

# DIERINGER SCHOOL DISTRICT ADDENDUM B-3 REGION 5 ALL HAZARD MITIGATION PLAN 2020-2025 EDITION

## **Prepared for:**

Dieringer School District 1320 178<sup>th</sup> Avenue East Lake Tapps, WA 98391

In Cooperation with:

Pierce County Department of Emergency Management 2501 S. 35<sup>th</sup> Street, Suite D Tacoma, WA 98409 (This page left blank intentionally)

## **ADDENDUM B-3**

## REGION 5 ALL HAZARD MITIGATION PLAN DIERINGER SCHOOL DISTRICT

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#### Section 1

## **Plan Process Requirements**

#### Planning Process---Requirement §201.6(b):

An open public involvement process is essential to the development of an effective plan.

#### Documentation of the Planning Process---Requirement §201.6(b):

In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process **shall** include:

- (1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;
- (2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process; and
- (3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

#### Documentation of the Planning Process---Requirement §201.6(c)(1):

[The plan **shall** document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

- Does the plan provide a narrative description of the process followed to prepare the new or updated plan?
- Does the new or updated plan indicate who was involved in the current planning process? (Who led the
  development at the staff level and were there any external contributors such as contractors? Who participated
  on the plan committee, provided information, reviewed drafts, etc.?)
- Does the new or updated plan indicate how the public was involved? (Was the public provided an opportunity to comment on the plan during the drafting stage and prior to the plan approval?)
- Does the new or updated plan discuss the opportunity for neighboring communities, agencies, businesses, academia, nonprofits, and other interested parties to be involved in the planning process?
- Does the planning process describe the review and incorporation, if appropriate, of existing plans, studies, reports, and technical information?
- Does the updated plan document how the planning team reviewed and analyzed each section of the plan and whether each section was revised as part of the update process?

#### **SECTION 1**

## REGION 5 ALL HAZARD MITIGATION PLAN 2020-2025 EDITION DIERINGER SCHOOL DISTRICT PROCESS SECTION

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## **Changes To Jurisdiction Plan in this Document**

This Process Section for the Dieringer School District Hazard Mitigation Plan includes the following changes that are documented as a result of a complete review and update of the existing plan. The purpose of the following change matrix is to advise the reader of these changes updating this plan from the original document approved in November 2008.

The purpose for the changes is three-fold: 1) the Federal Law (Code of Federal Regulations (CFR), Title 44, Part 201.4) pertaining to Mitigation Planning has changed since the original Plan was undertaken; 2) the Local Mitigation Planning Requirements of the Disaster Mitigation Act of 2000 201.6 (d) (3) Plan Review states plans **must** be reviewed, revised if appropriate, and resubmitted for approval within five years in order to continue to be eligible for HMGP project grant funding. This document when completed and approved will become the Dieringer School District Hazard Mitigation Plan.

## **Change Matrix**

This Matrix of Changes documents the pertinent changes made from the July 2015 Dieringer School District Plan for the Region 5 All Hazard Mitigation Plan; 2020-2025 Edition. Most of the changes are a matter of additional detail, more information provided, and in some cases a response to new requirements. This 2020-2025 version represents a complete review and update by Dieringer School District and Pierce County Emergency Management using a detailed process for development and following an established format. During this procedure, all web links have been verified and updated.

Table 1-1 Change Matrix – Dieringer School District Region 5 Hazard Mitigation Plan 2020-2025 Edition

Section 1 – Plan Development, Process Section	
Section or Part of Plan	New in 2020 Plan
Section 1 – Process Section	Section 1 – Process Section
	The 2020 Process Section contains updated Planning Meeting overviews, Planning Team Members, Drop-in schedule, Public Comment dates, Elected Official Meetings and updated dates for Plans that collaborate with the mitigation plan.

