

## Section 5

### Mitigation Strategy Requirements

***Mitigation Strategy---Requirement §201.6(c)(3):***

The plan **shall** include a strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.

***Local Hazard Mitigation Goals---Requirement §201.6(c)(3)(i):***

[The hazard mitigation strategy **shall** include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.

- Does the plan include a description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards?

***Identification and Analysis of Mitigation Measures---Requirement §201.6(c)(3) (ii):***

[The mitigation strategy **shall** include a] section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.

- Does the plan identify a **comprehensive range** of specific mitigation actions and projects for each hazard?
- Do the identified range of mitigation actions and projects address reducing the effects of hazards on **new** buildings and infrastructure?
- Do the identified range of mitigation actions and projects address reducing the effects of hazards on **existing** buildings and infrastructure?

***Implementation of Mitigation Measures---Requirement: §201.6(c)(3) (iii):***

[The mitigation strategy section **shall** include] an action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization **shall** include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.

- Does the mitigation strategy include how the actions are **prioritized**?
- Does the mitigation strategy address how the actions will be **implemented and administered**?
- Does the prioritization process include an emphasis on the use of **cost-benefit review**?

## SECTION 5

# REGION 5 HAZARD MITIGATION PLAN CITY OF FIFE MITIGATION STRATEGY SECTION

## Table of Contents

MITIGATION STRATEGY REQUIREMENTS .....	1
TABLE OF CONTENTS .....	2
STARTUP MITIGATION MEASURES .....	6
EXISTING MITIGATION ACTIONS .....	6
PLAN MAINTENANCE .....	6
HAZARD MITIGATION FORUM .....	7
PIERCE COUNTY HAZARD MITIGATION FORUM .....	7
CITY GOVERNMENT MITIGATION MEASURES .....	8
CAPABILITY IDENTIFICATION AND EVALUATION .....	8
EMERGENCY RADIO SYSTEM .....	8
SIREN UPGRADE .....	9
CONTINUITY OF OPERATIONS PLAN (COOP) .....	9
CONTINUITY OF GOVERNMENT PLAN (COG) .....	10
NEW CONSTRUCTION WEATHER RADIO PROGRAM .....	10
HOME SALE WEATHER RADIO PROGRAM .....	11
IMPROVE EMERGENCY NOTIFICATION .....	11
COMMUNITY RATING SYSTEM/FLOOD INSURANCE .....	12
ASSIST WITH BARRICADES AND TRAFFIC CONTROL WITH EVACUATION .....	12
REPAIR AND CLEAR DEBRIS FROM SIDEWALKS .....	13
CLEAR DEBRIS FROM CITY BUILDING GROUNDS .....	13
CLEAR DEBRIS FROM STREETS / REPAIR LEVEES/ MAINTAIN ACCESS .....	14
GIS HAZARD IDENTIFICATION .....	14
MAINTAIN GIS SYSTEM .....	15
INSPECT AND REPAIR DD21 INFRASTRUCTURES .....	15
INSPECT AND REPAIR DD23 INFRASTRUCTURE .....	16
MAINTAIN ALL BRIDGES TO CARRY DESIGN LOADS .....	16
MAINTAIN DRINKING WATER STANDARDS IN WATER SYSTEM .....	17
MAINTAIN FIRE FLOW THROUGH WATER DISTRIBUTION SYSTEM .....	17
MAINTAIN SEWER FLOWS IN SYSTEM WITHOUT BACK-UP .....	18
MAINTAIN TRAFFIC CONTROL DEVICES .....	18
MAINTAIN VEHICLE AND EQUIPMENT FLEET .....	19
CREATE FULL ACCOUNTING RECORDS FOR UTILITY PLANT INFRASTRUCTURES .....	19
MAINTAIN DRAINAGE OF STREETS, DITCHES & STREAMS .....	20
PUBLIC EDUCATION MITIGATION MEASURES .....	21
FIFE EMERGENCY PUBLIC EDUCATION PROGRAM .....	21

EVACUATION AND SHELTER IN PLACE BROCHURES.....21  
UPDATED LAHAR INFORMATION DISTRIBUTION .....22  
HISPANIC LAHAR HAZARD EDUCATION.....22  
ENDNOTES ..... 23

