hurricane, Tornado, Extreme Wind
Effect on new/existing buildings:	Reduce damages to new/existing structures
Priority (High, Moderate, Low):	Low
Estimated Cost:	\$300,000
Potential Funding Sources:	HMGP; General Funds
Lead Agency/Department Responsible:	City of Los Fresnos / Emergency Management
Implementation Schedule:	Within 48 months of plan adoption pending funding
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5

Section 20: Mitigation Actions

Los Fresnos – Action #27	
Proposed Action:	Remove dead and downed trees to decrease fire fuels in Wildland Urban Interface (WUI) areas
BACKGROUND INFORMATION	
Site and Location:	City-wide WUI
Risk Reduction Benefit (Current Cost/Losses Avoided):	Natural landform protection and reduced risk of loss of property due to wildfire
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Natural Systems Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Effect on new/existing buildings:	Reduce fire risk to new and existing structures
Priority (High, Moderate, Low):	Low
Estimated Cost:	\$25,000
Potential Funding Sources:	Texas Forest Service; FireWise
Lead Agency/Department Responsible:	City of Los Fresnos / Parks and Recreation
Implementation Schedule:	Within 48 months of plan adoption pending funding
Incorporation into Existing Plans:	CWPP

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

Section 20: Mitigation Actions

Los Fresnos – Action #28	
Proposed Action:	Landscaping ordinance to include plants more resistant to fire and adopt a revised Fire Wise landscaping ordinance
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	Reduces the spread of fire; reduces the risk of loss of property due to wildfire
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Effect on new/existing buildings:	Reduce fire risk to new/existing buildings
Priority (High, Moderate, Low):	Low
Estimated Cost:	\$1,000
Potential Funding Sources:	General Funds
Lead Agency/Department Responsible:	City of Los Fresnos / Administration
Implementation Schedule:	Within 48 months of plan adoption pending funding
Incorporation into Existing Plans:	Local Ordinances; Comprehensive Plan

COMMENTS:
Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5

Section 20: Mitigation Actions

Los Fresnos – Action #29	
Proposed Action:	Purchase and install permanent hard-wired generators for back-up power supply for critical facilities (4)
BACKGROUND INFORMATION	
Site and Location:	City-wide critical facilities
Risk Reduction Benefit (Current Cost/Losses Avoided):	During brown outs / power outages, use generators for lift stations and critical facilities to keep operational
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat; Extreme Wind; Hurricane; Tornado; Hail
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	\$300,000
Potential Funding Sources:	HMGP; General Funds; Utility Funds
Lead Agency/Department Responsible:	City of Los Fresnos
Implementation Schedule:	Within 12 months of plan adoption pending funding
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

Section 20: Mitigation Actions

Los Fresnos – Action #30	
Proposed Action:	Purchase large volume pumps (2)
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Pump water from flooded areas to reduce damage to property and life
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on new/existing buildings:	Reduce damage to new and existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	\$100,000
Potential Funding Sources:	HMGP; General Funds
Lead Agency/Department Responsible:	City of Los Fresnos
Implementation Schedule:	Within 12 months of plan adoption pending funding
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

Section 20: Mitigation Actions

Los Fresnos – Action #31	
Proposed Action:	Deepen drainage area in Resaca Escondido and Falcon Lake to increase storm water retention capacity
BACKGROUND INFORMATION	
Site and Location:	Resaca Escondido and Falcon Lake
Risk Reduction Benefit (Current Cost/Losses Avoided):	Increase capacity of drainage to protect homes and property from flooding
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on new/existing buildings:	Reduce damage to new and existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	\$1,000,000
Potential Funding Sources:	HMGP; General Funds
Lead Agency/Department Responsible:	City of Los Fresnos
Implementation Schedule:	Within 12 months of plan adoption pending funding
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5

