

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 FIRCREST MITIGATION STRATEGY SECTION

Table of Contents

MITIGATION STRATEGY REQUIREMENTS.....	1
TABLE OF CONTENTS	2
STARTUP MITIGATION MEASURES.....	4
EXISTING MITIGATION ACTIONS	4
PLAN MAINTENANCE	4
HAZARD MITIGATION FORUM	5
PIERCE COUNTY HAZARD MITIGATION FORUM	5
CITY GOVERNMENT MITIGATION MEASURES	6
CAPABILITY IDENTIFICATION AND EVALUATION.....	6
SEISMIC EVALUATION OF CITY FACILITIES	6
COMPREHENSIVE EMERGENCY MANAGEMENT PLAN UPDATE AND MAINTENANCE	7
EMERGENCY MANAGEMENT COMMUNICATIONS SYSTEM.....	7
FLOOD PRONE PROPERTY MITIGATION.....	8
GENERATORS FOR CITY BUILDINGS	8
GENERATORS FOR SEWER LIFT STATIONS	9
AGREEMENTS WITH REGIONAL PARTNERS AND PRIVATE SECTOR BUSINESSES FOR DISASTER RESOURCES	9
PUBLIC EDUCATION MITIGATION MEASURES.....	10
DISASTER AND EMERGENCY PREPAREDNESS TRAINING FOR STAFF	10
PUBLIC DISASTER PREPAREDNESS & EDUCATION PROGRAM	10
ENDNOTES.....	11

Table 5-1 City of Fircrest Mitigation Strategy Matrix

Implementation Mechanism	Mitigation Measure (<i>Hazard(s)</i>) ¹	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,V,D,F,WUI,SW,MM</i>)	Fircrest	Ongoing	✓	✓	✓	✓	✓	✓
	2. Plan Maintenance (<i>E,L,V,D,F,WUI, SW, MM</i>)	Fircrest	Ongoing	✓	✓	✓	✓	✓	✓
HMF	1. Pierce County Hazard Mitigation Forum (<i>E,L,V,D,F,WUI,SW,MM</i>)	PC DEM; Fircrest	Ongoing	✓	✓	✓	✓	✓	✓
City Government	1. Capability Identification and Evaluation (<i>E,L,V,D,F,WUI,SW,MM</i>)	Fircrest	1-2						
	2. Seismic Evaluation of City Facilities (<i>E,SW,MM</i>)	Fircrest - Public Works	5	✓	✓				✓
	3. Comprehensive Emergency Management Plan Update and Maintenance (<i>E,V,D,F,SW,WUI,MM</i>)	Fircrest - Police Department	1-2	✓	✓			✓	✓
	4. Emergency Management Communications System (<i>E,V,D,F,SW,WUI,MM</i>)	Fircrest	1-2	✓	✓	✓			✓
	5. Flood Prone Property Mitigation (<i>E,F,SW</i>)	Fircrest - Public Works and Planning/Buildings Department	5	✓		✓		✓	
	6. Generators for City Buildings (<i>E,V,F,SW,MM</i>)	Fircrest - Public Works	5	✓	✓			✓	✓
	7. Generators for Sewer Lift Stations (<i>E,V,F,SW,MM</i>)	Fircrest - Public Works	5	✓	✓		✓	✓	✓
	8. Agreements with Regional Partners and Private Sector Businesses for Disaster Resources (<i>E,V,D,F,SW,WUI</i>)	Fircrest - Police and Public Works Departments	1-2	✓	✓			✓	✓
Public Education	1. Disaster and Emergency Preparedness Training for Staff (<i>E,V,D,F,SW,WUI,MM</i>)	Fircrest - Police Department	1-2	✓	✓	✓	✓	✓	✓
	2. Public Disaster Preparedness & Education Program (<i>E,V,D,F,SW,WUI,MM</i>)	Fircrest - Police Department	1-2	✓	✓			✓	✓

Startup Mitigation Measures

Existing Mitigation Actions

Hazards: E, L, V, D, F, WUI, SW¹, MM²

Fircrest 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 Fircrest
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, V, D, F, WUI, SW¹, MM²

Fircrest 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; Provide/Ensure Continuity of Operations; Increase Public Awareness and Education/Preparedness for Disasters; Restore/Protect/Preserve the Environment; 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 Fircrest
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, V, D, F, WUI, SW¹, MM²

Fircrest 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; Provide/Ensure Continuity of Operations; Increase Public Awareness and Education/Preparedness for Disasters; Restore/Protect/Preserve the Environment; 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 Fircrest
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, V, D, F, WUI, SW¹, MM²

Fircrest will develop a consistent and replicable system for evaluating the 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 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 Fircrest
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.