**Table 5-1 City of Fife Mitigation Strategy Matrix**

Implementation Mechanism	Mitigation Measure ( <i>Hazard(s)</i> ) <sup>1</sup>	Lead Jurisdiction(s) / Department(s)	Timeline (years)	Plan Goals					
				Life and Property	Operations Continuity	Partnerships	Natural Resources	Preparedness	Sustainable Economy
Startup	1. Existing Mitigation Actions ( <i>E,L,T,V,D,F,WUI,SW,MM</i> )	Fife - Administration	Ongoing	✓	✓	✓	✓	✓	✓
	2. Plan Maintenance ( <i>E,L,T,V,D,F,WUI,SW,MM</i> )	Fife - Administration	Ongoing	✓	✓	✓	✓	✓	✓
HMF	1. Pierce County Hazard Mitigation Forum ( <i>E,L,T,V,D,F,WUI,SW,MM</i> )	PC DEM; Fife - Administration	Ongoing	✓	✓	✓	✓	✓	✓
City Government	1. Capability Identification and Evaluation ( <i>E,L,T,V,D,F,WUI,SW,MM</i> )	Fife	1-2	N/A					
	2. Emergency Radio System ( <i>E,L,T,V,F,SW,MM</i> )	Fife - City Manager and Police Department	1-2	✓	✓			✓	
	3. Siren Upgrade ( <i>V,F</i> )	Fife - Public Works and Police Department	5	✓	✓				
	4. Continuity of Operations Plan (COOP) ( <i>E,L,T,V,D,F,SW,MM</i> )	Fife - All Departments	1-2	✓	✓				✓
	5. Continuity of Government Plan (COG) ( <i>E,L,T,V,D,F,SW,MM</i> )	Fife - City Manager	5	✓	✓				✓
	6. New Construction Weather Radio Program ( <i>E,L,T,V,F,SW,MM</i> )	Fife - Communications	Ongoing	✓	✓			✓	✓
	7. Home Sale Weather Radio Program ( <i>E,L,T,V,F,SW,MM</i> )	Fife - City Manager	5	✓				✓	✓
	8. Improve Emergency Notification ( <i>T,V,F</i> )	Fife - Police Department	Ongoing	✓				✓	
	9. Community Rating System / Flood Insurance ( <i>F</i> )	Fife - Community Development Department	Ongoing	✓				✓	✓
	10. Assist with Barricades and Traffic Control with Evacuation ( <i>E,L,T,V,F,SW</i> )	Fife - Public Works and Police Department	Ongoing	✓	✓			✓	✓
	11. Repair and Clear Debris from Sidewalks ( <i>E,L,T,V,F,SW</i> )	Fife - Public Works Department	1-2	✓	✓			✓	✓
	12. Clear Debris from City Building Grounds ( <i>E,L,T,V,F,SW,WUI</i> )	Fife - Public Works Department	Ongoing	✓				✓	✓
	13. Clear Debris from Streets / Repair Levees / Maintain Access ( <i>E,L,T,V,F,SW</i> )	Fife - Public Works Department	5	✓	✓			✓	✓

