

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 PIERCE COUNTY FIRE PROTECTION DISTRICT #27 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
FIRE DISTRICT MITIGATION MEASURES	6
CAPABILITY IDENTIFICATION AND EVALUATION.....	6
FIRE FIGHTER HOUSING	6
IMPROVED EMERGENCY COMMUNICATIONS.....	7
INTEGRATION WITH ANDERSON ISLAND COMMUNITY PLAN	7
NON-STRUCTURAL RETROFIT OF OWNED FACILITIES	8
SEISMIC RETROFIT OF UNDERGROUND UTILITIES.....	8
STRENGTHEN EMERGENCY OPERATIONS PLAN	9
PUBLIC ACCESS AEDS.....	9
LARGE FUNDING RESOURCES.....	10
SINGLE FAMILY DEVELOPMENT INCENTIVES	10
DOCK PROTECTION ON ORO BAY.....	11
PUBLIC EDUCATION MITIGATION MEASURES.....	12
NEW TRAINING FOR EMS RESPONDER	12
DEVELOPMENT OF ADDITIONAL EMT TRAINED PERSONNEL.....	12
COMMUNITY EDUCATION.....	13
ENDNOTES.....	14

Table 5-1 Pierce County Fire District #27 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,T,V,D,F,WUI,SW,MM</i>)	PC Fire District #27	Ongoing	✓	✓	✓	✓	✓	✓
	2. Plan Maintenance (<i>E,L,T,V,D,F,WUI,SW,MM</i>)	PC Fire District #27	Ongoing	✓	✓	✓	✓	✓	✓
HMF	1. Pierce County Hazard Mitigation Forum (<i>E,L,T,V,D,F,WUI,SW,MM</i>)	PC Fire District #27	Ongoing	✓	✓	✓	✓	✓	✓
Fire District	1. Capability Identification and Evaluation (<i>E,L,T,V,D,F,WUI,SW,MM</i>)	PC Fire District #27	1-2	N/A					
	2. Fire Fighter Housing (<i>E,L,T,V,D,F,WUI,SW,MM</i>)	PC Fire District #27	5	✓	✓			✓	✓
	3. Improve Emergency Communications (<i>E,L,T,V,D,F,WUI,SW,MM</i>)	PC Fire District #27	5	✓	✓	✓		✓	
	4. Integration with Anderson Island Community Plan (<i>E,L,T,V,D,F,WUI,SW,MM</i>)	PC Fire District #27	1-2	✓		✓	✓	✓	✓
	5. Non-Structural Retrofit of Owned Facilities (<i>E,V,SW</i>)	PC Fire District #27	1-2	✓	✓				✓
	6. Seismic Retrofit of Underground Utilities (<i>E,L,T,V,D,F,WUI,SW,MM</i>)	PC Fire District #27	5	✓	✓	✓	✓	✓	✓
	7. Strengthen Emergency Operations Plan (<i>E,L,T,V,D,F,WUI,SW,MM</i>)	PC Fire District #27	5	✓	✓	✓		✓	✓
	8. Public Access AEDs (<i>MM</i>)	PC Fire District #27	Ongoing			✓		✓	
	9. Large Funding Resources (<i>E,L,T,V,D,F,WUI,SW,MM</i>)	PC Fire District #27	1-2	✓	✓	✓		✓	✓
	10. Single Family Development Incentives (<i>E,V,F,SW,WUI,MM</i>)	PC Fire District #27	Ongoing			✓		✓	
	11. Dock Protection on Oro Bay (<i>E,L,T,V,D,F,WUI,SW,MM</i>)	PC Fire District #27 with Regional Partners	5	✓	✓				✓
Public Education	1. New Training for EMS Responder (<i>E,L,T,V,D,F,WUI,SW,MM</i>)	PC Fire District #27	5	✓		✓		✓	
	2. Development of Additional EMT Trained Personnel (<i>E,L,T,V,D,F,WUI,SW,MM</i>)	PC Fire District #27	1-2	✓	✓	✓			✓
	3. Community Education (<i>E,L,T,V,D,F,WUI,SW,MM</i>)	PC Fire District #27	1-2	✓	✓	✓		✓	✓

Startup Mitigation Measures

Existing Mitigation Actions

Hazards: E, L, T, V, D, F, WUI, SW¹, MM²

Pierce County Fire District #27 will continue to implement existing programs, policies, and regulations as identified in the Capability Identification Section of this Plan. This includes continuing those programs that are identified as technical and fiscal 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)** = Pierce County Fire District #27
5. **Timeline** = Ongoing
6. **Benefit** = Area-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, SW¹, MM²

Pierce County Fire District #27 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)** = Pierce County Fire District #27
5. **Timeline** = Ongoing
6. **Benefit** = Area-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, SW¹, MM²

Pierce County Fire District #27 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)** = Pierce County Fire District #27
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.