Section 20: Mitigation Actions

Port Isabel

Port Isabel – Action #1	
Proposed Action:	Educate citizens of water conservation year round through pamphlets, social media and annual meetings
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	Reduces impact on environment and citizens during a drought; reductions in water usage and adoption of methods that promote drought resiliency may result in reduction of drought losses to ornamental and agricultural planting
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought
Effect on new/existing buildings:	Reduce impacts of drought on existing structures
Priority (High, Moderate, Low):	Low
Estimated Cost:	\$500
Potential Funding Sources:	Texas Water Development Board; Region M Water Planning Group
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	Within 36 months of plan adoption pending funding
Incorporation into Existing Plans:	Mitigation; Utilities

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

Section 20: Mitigation Actions

Port Isabel – Action #2	
Proposed Action:	Plant native trees/plants to provide shading in public ROWs and parks to provide shade, help with heat reduction, and reduce water usage
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	By implementing this measure, the city can avoid loss to publicly-owned trees and plants, valued at approximately \$250,000. Reduce risk of injury or illness to residents
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought; Extreme Heat
Effect on new/existing buildings:	Reduce effects of extreme heat on existing buildings
Priority (High, Moderate, Low):	Low
Estimated Cost:	\$100,000
Potential Funding Sources:	General Funds
Lead Agency/Department Responsible:	Building Maintenance
Implementation Schedule:	Within 36 months of plan adoption pending funding
Incorporation into Existing Plans:	Utilities; Comprehensive Plan

COMMENTS:
As a community dependent on tourism, the maintenance of public green spaces is essential to the City's economic vitality.
Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5

Section 20: Mitigation Actions

Port Isabel – Action #3	
Proposed Action:	Upgrade Tarpon, Pompano, Harbor Island, Bass, and Trout roadways to install flexible base material and pavement joints to prevent road damage due to soil expansion
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	Reduce risk to life and property caused by disruption in response
Type of Action: <i>(Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)</i>	Structure and Infrastructure Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Expansive Soils
Effect on new/existing buildings:	Reduce effects of expansive soils on new and existing structures and infrastructure
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$2,500,000
Potential Funding Sources:	HMGP; General Funds
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	Within 24 months of plan adoption pending funding
Incorporation into Existing Plans:	Comprehensive Plan

COMMENTS:
Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 4; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 4

Section 20: Mitigation Actions

Port Isabel – Action #4	
Proposed Action:	Require plans and specifications for public works projects to include materials resistant to soil expansion, such as flexible base material instead of concrete
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Reduce risk to life and property caused by disruption in response
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Expansive Soils
Effect on new/existing buildings:	Reduce effects of expansive soils to new structures and infrastructure
Priority (High, Moderate, Low):	High
Estimated Cost:	\$1,000
Potential Funding Sources:	HMGP; General Funds
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	Within 12 months of plan adoption pending funding
Incorporation into Existing Plans:	Comprehensive Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

Section 20: Mitigation Actions

Port Isabel – Action #5	
Proposed Action:	Conduct public education on dangers of extreme heat and methods to avoid injury or illness
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Reduce risk to life and property through education and awareness
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Low
Estimated Cost:	\$500
Potential Funding Sources:	HMGP; General Funds
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	Within 36 months of plan adoption pending funding
Incorporation into Existing Plans:	N/A

COMMENTS:
Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5

Section 20: Mitigation Actions

Port Isabel – Action #6	
Proposed Action:	Establish cooling center at Port Isabel Community Center, by installing upgraded air conditioners, fans, and a generator; distribute information to residents on the availability of the cooling center during extreme heat events
BACKGROUND INFORMATION	
Site and Location:	Community Center
Risk Reduction Benefit (Current Cost/Losses Avoided):	Reduce risk to life and property through education and awareness
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Education and Awareness; Structure and Infrastructure Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$150,000
Potential Funding Sources:	HMGP; General Funds
Lead Agency/Department Responsible:	Library
Implementation Schedule:	Within 24 months of plan adoption pending funding
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 4; and Environmentally Sound = 5</p>