Implementation Mechanism	Mitigation Measure ( <i>Hazard(s)</i> ) <sup>1</sup>	Lead Jurisdiction(s) / Department(s)	Timeline (years)	Plan Goals					
				Life and Property	Operations Continuity	Partnerships	Natural Resources	Preparedness	Sustainable Economy
	14. GIS Hazard Identification ( <i>E,L,T,V,F,SW,WUI,MM</i> )	Fife	Ongoing	✓	✓	✓			
	15. Maintain GIS System ( <i>E,L,T,V,F,SW,WUI,MM</i> )	Fife - Public Works Department	Ongoing	✓	✓				
	16. Inspect and Repair DD21 Infrastructures ( <i>E,L,T,V,F,SW</i> )	Fife - Public Works Department/Drainage District #21	Ongoing	✓	✓	✓	✓	✓	✓
	17. Inspect and Repair DD23 Infrastructures ( <i>E,L,T,V,F,SW</i> )	Fife - Public Works Department/Drainage District #23	Ongoing	✓	✓	✓	✓	✓	✓
	18. Maintain All Bridges to Carry Design Loads ( <i>E,L,T,V,F,SW,WUI</i> )	Fife - Public Works/Pierce County Public Works	Ongoing	✓	✓	✓		✓	✓
	19. Maintain Drinking Water Standards in Water System ( <i>E,L,T,V,F,SW</i> )	Fife - Public Works & Water Department	Ongoing	✓	✓		✓	✓	✓
	20. Maintain Fire Flow through Water Distribution System ( <i>E,L,D,F</i> )	Fife - Public Works Department	Ongoing	✓	✓	✓	✓	✓	✓
	21. Maintain Sewer Flows in System without Back-Up ( <i>E,L,T,V,F,SW</i> )	Fife - Public Works/ WA State DOH/TPCHD	Ongoing	✓	✓		✓	✓	✓
	22. Maintain Traffic Control Devices ( <i>E,L,T,V,F,SW</i> )	Fife - Public Works Department	Ongoing	✓	✓			✓	✓
	23. Maintain Vehicle and Equipment Fleet ( <i>E,L,T,V,F,SW,WUI</i> )	Fife - Public Works Fleet Department	Ongoing	✓	✓	✓	✓	✓	✓
	24. Create Full Accounting Records for Utility Plant Infrastructures ( <i>E,L,T,V,F,SW,MM</i> )	Fife - Finance Department	Ongoing						✓
	25. Maintain Drainage of Streets, Ditches & Streams ( <i>E,L,T,V,F,SW,WUI,MM</i> )	Fife - Public Works Department	Ongoing	✓	✓	✓	✓	✓	✓
<b>Public Education</b>	1. Fife Emergency Public Education Program ( <i>E,L,T,V,D,F,WUI,SW,MM</i> )	Fife - Police Department	1-2	✓		✓		✓	
	2. Education and Shelter In Place Brochures ( <i>E,T,V,F,MM</i> )	Fife - Police Department	1-2	✓				✓	
	3. Updated Lahar Information Distribution ( <i>V</i> )	Fife - Police Department	1-2	✓				✓	
	4. Hispanic Lahar Hazard Education ( <i>V</i> )	Fife - Police Department	1-2	✓				✓	

# Startup Mitigation Measures

---

## Existing Mitigation Actions

**Hazards:** E, L, T, V, D, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Fife will continue to implement existing programs, policies, and regulations as identified in the Capability Identification Section of this Plan. This includes such actions as updating the Critical Area Regulations and any ensuing land use policies with best available science. It also includes continuing those programs that are identified as technical capabilities.

1. **Goal(s) Addressed** = Protect Life and Property; Promote A Sustainable Economy; Ensure Continuity of Operations; Increase Public Preparedness for Disasters; Preserve or Restore Natural Resources; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be accomplished with local budgets or grants.
4. **Lead Jurisdiction(s)** = City of Fife - Administration).
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

---

## Plan Maintenance

**Hazards:** E, L, T, V, D, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Fife will adopt those processes outlined in the Plan Maintenance Section of this Plan.

1. **Goal(s) Addressed** = Protect Life and Property; Promote A Sustainable Economy; Ensure Continuity of Operations; Increase Public Preparedness for Disasters; Preserve or Restore Natural Resources; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget.
4. **Lead Jurisdiction(s)** = City of Fife - Administration).
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

# Hazard Mitigation Forum

---

## Pierce County Hazard Mitigation Forum

**Hazards:** E, L, T, V, D, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Fife will work in conjunction with the County through the Pierce County Hazard Mitigation Forum (HMF). The Forum will continue as a means of coordinating mitigation planning efforts among all jurisdictions within the County that have completed a mitigation plan. This ensures efficient use of resources and a more cooperative approach to making a disaster resistant county. The HMF meets annually; every October. This is addressed in the Plan Maintenance Section of this Plan.