Section 2 – Participating Jurisdiction Profiles		
Section or Part of Plan	Previous	2020 Plan
Section 2 – Profile	Information was current as of	The 2020 version of the
	2010 Census Data.	Profile has been reviewed and
		updated. The Infrastructure
		Summary section was updated

	showing a significant increase in tax parcel values. In addition, the Economic Summary was updated also showing an increase.
Information was current as of 2010 Census Data.	The 2010 Census Data remained for population data and is the current GIS available information from Pierce County. Once the 2020 Census data becomes available in Pierce County GIS format, population data figures will be updated in the Profile Section 2 and the Risk Assessment Section 4.
	A new Demographic Analysis paragraph was added to the 2020 Mitigation Plan to elaborate on Dieringer School District's demographics in more detail and capturing some of the at-risk populations. This also allowed the district to provide an updated overview of its growing population beyond the 2010 census which is outdated.

Section 3 – Capability Identification		
Section or Part of Plan	Previous	2020 Plan
Section 3 – Capability	The Capability Tables shown in the previous plan are in a similar format.	The 2020 Capability Section has been improved and updated to show current information from the Dieringer School District.

Section 4 – Vulnerability, Risk Analysis		
Section or Part of Plan	2020 Plan	
Vulnerability and Hazard Impact Analysis	This section was added to provide a better	

	understanding on how the identified hazards affect the Dieringer School District and its critical infrastructure.
Changes in Development	This required element was added to provide a clearer understanding and location within the plan of the changes in development that have occurred within the Dieringer School District over the past five years.
Disaster Declarations Charts	The Geological, Meteorological and Technological Charts have been updated to reflect current changes in Pierce County's Hazard Identification Risk Assessment (HIRA). Major changes include updating the maps, figures and table column to align with the changes in the HIRA. Technological Hazards added "Active Threat" and "Cyber Attack" under the Terrorism category.
Hazard Maps - Overview of Data Source Descriptions	This section was added to provide the reader with a better understanding of the data source that was used to produce the hazard maps.
The previous version of the plan contained hazard maps.	The 2020 Risk Section includes updated maps and contains additional hazard maps such as deep/shallow landslides susceptibility.
The previous version included specific analysis showing vulnerability of population, land and infrastructure according to Census 2010 and 2013/2014 tax parcel data.	The 2020 Risk Section includes completely updated tables showing vulnerability of population, (where different hazard maps were used) land and infrastructure using Census 2010 data and 2019/2020 tax parcel data.

Section 5 – Mitigation Strategy	
Section or Part of Plan	2020 Plan
The previous document used the standard goals as outlined for the entire project.	The 2020 Mitigation Section was drafted using specific goals and objectives written by the jurisdictions to their specific hazards and concerns.
The previous document contained a Mitigation Measure Matrix chart followed by written descriptions of each individual measure.	The new document uses the same format as the original plan with the addition of a 'Status Update' table under each mitigation measure. This provides the opportunity to update each mitigation strategy and track the status. New measures have been added to both the Matrix and the individual measure descriptions.

o a historical appendix in
ojects completed by the
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Section 6 – Infrastructure	
Section or Part of Plan	2020 Plan
The previous plan used a full table with details on each piece of critical infrastructure. In addition, a matrix summary of hazards and dependencies affecting the critical infrastructure was completed.	The 2020 plan uses the same table. The tables have been reviewed and updated by the jurisdiction. This section is only available to the jurisdiction due to the sensitivity of information contained. A disclosure statement acts as a placeholder for Section 6.

Section 7 – Plan Maintenance	
Section or Part of Plan	2020 Plan
The previous Plan Maintenance for the jurisdiction was very similar in format to the newer version for 2020.	The 2020 version of the Plan Maintenance borrows from the format and content of the original; however, the entire document has been reviewed and updated to current information.

Section 8 – Other Changes	
Section or Part of Plan	2020 Plan
The previous document contained three Appendices.	The 2020 Plan contains six Appendices including: place for the final resolution and approval letter from FEMA, list of jurisdiction's planning team, a chart for any changes, 2014 HAZUS analysis, documentation records for Public Outreach events and a historical appendix for completed projects. The Acronym list appears in the Base
	Plan for the entire project.

#### **Plan Process**

The Region 5 Hazard Mitigation Plan Process Section is a discussion of the planning process used to update the Region 5 Hazard Mitigation Plan (Pierce County is Region 5 for Homeland Security (HLS) in Washington State, including how the process was prepared, who aided in the process, and the public involvement.