Seismic Evaluation of City Facilities

Hazards: E, SW¹, MM²

The City will evaluate city-owned critical facilities to determine their earthquake structural integrity.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Promote a Sustainable Economy.
2. **Cost of Measure** = To be determined after evaluation of facilities
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City of Fircrest - Public Works
5. **Timeline** = Long-term
6. **Benefit** = Facility specific, citywide, community and citizens, regional partners
7. **Life of Measure** = 50 years for retrofit
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

Comprehensive Emergency Management Plan Update and Maintenance

Hazards: E, V, D, F, SW, WUI¹, MM²

Maintain and update the City's Comprehensive Emergency Management Plan (CEMP). Insure the CEMP is kept up to date as changes occur in emergency preparedness. Add a new section for a process to handle City boil water advisories and for water quality related emergencies.

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** = Staff time and materials
3. **Funding Source and Situation** = Funding could be obtained through local budget and grants.
4. **Lead Jurisdiction(s)** = City of Fircrest - Police Department
5. **Timeline** = Short-term
6. **Benefit** = City employees, community, first responders and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

Emergency Management Communications System

Hazards: E, V, D, F, WUI, SW¹, MM²

Utilize IntelliCast (Reverse 911) to provide notification of urgent and emergency situations. Also, implement use of City Incident/Alert Information line for residents to call for updates and information on emergency situations. Utilize reader boards to provide information to residents.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; 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 Fircrest
5. **Timeline** = Short-Term
6. **Benefit** = City-wide, community, regional partners
7. **Life of Measure** = 5-10 years
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

Flood Prone Property Mitigation

Hazards: E, F, SW¹

The measure will investigate possible methods to mitigate the areas of the City that experience flooding. This area is primarily adjacent to Leach Creek located in the southern end of the City. The strategy could include such measures as purchasing the property, elevating structures and investigating methods of walling off structures to prevent damage to individual properties.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget and state or federal grants.
4. **Lead Jurisdiction(s)** = City of Fircrest - Public Works and Planning/Building Departments
5. **Timeline** = Long-term
6. **Benefit** = Neighborhood specific, first responders
7. **Life of Measure** = Dependent on measures taken. Purchasing property would be permanent, structural changes would be for the life of the structure modifications.
8. **Community Reaction** = the proposal would be somewhat controversial.

Generators for City Buildings

Hazards: E, V, F, SW¹, MM²

Purchase and install generators for three City buildings. They are the Public Safety Building housing the Fire and Police Departments, the Fircrest Community Center and City Hall. During the last wind and ice storms, City Hall was forced to close due to lack of power. Also, the Public Safety Building has a small generator that was inefficient and unable to provide adequate power to keep operations going. The Community Center has been used in the past as a place for residents to come for refuge but had no power. Generators would allow for operations to continue. The Public Works Building has a generator that will allow for continued operations. Fircrest needs to keep basic services in operation for all buildings.

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** = Cost of Generators and installation
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City of Fircrest - Public Works
5. **Timeline** = Long-term
6. **Benefit** = Fircrest employees, community, first responders, citizens and regional partners
7. **Life of Measure** = 40 years
8. **Community Reaction** = the proposal would benefit those affected, with no adverse reaction from others.

Generators for Sewer Lift Stations

Hazards: E, V, F, SW¹, MM²

Purchase and install generators for the five sewer lift stations in the City. In the event of an extended power outage, the sewer lift stations would not function and have the potential for backups and health and property damage issues.

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** = Equipment and installation
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City of Fircrest - Public Works
5. **Timeline** = Long-term
6. **Benefit** = Citywide, citizens, community
7. **Life of Measure** = 40 years
8. **Community Reaction** = the proposal would benefit those affected, with no adverse reaction from others.

Agreements with Regional Partners and Private Sector Businesses for Disaster Resources

Hazards: E, V, D, F, SW, WUI¹

Agreements with Regional Partners can be established to provide mutual aid during emergencies. Currently Fircrest works cooperatively with adjoining cities and Pierce County. We would expand this effort to schools and other public agencies. Also, agreements could be established with private sector businesses to provide vital equipment and supplies during emergencies.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Promote a Sustainable Economy; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = TBD - Minimal
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City of Fircrest - Police and Public Works Departments
5. **Timeline** = Short-term
6. **Benefit** = Fircrest employees, community, first responders and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

Public Education Mitigation Measures

Disaster and Emergency Preparedness Training for Staff

Hazards: E, V, D, F, WUI, SW¹, MM²

Staff will participate in training for emergency preparedness, hazard mitigation, NIMS, ATC training and emergency drills.

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** = Staff time and materials
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City of Fircrest - Police Department
5. **Timeline** = Short-term
6. **Benefit** = City employees, community and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

Public Disaster Preparedness & Education Program

Hazards: E, V, D, F, SW, WUI¹, MM²

Provide information to the public on basic preparedness, hazards and mitigation. This would be done through the City newsletter, at community meetings and community events and fairs. Residents, schools and businesses would be encouraged to create and maintain emergency supply kits. Information on preparedness will be provided on the City's website.

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 - minimal
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City of Fircrest - Police Department
5. **Timeline** = Short-term
6. **Benefit** = Citizens and community, first responders and regional partners
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

Endnotes

¹ Hazard Codes:

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

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

² 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.