1. **Goal(s) Addressed** = Protect Life and Property; Promote A Sustainable Economy; Ensure Continuity of Operations; Increase Public Preparedness for Disasters; Preserve or Restore Natural Resources; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = Minor
3. **Funding Source and Situation** = Funding could be obtained through local budget.
4. **Lead Jurisdiction(s)** = PC DEM; City of Fife
5. **Timeline** = Ongoing
6. **Benefit** = Regional
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

# City Government Mitigation Measures

---

## Capability Identification and Evaluation

**Hazards:** E, L, T, V, D, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Fife will develop a consistent and replicable system for evaluating the City's capabilities. A comprehensive evaluation will lead to specific policy recommendations to more effectively achieve disaster resistant communities. Further, a capability evaluation involves measurable variables so that capabilities may eventually be tracked in conjunction with the implementation of all mitigation measures. This is a key component in evaluating the success of the City's overall mitigation strategy.

1. **Goal(s) Addressed** = N/A. Goals addressed are contingent upon the mitigation measures resulting from this priority.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City of Fife
5. **Timeline** = Short-term
6. **Benefit** = City-Wide
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

---

## Emergency Radio System

**Hazards:** E, L, T, V, F, SW<sup>1</sup>, MM<sup>2</sup>

One of the major problems confronting emergency responders is the inability to communicate across disciplines. Historically, police, fire, ambulance, utilities and public works have not been able to talk to each other, much less responders from neighboring jurisdictions. Fife will develop and implement a communication networking system to allow cross-banding between the various City Departments and adjacent jurisdictions.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through grants.
4. **Lead Jurisdiction(s)** = City of Fife - City Managers with assistance from Police Department
5. **Timeline** = Short-term
6. **Benefit** = First responders, citizens and visitors
7. **Life of Measure** = 10 years
8. **Community Reaction** = the proposal would benefit those affected, with no adverse reaction from others.

---

## Siren Upgrade

**Hazards:** V, F<sup>1</sup>

Fife has been proactive in developing good siren coverage for the lahar warning system within the City. However many of the sirens are old and outdated. The City will replace the older lahar sirens and redistribute the sirens for a better coverage of the population.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations.
2. **Cost of Measure** = 3 sirens at \$70,000 each = \$210,000
3. **Funding Source and Situation** = Funding could be obtained through grants.
4. **Lead Jurisdiction(s)** = City of Fife - Public Works and Police Department
5. **Timeline** = Long-term
6. **Benefit** = City of Fife citizens, businesses, Puyallup Tribe, visitors and first responders
7. **Life of Measure** = 20 years
8. **Community Reaction** = the proposal would be somewhat controversial.

---

## Continuity of Operations Plan (COOP)

**Hazards:** E, L, T, V, D, F, SW<sup>1</sup>, MM<sup>2</sup>

A key to a jurisdiction having the ability to rebound from a catastrophic incident is to have plans in place on how the individual departments will continue operations afterwards. Where will they operate from if their facilities are unusable? How will they fulfill their public obligations if their equipment is damaged or their staff is ill? In order to prepare for these types of eventualities, Fife will develop and implement a COOP for each different department in the City of Fife.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Promote a Sustainable Economy.
2. **Cost of Measure** = Staff time and materials
3. **Funding Source and Situation** = Funding could be obtained through local budget.
4. **Lead Jurisdiction(s)** = City of Fife – All Departments
5. **Timeline** = Short-term
6. **Benefit** = City of Fife Individual Departments, staff and citizens
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal would benefit those affected, with no adverse reaction from others.

---

## Continuity of Government Plan (COG)

**Hazards:** E, L, T, V, D, F, SW<sup>1</sup>, MM<sup>2</sup>

City government as a whole may have problems functioning in the post disaster climate. In order to make sure the City can fulfill its obligations to the citizens, the City of Fife will develop and implement a plan on how to keep the City operational and responsive to the needs of the citizens in the post disaster environment.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Promote A Sustainable Economy.
2. **Cost of Measure** = Staff time and materials
3. **Funding Source and Situation** = Funding could be obtained through local budgets.
4. **Lead Jurisdiction(s)** = City of Fife - City Manager
5. **Timeline** = Long-term
6. **Benefit** = City of Fife staff and employees, Citizens of Fife, Regional Partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal would benefit those affected, with no adverse reaction from others.