Fire District Mitigation Measures

Capability Identification and Evaluation

Hazards: E, L, T, V, D, F, WUI, SW¹, MM²

Pierce County Fire District #27 will develop a consistent and replicable system for evaluating 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)** = Pierce County Fire District #27
5. **Timeline** = Short-term
6. **Benefit** = Area-Wide
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

Fire Fighter Housing

Hazards: E, L, T, V, D, F, SW, WUI¹, MM²

To develop housing for approximately four full time fire fighters. This requires building quarters to place residents on site.

1. **Goal(s) Addressed** = Protect Life and Property; Promote A Sustainable Economy; Provide/Ensure Continuity of Operations; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = \$150,000 per year
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants and state or federal grants.
4. **Lead Jurisdiction(s)** = Pierce County Fire District #27
5. **Timeline** = Long-Term
6. **Benefit** = Fire District and community
7. **Life of Measure** = 25 years
8. **Community Reaction** = the proposal would benefit those affected, with no adverse reaction from others.

Improved Emergency Communications

Hazards: E, L, T, V, D, F, WUI¹, MM²

- Develop message and list of stakeholder groups
 - Develop/utilize existing emergency communication plans
 - Attend relevant board/community meetings and make proposals
 - Schedule/conduct an island “table top” exercise
 - Refresh the plan and the commitment annually
1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; 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 or grants and state or federal grants.
 4. **Lead Jurisdiction(s)** = Pierce County Fire District #27
 5. **Timeline** = Long-term
 6. **Benefit** = Island residents, businesses and first responders
 7. **Life of Measure** = Perpetual
 8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

Integration with Anderson Island Community Plan

Hazards: E, L, T, V, D, F, SW, WUI¹, MM²

- PCFD #27 representatives participate in Pierce County Planning led project to update the formal 10 year long-term community plan for Anderson Island.
 - PCFD #27 representatives promote consideration of hazard mitigation priorities to influence policies, zoning, etc. in final Pierce County Community Plan for Anderson Island.
1. **Goal(s) Addressed** = Protect Life and Property; Promote A Sustainable Economy; Preserve or Restore Natural Resources; Increase Public Preparedness for Disasters; Establish and Strengthen Partnerships for Implementation.
 2. **Cost of Measure** = Staff time only
 3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
 4. **Lead Jurisdiction(s)** = Pierce County Fire District #27
 5. **Timeline** = Short-term
 6. **Benefit** = Residents, organizations and regional partners
 7. **Life of Measure** = 10 years review/refresh cycle
 8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

Non-Structural Retrofit of Owned Facilities

Hazards: E, V, SW¹

- Identify items to be secured or at risk
 - Identify method for stabilization/securing
 - Purchase/install braces, brackets, etc.
 - Include fire station, fireboat, Fire Comm repeater in review
1. **Goal(s) Addressed** = Protect Life and Property; Promote A Sustainable Economy; Ensure Continuity of Operations.
 2. **Cost of Measure** = Estimate \$5,000
 3. **Funding Source and Situation** = Funding could be obtained through local budget or grants and state or federal grants.
 4. **Lead Jurisdiction(s)** = Pierce County Fire District #27
 5. **Timeline** = Short-term
 6. **Benefit** = Fire Station, first responders, citizens and community
 7. **Life of Measure** = 5 years
 8. **Community Reaction** = the proposal would benefit those affected, with no adverse reaction from others.

Seismic Retrofit of Underground Utilities

Hazards: E, L, T, V, D, F, SW, WUI¹, MM²

Develop mutual agreements, policies and funding with Tanner Electric to place more electric services underground.

1. **Goal(s) Addressed** = Protect Life and Property; Increase Public Preparedness for Disasters; Promote A Sustainable Economy; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation; Preserve or Restore Natural Resources.
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)** = Pierce County Fire District #27
5. **Timeline** = Long-term
6. **Benefit** = Electric customers and island residents
7. **Life of Measure** = 50 years
8. **Community Reaction** = the proposal would benefit those affected, with no adverse reaction from others.