Section 20: Mitigation Actions

Port Isabel – Action #7	
Proposed Action:	Extend garage bays at fire department, EMS, and police department to protect emergency response vehicles during disasters
BACKGROUND INFORMATION	
Site and Location:	Municipal fire and police department
Risk Reduction Benefit (Current Cost/Losses Avoided):	Reduce property damage loss of emergency response vehicles; the replacement value of the vehicles being protected is approximately \$1,00,000
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hail; Extreme Wind; Hurricane; Flood; Extreme Heat; Tornado
Effect on new/existing buildings:	Reduce risk to existing structures through continuity of emergency services
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$500,000
Potential Funding Sources:	HMGP; General Fund; AFG
Lead Agency/Department Responsible:	Fire Department
Implementation Schedule:	Within 12 months of plan adoption pending funding
Incorporation into Existing Plans:	Law Enforcement, Fire Fighting

COMMENTS:
By protecting the vehicles, the city preserves its emergency response capacity.
Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 4

Section 20: Mitigation Actions

Port Isabel – Action #8	
Proposed Action:	Purchase and Installation of permanent (hard-wired) generators in municipal buildings necessary for continuity during a disaster
BACKGROUND INFORMATION	
Site and Location:	Municipal buildings (EOC, Community Center, Police Station, Fire/EMS, City Hall, Public Works)
Risk Reduction Benefit (Current Cost/Losses Avoided):	Allows continuity of operation during and after disasters
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hail; Extreme Wind; Hurricane; Flood; Tornado; Extreme Heat
Effect on new/existing buildings:	Reduce risk to existing facilities
Priority (High, Moderate, Low):	High
Estimated Cost:	\$300,000
Potential Funding Sources:	HMGP; General Funds
Lead Agency/Department Responsible:	Fire Department
Implementation Schedule:	Within 12 months of plan adoption pending funding
Incorporation into Existing Plans:	Law Enforcement; Recovery; Public Works; Utilities; Emergency Management Plan

COMMENTS:
The isolated, coastal location of Port Isabel makes the city susceptible to extended power loss. The installation of generators at critical facilities will enable the city to continue to provide public services and to implement recovery actions following a disaster.
Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5

Section 20: Mitigation Actions

Port Isabel – Action #9	
Proposed Action:	Become a “StormReady” Community as per NOAA standards
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Reduce risk to residents through education and awareness
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Wind; Hurricane; Flood; Hail; Tornado
Effect on new/existing buildings:	Reduce risk to existing structures through early awareness and education
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$500
Potential Funding Sources:	HMGP; General Funds
Lead Agency/Department Responsible:	EMC
Implementation Schedule:	Within 24 months of plan adoption pending funding
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

Section 20: Mitigation Actions

Port Isabel – Action #10	
Proposed Action:	Prepare and advertise local evacuation plan
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	Reduce risk to life and property through education and awareness
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Local Plans and Regulations; Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hail; Extreme Wind; Hurricane; Flood; Terrorism; Hazardous Material; Wildfire
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$500
Potential Funding Sources:	HMGP; General Funds; AFG
Lead Agency/Department Responsible:	Police Department
Implementation Schedule:	Within 24 months of plan adoption pending funding
Incorporation into Existing Plans:	Evacuation Plan

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>

Section 20: Mitigation Actions

Port Isabel – Action #11	
Proposed Action:	Update floodplain management ordinances to include higher standards required to join the CRS program; Join the CRS program upon adoption of ordinance
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided):	Updates to the flood ordinance or adoption of measures required by CRS would result in a reduction in risk to property within the city
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on new/existing buildings:	Reduce risk to existing and future structures
Priority (High, Moderate, Low):	High
Estimated Cost:	\$500
Potential Funding Sources:	HMGP; General Funds
Lead Agency/Department Responsible:	Building Department
Implementation Schedule:	Within 12 months of plan adoption pending funding
Incorporation into Existing Plans:	Floodplain Ordinance

COMMENTS:
<p>Additional Considerations: The following STAPLEE criteria were evaluated on a scale of 1 to 5 indicating the extent to which this action satisfies each consideration. (1= Does Not Satisfy 3 = Moderately Satisfies 5 = Strongly Satisfies) Socially Acceptable = 5; Technically Feasible = 5; Administratively Possible = 5; Politically Acceptable = 5; Legal = 5; Economically Sound = 5; and Environmentally Sound = 5</p>