---

## New Construction Weather Radio Program

**Hazards:** E, L, T, V, F, SW<sup>1</sup>, MM<sup>2</sup>

A major problem that arises again and again is the difficulty in notifying the public during times of emergency or disaster. One key method that can be used to assist with this process is to distribute emergency information over NOAA Weather Radio. However, if the public does not have access to weather radios they will be unable to receive warnings or other emergency information. In order to increase the number of families receiving this information the City of Fife will actively pursue programs to increase the number of weather radios in the jurisdiction. The first of these programs is to require that new construction be hard wired for NOAA Weather Radios.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Increase Public Preparedness for Disasters; Promote A Sustainable Economy.
2. **Cost of Measure** = \$3,000
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City of Fife - Communications Department
5. **Timeline** = Ongoing
6. **Benefit** = Citizens of Fife, Businesses, Puyallup Tribe and First Responders
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal would benefit those affected with no adverse reaction from others.

---

## Home Sale Weather Radio Program

**Hazards:** E, L, T, V, F, SW<sup>1</sup>, MM<sup>2</sup>

The second program that the City of Fife will develop is to require that all homes being sold within the City limits be certified that they have a NOAA Weather Radio wired into the house. The City will do this through developing and passing an ordinance that all homes must fulfill that requirement.

1. **Goal(s) Addressed** = Protect Life and Property; Increase Public Preparedness for Disasters, Promote A Sustainable Economy.
2. **Cost of Measure** = \$3,000
3. **Funding Source and Situation** = Funding could be obtained through local budget.
4. **Lead Jurisdiction(s)** = City of Fife - Manager's Office
5. **Timeline** = Long-Term
6. **Benefit** = City of Fife citizens who live in the valley
7. **Life of Measure** = 30 years
8. **Community Reaction** = the proposal would be somewhat controversial.

---

## Improve Emergency Notification

**Hazards:** T, V, F<sup>1</sup>

In order to assist citizens who do not currently have weather radios within their homes the City will procure NOAA weather/all hazard radios and distribute them to homes constructed prior to the ordinance requiring their installation.

1. **Goal(s) Addressed** = Protect Life and Property; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = \$10,000.00
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants and state or federal grants.
4. **Lead Jurisdiction(s)** = City of Fife - Police Department
5. **Timeline** = Ongoing
6. **Benefit** = 2,000-5,000 residents
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal would benefit those affected, with no adverse reaction from others.

---

## Community Rating System/Flood Insurance

### **Hazards:** F<sup>1</sup>

The City of Fife joined the National Flood Insurance Program's Community Rating System (CRS) on May 1, 2006. Currently, having a rating of 7 which gives properties in the Special Flood Hazard Areas (SFHA) a 15% decrease in their flood insurance premiums and those outside the SFHAs a 5% decrease. Fife will attempt to increase the deductions available for citizens through proactively working to increase the City's rating from its current 7 to a 6 or 5.

1. **Goal(s) Addressed** = Protect Life and Property; Increase Public Preparedness for Disasters; Promote a Sustainable Economy.
2. **Cost of Measure** = Initiate: \$15,000.00 Maintain: \$3,000.00 annually
3. **Funding Source and Situation** = Funding could be obtained through local budgets or grants.
4. **Lead Jurisdiction(s)** = City of Fife - Community Development Department
5. **Timeline** = Ongoing
6. **Benefit** = All citizens/property owners in City of Fife
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal would benefit those affected, with no adverse reaction from others.

---

## Assist with Barricades and Traffic Control with Evacuation

### **Hazards:** E, L, T, V, F, SW<sup>1</sup>

During emergencies or disasters the Fife Police Department will oversee traffic control and evacuation if necessary. In order to facilitate the movement of traffic and if necessary evacuation of the City, the Public Works Department and other departments if necessary will place and maintain barricades for traffic control as directed by Fife Police Department.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Increase Public Preparedness for Disasters; Promote a Sustainable Economy.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants and state or federal grants.
4. **Lead Jurisdiction(s)** = City of Fife - Public Works & Police Department
5. **Timeline** = Ongoing
6. **Benefit** = City of Fife citizens and the community
7. **Life of Measure** = Varies
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

---

## Repair and Clear Debris from Sidewalks

**Hazards:** E, L, T, V, F, SW<sup>1</sup>

The ability of citizens to evacuate with ease and without obstruction on foot from homes, places of work and commercial areas is necessary. Therefore the City of Fife will emphasize the continued repair and maintenance of sidewalks and other pathways for safe pedestrian travel.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Increase Public Preparedness for Disasters; Promote a Sustainable Economy.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budgets.
4. **Lead Jurisdiction(s)** = City of Fife - Public Work Department
5. **Timeline** = Short-term
6. **Benefit** = Pedestrians and motoring public
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal would be somewhat controversial.