Strengthen Emergency Operations Plan

Hazards: E, L, V, D, F, SW, WUI¹, MM²

- Identify organizations/agencies to work with
 - Joint review of emergency operations plans
 - Identify gaps and improve plans as needed
 - Document agreements as appropriate
 - Periodic “table top” drills to identify needed changes
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 budget or grants and state or federal grants.
 4. **Lead Jurisdiction(s)** = Pierce County Fire District #27
 5. **Timeline** = Long-term
 6. **Benefit** = Residents, organizations, neighboring fire districts and regional partners
 7. **Life of Measure** = Perpetual
 8. **Community Reaction** = the proposal would benefit those affected, with no adverse reaction from others.

Public Access AEDs

Hazards: MM²

Within one year, install three AEDs for public access.

1. **Goal(s) Addressed** = Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = Approximately \$6,000
3. **Funding Source and Situation** = Funding could be obtained through local budgets or grants and state or federal grants.
4. **Lead Jurisdiction(s)** = Pierce County Fire District #27
5. **Timeline** = Ongoing
6. **Benefit** = Residents, Visitors, Regional Partners and First Responders
7. **Life of Measure** = 5 years
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

Large Funding Resources

Hazards: E, L, V, D, F, SW, WUI¹, MM²

Long term funding for the District has been accomplished by the voters of Anderson Island voting for the recent budget lift.

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 budget or grants and state or federal grants.
4. **Lead Jurisdiction(s)** = Pierce County Fire District #27
5. **Timeline** = Short-term
6. **Benefit** = Fire District, community and citizens
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal would benefit those affected, with no adverse reaction from others.

Single Family Development Incentives

Hazards: E, V, F, SW, WUI¹, MM

- Maintain/improve quality of PCFD #27 services
 - Communicate via periodic newsletter and/or articles about PCFD #27 activities
1. **Goal(s) Addressed** = 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 or grants.
 4. **Lead Jurisdiction(s)** = Pierce County Fire District #27
 5. **Timeline** = Ongoing
 6. **Benefit** = Residents, community, PCFD #27 and regional partners
 7. **Life of Measure** = Perpetual
 8. **Community Reaction** = the proposal would benefit those affected, with no adverse reaction from others.

Dock Protection on Oro Bay

Hazards: E, L, T, V, D, F, SW, WUI¹, MM²

Retrofit the dock serving the fire boat and others on the East side of the island to survive the 100 year flood, potential tsunami and other threats and hazards on the island.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Promote a Sustainable Economy.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local funds or grants.
4. **Lead Jurisdiction(s)** = Anderson Island with Regional Partners
5. **Timeline** = Long-term
6. **Benefit** = Residents, community, PCFD #27 and regional partners
7. **Life of Measure** = 25 years
8. **Community Reaction** = the proposal would be somewhat controversial.

Public Education Mitigation Measures

New Training for EMS Responder

Hazards: E, L, T, V, D, F, SW, WUI¹, MM²

Because of the increase in the elderly population on the island, we need more training and skills to meet this specific need.

1. **Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
2. **Cost of Measure** = \$5,000 per year in staffing and materials
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants and state or federal grants.
4. **Lead Jurisdiction(s)** = Pierce County Fire District #27
5. **Timeline** = Long-term
6. **Benefit** = Senior Citizens, First Responders and community
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal would benefit those affected, with no adverse reaction from others.

Development of Additional EMT Trained Personnel

Hazards: E, L, T, V, D, F, SW, WUI¹, MM²

Provide funding and in-house training so that EMT training can be available within the district, making it more accessible to more interested individuals.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Promote A Sustainable Economy; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
2. **Cost of Measure** = \$5,000 to \$8,000 per year
3. **Funding Source and Situation** = Funding could be obtained through local budgets or grants and state or federal grants.
4. **Lead Jurisdiction(s)** = Pierce County Fire District #27
5. **Timeline** = Short-Term
6. **Benefit** = Fire District employees and community
7. **Life of Measure** = Perpetual
8. **Community Reaction** = the proposal is likely to be endorsed by the entire community.

Community Education

Hazards: E, L, V, D, F, SW, WUI¹, MM²

- Develop/acquire needed training modules
 - Deliver/educate via appropriate community gatherings
 - Scope includes wetland/timber resource protection, basic first aid and CPR and AED, home hazard mitigation, natural hazard risk awareness
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 budget or grants.
 4. **Lead Jurisdiction(s)** = Pierce County Fire District #27
 5. **Timeline** = Short-term
 6. **Benefit** = Residents, communities, First Responders
 7. **Life of Measure** = Perpetual
 8. **Community Reaction** = the proposal would 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.