The Plan update is developed around all major components identified in 44 CFR 201.6, including:

- Public Involvement Process:
- Jurisdiction Profile:
- Capability Identification;
- Risk Assessment;
- Mitigation Strategy;
- Infrastructure Section; and,
- Plan Maintenance Procedure.

Below is a summary of those elements and the processes involved in their development.

#### **Public Involvement Process**

Public participation is a key component to strategic planning processes. Citizen participation offers citizens the chance to voice their ideas, interests, and opinions.

"Involving stakeholders who are not part of the core team in all stages of the process will introduce the planning team to different points of view about the needs of the community. It will also provide opportunities to educate the public about hazard mitigation, the planning process, and findings, and could be used to generate support for the mitigation plan."

In order to accomplish this goal and to ensure that the updated Region 5 Hazard Mitigation Plan be comprehensive, the seven planning groups in conjunction with Pierce County Department of Emergency Management developed a public participation process of three components:

- 1. A Planning Team comprised of knowledgeable individual representatives of HLS Region 5 area and its hazards;
- 2. Hazard Meetings to target the specialized knowledge of individuals working with populations or areas at risk from all hazards; and
- 3. Public meetings to identify common concerns and ideas regarding hazard mitigation and to discuss specific goals, objectives and measures of the mitigation plan.

This section discusses each of these components in further detail below with public participation outlined in each. Integrating public participation into the development of the Region 5 Hazard

Mitigation Plan update has helped to ensure an accurate depiction of the Region's risks, vulnerabilities, and mitigation priorities.

## **Planning Team**

The Planning Team was organized early in 2019. The individual Region 5 Hazard Mitigation Planning Team members understand the portion of Pierce County containing their specific jurisdiction, including how residents, businesses, infrastructure, and the environment may be affected by all hazard events. The members are experienced in past and present mitigation activities and represent those entities through which many of the mitigation measures would be implemented. The Planning Team guided the update of the Plan, assisted in reviewing and updating goals and measures, identified stakeholders, and shared local expertise to create a more comprehensive plan. The Planning Team was comprised of:

**Table 1-2 Planning Teams – Discipline Group** 

NAME	TITLE	JURISDICTION-DEPARTMENT
Scott Hubbard	Superintendent (retired during update)	Carbonado School District
Jessie Sprouse	Superintendent	Carbonado School District
Randy Granum	Safety and Security Manager	Clover Park School District
Kirsten Parker	Director of Human Resources	Dieringer School District
Clay Jamerson	Manager of Transportation	Eatonville School District
John Fisher	Facilities Manager	Eatonville School District
Ben Ramirez	Deputy Superintendent	Fife School District
Katie Gillespie	Safety, Security/EM Supervisor	Franklin Pierce School District
Chris Willis	Executive Director for Student Support Services	Orting School District
Holly Mortenson	Payroll Specialist & Operations Support Assistant	Orting School District
Shawn Thompson	Environmental Health & Safety Officer	Pacific Lutheran University
Patrick Gillespie	Director of Facilities	Peninsula School District
Sara Hoover	Risk and Compliance Manager	Peninsula School District
Brian Devereux	Director of Facilities Planning	Puyallup School District
Susanne Beauchaine	Executive Director of Human Resources and Safety	Steilacoom School District No. 1
Cheryl Collins	Risk Manager / Purchasing	Sumner-Bonney Lake School District
Bill Gaines	Assistant Superintendent Operations & community Engagement	Sumner-Bonney Lake School District
Mike Rupert	Director of Safety/Security	Tacoma Public Schools
Jeff Rogers	Environmental Health/Safety	Tacoma Public Schools
Torey Heidelberg	Emergency Preparedness/Safety Coordinator	University Place School District
Michelle Bradshaw	Intervention Specialist	White River School District

Jer Argo	Director of Business and Operations	White River School District
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Table 1-3 Planning Teams – Regional Group