---

## Clear Debris from City Building Grounds

**Hazards:** E, L, T, V, F, SW, WUI<sup>1</sup>

In the post disaster environment debris will be a major problem. Primarily to remove life safety debris and secondarily to remove aesthetic and non-aesthetic debris.

1. **Goal(s) Addressed** = Protect Life and Property; Increase Public Preparedness for Disasters; Promote a Sustainable Economy.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City of Fife - Public Works Department
5. **Timeline** = Ongoing
6. **Benefit** = Infrastructure patrons
7. **Life of Measure** = 90 days
8. **Community Reaction** = the proposal would be somewhat controversial.

---

## Clear Debris from Streets / Repair Levees/ Maintain Access

**Hazards:** E, L, T, V, F, SW<sup>1</sup>

Provide safe passable roadways starting with arterials.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Increase Public Preparedness for Disasters; Promote a Sustainable Economy.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budgets or grants and state or federal grants.
4. **Lead Jurisdiction(s)** = City of Fife - Public Works Department
5. **Timeline** = Long-term
6. **Benefit** = All motoring and transitory public
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal would be somewhat controversial.

---

## GIS Hazard Identification

**Hazards:** E, L, T, V, F, SW, WUI<sup>1</sup>, MM<sup>2</sup>

Identify locations and information about hazardous substances and plan for protection of these to reduce risk of environmental pollution and life/safety risk.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budgets or grants and state or federal grants.
4. **Lead Jurisdiction(s)** = City of Fife
5. **Timeline** = Ongoing
6. **Benefit** = City of Fife Individual Departments, staff, businesses and citizens
7. **Life of Measure** = Varies
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

---

## Maintain GIS System

**Hazards:** E, L, T, V, F, SW, WUI<sup>1</sup>, MM<sup>2</sup>

With the heavy reliance on Geographic Information Systems (GIS) today it is imperative that the City's capability to define and locate critical facilities, lifelines, hazardous chemicals, etc. be maintained and protected to the highest possible standard.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budgets or grants and state or federal grants.
4. **Lead Jurisdiction(s)** = City of Fife - Public Works
5. **Timeline** = Ongoing
6. **Benefit** = City of Fife Individual Departments, staff and citizens
7. **Life of Measure** = Varies
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

---

## Inspect and Repair DD21 Infrastructures

**Hazards:** E, L, T, V, F, SW<sup>1</sup>

Maintain drainage and basins served by Drainage District 21.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Preserve or Restore Natural Resources; Increase Public Preparedness for Disasters; Promote a Sustainable Economy.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budgets or grants and state or federal grants.
4. **Lead Jurisdiction(s)** = City of Fife - Public Works Department/Drainage District 21
5. **Timeline** = Ongoing
6. **Benefit** = All drainage District customers and up-stream communities
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal would be somewhat controversial.

---

## Inspect and Repair DD23 Infrastructure

**Hazards:** E, L, T, V, F, SW<sup>1</sup>

Maintain drainage and basins served by Drainage District 23.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Preserve or Restore Natural Resources; Increase Public Preparedness for Disasters; Promote a Sustainable Economy.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budgets or grants and state or federal grants.
4. **Lead Jurisdiction(s)** = City of Fife - Public Works Department/Drainage District 23
5. **Timeline** = Ongoing
6. **Benefit** = Drainage District #23 customers and up-stream communities
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal would be somewhat controversial.

---

## Maintain All Bridges to Carry Design Loads

**Hazards:** E, L, T, V, F, SW, WUI<sup>1</sup>

Establish procedures to maintain bridges and to verify that the bridges are capable of carrying design loads. Contract with Pierce County Public Works for routine and emergency bridge inspection services.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters; Promote a Sustainable Economy.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budgets or grants.
4. **Lead Jurisdiction(s)** = City of Fife - Public Works/Pierce County Public Works
5. **Timeline** = Ongoing
6. **Benefit** = City of Fife and emergency jurisdictions
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

---

## Maintain Drinking Water Standards in Water System

**Hazards:** E, L, T, V, F, SW<sup>1</sup>

A major problem after many disasters is having enough potable water for the routine and supplemental testing of public water system.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Preserve or Restore Natural Resources; Increase Public Preparedness for Disasters; Promote a Sustainable Economy.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budgets or grants and state or federal grants.
4. **Lead Jurisdiction(s)** = City of Fife - Public Works & Water Department
5. **Timeline** = Ongoing
6. **Benefit** = All customers and transitory populations
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

---

## Maintain Fire Flow through Water Distribution System

**Hazards:** E, L, D, F<sup>1</sup>

A key to controlling the fires that erupt after major incidents, especially earthquakes is to have adequate fire flow at all times. Therefore the City of Fife will maintain system for optimal readiness as well as having a call in system with manned phones for leaks and the inspection of wells and inerties.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Preserve or Restore Natural Resources; Increase Public Preparedness for Disasters; Promote a Sustainable Economy.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budgets or grants and state or federal grants.
4. **Lead Jurisdiction(s)** = City of Fife - Public Works
5. **Timeline** = Ongoing
6. **Benefit** = All employees and business populations
7. **Life of Measure** = 50 years
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

---

## Maintain Sewer Flows in System without Back-Up

**Hazards:** E, L, T, V, F, SW<sup>1</sup>

Assess and maintain sanitary sewer collection and delivery.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Preserve or Restore Natural Resources; Increase Public Preparedness for Disasters; Promote a Sustainable Economy.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budgets or grants and state or federal grants.
4. **Lead Jurisdiction(s)** = City of Fife - Public Works Dept/WA State Dept. of Health/TPCHD
5. **Timeline** = Ongoing
6. **Benefit** = All sewer system customers and property owners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal would benefit those affected, with no adverse reaction from others.

---

## Maintain Traffic Control Devices

**Hazards:** E, L, T, V, F, SW<sup>1</sup>

Verify and maintain operation of all traffic control devices.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Increase Public Preparedness for Disasters; Promote a Sustainable Economy.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budgets or grants and state or federal grants.
4. **Lead Jurisdiction(s)** = City of Fife - Public Works Department
5. **Timeline** = Ongoing
6. **Benefit** = All motoring public and the transitory population
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

---

## Maintain Vehicle and Equipment Fleet

**Hazards:** E, L, T, V, F, SW, WUI<sup>1</sup>

Maintain fleet vehicles and equipment in a manner consistent with the needs of the city.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Preserve or Restore Natural Resources; Increase Public Preparedness for Disasters; Promote a Sustainable Economy.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budgets or grants.
4. **Lead Jurisdiction(s)** = City of Fife - Public Works Fleet Department
5. **Timeline** = Ongoing
6. **Benefit** = All city employees and customers
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal would be somewhat controversial.

---

## Create Full Accounting Records for Utility Plant Infrastructures

**Hazards:** E, L, T, V, F, SW<sup>1</sup>, MM<sup>2</sup>

Within two years create full accounting records for all utility plant infrastructures for water, sewer and storm utilities and update GIS system to show what is in the files.

1. **Goal(s) Addressed** = Promote a Sustainable Economy.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budgets or grants.
4. **Lead Jurisdiction(s)** = City of Fife - Finance Department
5. **Timeline** = Ongoing
6. **Benefit** = City of Fife Finance Dept and businesses
7. **Life of Measure** = 2 years
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

---

## Maintain Drainage of Streets, Ditches & Streams

**Hazards:** E, L, T, V, F, SW, WUI<sup>1</sup>, MM<sup>2</sup>

Keep storm water utilities maintained and improved as necessary.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Preserve or Restore Natural Resources; Increase Public Preparedness for Disasters; Promote a Sustainable Economy.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budgets or grants and state or federal grants.
4. **Lead Jurisdiction(s)** = City of Fife - Public Works Department
5. **Timeline** = Ongoing
6. **Benefit** = All City Employees
7. **Life of Measure** = Varies
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