NAME	TITLE	JURISDICTION-DEPARTMENT	
Woody Edvalson	Director/EM Coordinator	City of Bonney Lake	
Alan Predmore	Fire Chief/EM Director	City of Buckley ~ Town of	
		Wilkeson ~ Town of Carbonado	
Daillene Argo	Town Clerk-Treasurer	Town of Carbonado	
Mark Bethune	City Administrator	City of Orting	
Emily Terrell	Contracted Planner	Town of South Prairie	
Ryan Windish	Community Development Director	City of Sumner	
Trisha Sumners	Town Clerk-Treasurer	Town of Wilkeson	
Jim Jaques	Fire Chief, Asst.	East Pierce Fire & Rescue	
Zane Gibson	Fire Chief	Orting Valley Fire	
Scott Hubbard	Superintendent	Carbonado Historical School	
		District #19	
Jessie Sprouse	Principal/Superintendent	Carbonado Historical School	
		District #19	
Kirsten Parker	Director of Human Resources	Dieringer School District	
Chris Willis	Executive Director of Student	Orting School District	
	Support Services		
Holly Mortenson	Payroll Specialist & Ops Support	Orting School District	
	Asst.		
Cheryl Collins	Risk Manager	Sumner-Bonney Lake School	
		District	
Michelle Bradshaw	Intervention Specialist	White River School District	
Jer Argo	Director of Business and Operations	White River School District	
James Oliver	Assistant Director of Operations	Community Health Care	
Curt Simonson	HOA President	Crystal River Ranch Association	
Gary Castell	HOA Resident	Crystal Village Homeowners Assoc.	

## **Planning Team Meetings**

The Planning Team held 7 Planning Team Meetings either in their Discipline Groups or Regional Planning Groups. Meeting in Regional Planning Groups supported a whole community planning approach which either developed new or stronger relationships amongst jurisdictions. This allowed for an integration of mitigation strategies for regions sharing the commonality in hazards. There was a total of 45 meetings from February 2019 to January 2020 between all Planning Groups. Additional working group drop-in workshops were provided for jurisdictions to continue to work on and update their plans. Two "drop-in" workshops were provided each month from January through June alternating between morning and afternoons to accommodate work schedules.

The Planning Teams Discipline Groups: City and Town Group, Fire Group, School Group, Special Purpose Group, Utility Group, Medical Group and Unincorporated Pierce County Group.

These discipline groups will continue to meet on an annual basis for the relationship building and sharing of mitigation strategies and ideas.

The Planning Team Regional Groups broken down into five geographical areas in Pierce County: West Group (all of Gig Harbor, Key Peninsula, Herron Island, Fox Island and Raft Island), SW Group (Lakewood, Anderson Island, Steilacoom), Central Group (Puyallup, Graham, Eatonville), NE Group (Buckley, Carbonado, Bonney Lake, Wilkeson), North Group (Tacoma, Fife, Edgewood, Sumner). The Regional Groups were developed based on geographic location and the commonality of hazards shared and was new with this update. This provided for better community planning, relationship building, and collaboration of mitigation strategies ultimately leading to community resiliency. These Regional groups will continue to meet on an annual basis and as sub committees are developed to work on specific projects the frequency of meetings will potentially increase.

#### **Table 1-4 Planning Team Meetings**

#### Planning Team Meeting #1 - School Districts: PCEM Puyallup Room - February 22, 2019

Planning Team members Debbie Bailey and Wyatt Godfrey conducted the meeting and the Planning Team discussed the following items: Introduction of Planning Team, Review of the history of the Grant Application, Defining the Planning Requirements, How We Establish the In-Kind Match, Benefits of Developing a Plan, Defining the Planning Process, Establishing the Planning Team Meetings, Elected Official Meetings and Public Comment Meetings, reviewing each jurisdiction's profile information, and defining next steps.

#### Planning Team Meeting #2 – NE Regional Group: Buckley Fire Station – March 18, 2019

Planning Team members Debbie Bailey and Wyatt Godfrey conducted the meeting and the Planning Team discussed the following items: Introduction of Planning Team as this was our first Regional Planning meeting and there were new members present. We reviewed of items presented at previous meeting, Defining the Planning Requirements, Defining the Process, Establishing the Planning Team Meetings, Elected Official Meetings and Public Comment Meetings, and explaining the next steps.

This meeting focused on continuing review of the Profile Section, an introduction to begin thinking about mitigation strategies to include a review of what measures from their original plan have already been completed and thinking about new measures they may like to add. In addition, this group discussed the Capability Section and how to recognize capabilities that already exist within the jurisdiction. Everyone was reminded to set up their Elected Official meetings. Everyone was given a copy of their original Section 3 – Capability Section.