# Public Education Mitigation Measures

---

## Fife Emergency Public Education Program

**Hazards:** E, L, T, V, D, F, WUI, SW<sup>1</sup>, MM<sup>2</sup>

Fife will develop a Public Education and Citizen Preparedness Program covering threats, both natural and manmade, to the community. This will be conducted under the auspices of the Fife Police Department.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = \$50,000
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City of Fife - Police Department
5. **Timeline** = Short-term
6. **Benefit** = City of Fife Citizens, Business Community Puyallup Tribe and Responders
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community but there could be some controversy.

---

## Evacuation and Shelter in Place Brochures

**Hazards:** E, T, V, F, MM<sup>2</sup>

Fife is located adjacent to the large industrial base on the Tacoma tide flats. In addition there are rail lines that transport hazardous cargo through the City as well as being bisected by a major highway and freeway system. The result is that there could be a large chemical spill either independent of other incidents or as a result of another incident such as an earthquake. To prepare the citizens for this the City of Fife will distribute information to the public that explains both emergency evacuation and “shelter in place” procedures.

1. **Goal(s) Addressed** = Protect Life and Property; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budgets.
4. **Lead Jurisdiction(s)** = City of Fife - Police Department
5. **Timeline** = Short-Term
6. **Benefit** = City of Fife citizens, businesses, Puyallup Tribe and Responders
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

---

## Updated Lahar Information Distribution

### Hazards: V<sup>1</sup>

One of the greatest hazards facing the citizens of Fife is a lahar from Mt. Rainier. The City is built on a foundation of old lahar deposits. Realizing that the geologists predict that Mt. Rainier will once again send lahars down the Puyallup Valley into Fife the City will develop and distribute lahar information to the general public within the Fife City limits. This will include information on the hazard, the lahar warning system, how to prepare for a lahar, and the evacuation routes out of the City.

1. **Goal(s) Addressed** = Protect life and property; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget
4. **Lead Jurisdiction(s)** = City of Fife - Police Department
5. **Timeline** = Short-term
6. **Benefit** = City of Fife Citizens and First Responders
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal would benefit those affected, with no adverse reaction from others.

---

## Hispanic Lahar Hazard Education

### Hazards: V<sup>1</sup>

Due to the large number of Spanish speaking citizens within the City boundaries, the City of Fife will develop and promulgate lahar hazard materials to the Hispanic population in the City. This will include information on the hazard, the lahar warning system, how to prepare for a lahar, and the evacuation routes out of the City.

1. **Goal(s) Addressed** = Protect Life and Property; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City of Fife - Police Department
5. **Timeline** = Short-term
6. **Benefit** = Spanish speaking population, first responders and other citizens
7. **Life of Measure** = 10 years
8. **Community Reaction** = the proposal would benefit those affected, with no adverse reaction from others.

# Endnotes

---

<sup>1</sup> Hazard Codes:

Where necessary, the specific hazards addressed are noted as follows:

<b>A:</b>	Avalanche
<b>E:</b>	Earthquake
<b>F:</b>	Flood
<b>D:</b>	Drought
<b>T:</b>	Tsunami
<b>V(L OR T):</b>	Volcanic (lahar or tephra-specific)
<b>SW:</b>	Severe Storm (wind-specific)
<b>L:</b>	Landslide
<b>WUI:</b>	Wildland/Urban Interface Fire
<b>MM:</b>	Manmade to include terrorism
<b>ALL:</b>	All hazards, including some man made. Where only natural hazards are addressed, it is noted.

<sup>2</sup> While this Plan is strictly a *Natural* hazard mitigation plan, where a measure stems from a facility recommendation (Infrastructure Section) that deals specifically with terrorism, the mitigation strategy will use that analysis. Other measures, such as those that deal with multi-hazard community preparedness or recovery planning, mitigate man-made hazards and are noted as such. It is not the intent of this notation to imply that all measures were analyzed with regards to man-made hazards or that measures were identified with that in mind. Rather, the notation merely illustrates the potential on this template for the inclusion of man-made hazard analysis.