#### There was not a Regional Planning Meeting in April of 2019

#### Planning Team Meeting #3 – NE Regional Group: Buckley Fire Station – May 15, 2019

Planning Team members Debbie Bailey and Wyatt Godfrey conducted the meeting at the Buckley Fire Station with the majority of the regional jurisdictions present. We reviewed the Profile, Capabilities, and Mitigation Strategy Sections, along with introducing the Risk Assessment Section to the group. We also talked about progress made on the In-Kind Match sheets and pre-authorization approval from jurisdictions' governing bodies. Finally, we gathered feedback about our Threat and Hazard Identification Workshop held on May 1-2, and everyone's progress with outreach events for their mitigation plans, especially in relation to fire season starting and the opportunity for communities in this region to incorporate more fire protection and mitigation elements into their planning process.

There was not a Regional Planning Meeting in June of 2019

#### Planning Team Meeting #4 – NE Regional Group: Buckley Fire Station – July 25, 2019

Planning Team members Debbie Bailey and Wyatt Godfrey reviewed the Profile, Capabilities, Risk Assessment, and Mitigation Strategy Sections to see how everyone was coming along with their update process. A reminder was provided for those who had not turned in their in-kind match sheet, as well as for those who had not completed the governing body pre-approval requirement yet. Debbie offered to create jurisdictional maps for public outreach events to bring residents in to talk about hazards that can affect them and how the mitigation plan plays a role in community resilience. Lastly, Todd Kilpatrick, the former Mitigation Grant Program Manager with Washington State Emergency Management Division who now works at Pierce County Emergency Management, spoke to the group about the Hazard Mitigation Grant Program (HMGP), the Pre-Disaster Mitigation Grant (PDM), potential projects that are eligible for those grants, and the upcoming Mitigation Grant Workshop that'll be held on August 12<sup>th</sup> and 19<sup>th</sup>.

#### There was not a Regional Planning Meeting in August of 2019

Planning Team Meeting #5 – NE Regional Group: Buckley Fire Station – September 16, 2019

Planning Team members Debbie Bailey and Wyatt Godfrey reviewed the Profile, Capabilities, Risk Assessment, and Mitigation Strategy Sections to check on the jurisdictions' progress. More specifically, Debbie explained the process of developing new mitigation strategies to add to their plans. This discussion covered how to select a new mitigation strategy, the required components for their strategy development, and the format required to input the strategy into the plan. Feedback was gathered about the August Mitigation Grant Workshop – unanimous positive feedback with a few recommendations to improve for next time. A reminder for the In-Kind Match Sheet and pre-authorization documentation was provided. Finally, the meeting was closed out with a discussion on the progress of meeting the public outreach requirements and ideas for those who had not completed that component yet.

## Planning Team Meeting #6 – NE Regional Group: Buckley Fire Station – October 23, 2019

Planning Team members Debbie Bailey and Wyatt Godfrey held the meeting with less participation than preferred but included a call-in option for those who couldn't attend in person. The usual review of previous sections occurred, with the introduction of the Infrastructure and Plan Maintenance Sections. Participants were taught how to fill out the potentially overwhelming tables in the Infrastructure Section and told to review the Plan Maintenance Section for any inaccurate statements or language. Like the previous meeting, a reminder for the In-Kind Match Sheet, pre-authorization documentation, and public outreach documentation was provided.

Planning Team Meeting #7 – NE Regional Group: Buckley Fire Station – December 9 2019

The final planning meeting was conducted by Debbie Bailey and Wyatt Godfrey. All sections of the plan were discussed and reviewed to ensure participants' questions were answered. A detailed discussion of the Mitigation Strategy Section occurred, specifically looking at the integration of new strategies into the plan and how to reorder them by priority. Like the previous meeting, a reminder for the In-Kind Match Sheet, pre-authorization documentation, and public outreach documentation was provided. Participants were informed that in the new year, Pierce County DEM would be hosting two "workshops" a month where jurisdictions can walk in and get help with their plan on an individual basis, instead of only in the previously used group format. The goal is to refine the work that participants have done thus far and craft it into a well-rounded, comprehensive, and usable Hazard Mitigation Plan.

#### **Drop – In Workshop**

To provide further opportunity for participating jurisdictions to work on their plan updates Pierce County DEM hosted two additional "workshop" meetings per month starting in January 2020. These were not formal meetings but provided individual instruction or assistance to jurisdictions. They were scattered at two-week intervals during the month with alternating morning and afternoon times trying to accommodate busy schedules. Due to the COVID-19 virus pandemic our "drop-in" workshops were canceled for the remainder of the update cycle. We remained available through email and phone call conversations.

Date	Location	Comments/Outcome
January 7, 2020 – 1:00-3:30	Pierce County - DEM	
January 23, 2020 – 9:00-11:30	Pierce County - DEM	
February 11, 2020 – 1:00-3:30	Pierce County - DEM	
February 27, 2020 – 9:00-11:30	Pierce County - DEM	

#### **Public Comment**

Date	Location	Time
October 31, 2019	Online Community Preparedness Survey	N/A
TBD – Due to COVID-19	In-person or online	N/A

### **Elected Official Meetings**

At the February 24, 2020 Dieringer School District's Board of Directors meeting, staff discussed the update process with the Board members, accepted public comment of which there was none, and received Board's acknowledgement that staff had their approval to work on the plan.

## **Joint Planning Requirement**

Dieringer School District has the following identified plan which must collaborate with the mitigation plan; these plans are identified in the table below and must be updated within the predetermined timeline.

Plan	Next Update
Dieringer School Strategic Plan	2020

# Endnote i State and Local Mitigation Planning How-to Guide, Getting Started: building support for mitigation planning, FEMA 386-1, September 2002, p. 3-1.

#### **SECTION 2**

## REGION 5 ALL HAZARD MITIGATION PLAN 2020-2025 EDITION DIERINGER SCHOOL DISTRICT PROFILE SECTION

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#### MISSION STATEMENT

The mission of the Dieringer School District is as follows:

Educating every child for confidence today and contribution tomorrow.

#### **SERVICES SUMMARY**

The Dieringer School District was founded in the year 1890.

The District provides the following services:

#### **Basic Education Act — Goal**

A basic education is an evolving program of instruction that is intended to provide students with the opportunity to become responsible and respectful global citizens, to contribute to their economic well-being and that of their families and communities, to explore and understand different perspectives, and to enjoy productive and satisfying lives. Additionally, the state of Washington intends to provide for a public-school system that is able to evolve and adapt in order to better focus on strengthening the educational achievement of all students, which includes high expectations for all students and gives all students the opportunity to achieve personal and academic success. To these ends, the goals of each school district, with the involvement of parents and community members, shall be to provide opportunities for every student to develop the knowledge and skills essential to:

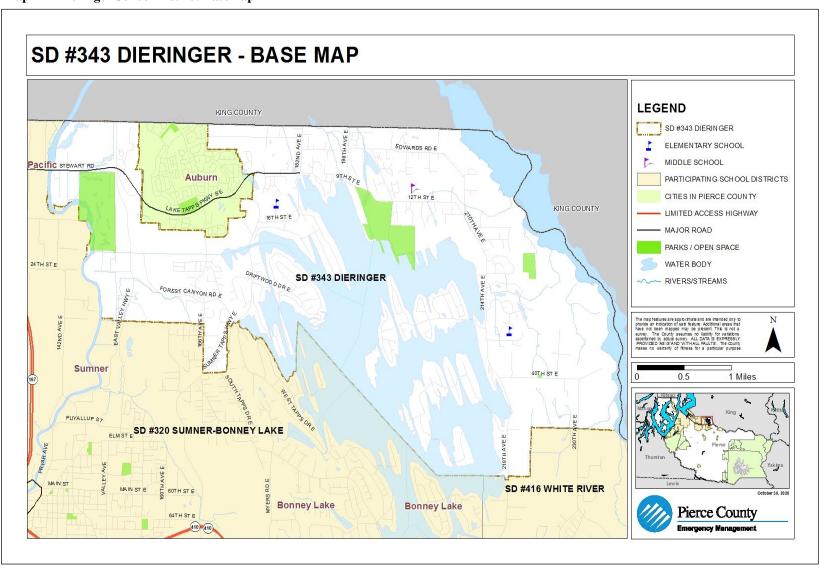
- (1) Read with comprehension, write effectively, and communicate successfully in a variety of ways and settings and with a variety of audiences;
- (2) Know and apply the core concepts and principles of mathematics; social, physical, and life sciences; civics and history, including different cultures and participation in representative government; geography; arts; and health and fitness;
- (3) Think analytically, logically, and creatively, and to integrate technology literacy and fluency as well as different experiences and knowledge to form reasoned judgments and solve problems; and
- (4) Understand the importance of work and finance and how performance, effort, and decisions directly affect future career and educational opportunities. (RCW 28A.150.210)

## **GEO-POLITICAL SUMMARY**

Table 2-1 Geo-Political Summary<sup>1</sup>

	Area	Elevation		Regional F	Partners
Jurisdiction	(sq mi)	Range (ft.)	Major Water Features	Shared Borders	Land Use Authorities
Dieringer School District	13.21	60-660	<ul> <li>Puyallup Watershed</li> <li>13-Mud Mountain Basin</li> <li>15-Lower White River Basin</li> </ul>	<ul><li>White River SD</li><li>Sumner SD</li><li>Auburn SD (KC)</li></ul>	<ul> <li>Bonney Lake</li> <li>Sumner</li> <li>Unincorporated Pierce County</li> <li>Auburn (KC)</li> <li>Pacific (KC)</li> <li>Unincorporated King County</li> </ul>

Map 2- 1 Dieringer School District Basemap



#### POPULATION SUMMARY

#### **Demographics**

Table 2-2 Population<sup>2</sup>

Jurisdiction	Population	Population Density (people/sq mi)	Population Served
Dieringer School	11 950	897.73	11 950
District	11,859	897.73	11,859
Region 5	795,225	440	795,225

Population data in Tables 2-2 and 2-3 are outdated and based off the Washington State Office of Financial Management (OFM) 2010 Census data. Once the 2020 Census data becomes available these population numbers will be updated and replaced in the plan. The same situation occurs with all population figures in Section 4 Risk Assessment assessing the risk and vulnerability for all identified hazards in the Dieringer School District.

#### **Special Populations**

Table 2-3 Special Populations<sup>3</sup>

Jurisdiction	Population	Population % of 65 Plus Total		Population Under 20	% of Total
Dieringer School District	11,859	1,435	12.1%	3,475	29.3%
Region 5	795,225	89,860	11.3%	193,240	24.3%

#### Demographic Analysis

The Dieringer School District is a K-8 district. Enrollment has stayed pretty steady over the last 5 years. In the 2014-2015 school year there were 1,552 students and in the 2019-2020 school year there are 1,572 students. Dieringer currently has 242 students identified as Special Education. Additionally, the district has 75 English Language Learners spanning 19 different languages. The district is comprised of 51.5% male students and 48.5% female students. Approximately 68.9% of the student population identify as White, 0.6% as American Indian/Alaskan Native, 7.6% Asian, 2.2% Black/African American, 9.4% Hispanic/Latino of any race(s), 0.6% Native Hawaiian/Other Pacific Islander and 10.6% Two or More Races. In the area serviced by the district, the population under the age of 20 has remained a constant 29% of the total while the population 65+ had a significant rise from 709 to 1,435. The Dieringer School District's vulnerability has increased as a result of an aging population and a higher population density in comparison to the last update.

#### **INFRASTRUCTURE SUMMARY**

#### General

Table 2-4 Parcel Summary<sup>4</sup>

Jurisdiction	# Parcels	Land Value	Average Land Value	Improved Value	Average Improved Value
Dieringer School District	3,902	\$1,393,188,800	\$357,045	\$1,218,541,400	\$312,286
Region 5	328,831	\$55,032,560,799	\$167,358	\$82,766,510,038	\$251,699

Jurisdiction	Total Assessed Value	Average Assessed Value
Dieringer School District	\$2,611,730,200	\$669,331
Region 5	\$137,799,070,837	\$419,057

#### Jurisdiction Infrastructure

The following table shows the overview of infrastructure owned by the Dieringer School District. The infrastructure is categorized according to the infrastructure sectors as designated by the Department of Homeland Security. This table is intended as a summary only.

For further details on Department of Homeland Security infrastructure sectors, please see the Process Section 1.

Table 2-5 Owned Infrastructure<sup>5</sup>

Total Infrastructure	Schools	Maintenance	Other	Total Value (\$)
5	3	1	1	\$57,711,100

## **ECONOMIC SUMMARY**

Table 2-6 Fiscal Summary<sup>6</sup>

Jurisdiction	Operating Costs (per month)	Operating Budgeted Revenues <sup>7</sup>	Operating Budgeted Expenditures <sup>8</sup>	Fund Balance as % of Operating Cost	Avg Fund Balance (5 yrs)
Dieringer School District	\$1,914,058	\$26,307,307	\$24,880,400	17.74%	\$2,346,544

#### RESOURCE DIRECTORY

#### Regional

- **Dieringer School District** http://www.dieringer.wednet.edu/
- Pierce County Government <a href="https://piercecountywa.gov/">https://piercecountywa.gov/</a>
- Pierce County DEM
  <a href="https://piercecountywa.gov/104/Emergency-Management">https://piercecountywa.gov/104/Emergency-Management</a>
- Pierce County Planning & Public Works (PPW) https://piercecountywa.gov/4999/Planning-Public-Works
- Municipal Research & Services Center of Washington (MRSC) <a href="http://www.mrsc.org/">http://www.mrsc.org/</a>

#### **National**

• US Census www.census.gov/

#### **Endnotes**

 $<sup>^{\</sup>rm l}$  Information from Pierce County GIS application, County View Pro (2019).

<sup>&</sup>lt;sup>2</sup> Derived from Pierce County GIS parcel information and extraction and Office of Superintendent of Public Instruction (OSPI).

<sup>&</sup>lt;sup>3</sup> Information from Pierce County GIS application, CountyView Pro (2019).

<sup>&</sup>lt;sup>4</sup> Information from Pierce County GIS application, CountyView Pro (2019). Numbers derived from tax parcels whose centers are within selected jurisdictions.

<sup>&</sup>lt;sup>5</sup> Information obtained from Jurisdiction from Infrastructure Matrix.

<sup>&</sup>lt;sup>6</sup> Information obtained from Jurisdiction from current Budget.

<sup>&</sup>lt;sup>7</sup> Non-Capital

<sup>&</sup>lt;sup>8</sup> Non-Capital

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#### **Section 3**

## **Capability Identification Requirements**

#### Planning Process---Requirement §201.6(b):

An open public involvement process is essential to the development of an effective plan.

#### Documentation of the Planning Process---Requirements §201.6(b):

In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process **shall** include:

- (3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.
  - Does the planning process describe the review and incorporation, if appropriate, of existing plans, studies, reports, and technical information?

#### Assessing Vulnerability: Analyzing Development Trends---Requirement §201.6(c)(2) (ii)(C):

[The plan **should** describe vulnerability in terms of] providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.]

Does the plan describe land uses and development trends?

Identification and Analysis of Mitigation Actions: National Flood Insurance Program (NFIP) Compliance--Requirement §201.6(c)(3)(ii):

[The mitigation strategy] must also address the jurisdiction's participation in the National Flood Insurance Program (NFIP), and continued compliance with NFIP requirements, as appropriate.

• Does the new or updated plan describe the jurisdiction(s) participation in the NFIP?

#### **SECTION 3**

## **REGION 5 ALL HAZARD MITIGATION PLAN 2020-2025 EDITION DIERINGER SCHOOL DISTRICT CAPABILITY IDENTIFICATION SECTION**

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TECHNICAL CAPABILITY	
FISCAL CAPABILITY	_
SPECIFIC CAPABILITIES	

## **Legal and Regulatory**

**Table 3-1 Legal and Regulatory** 

Regulatory Tools (Ordinances and Codes)	Yes or No
Jurisdiction Capabilities	
Shelter	Yes
Eminent Domain	Yes
RCW 28A - Common School Provisions	Yes
WAC Title 392 - Office of Superintendent of Public Instruction	Yes

## **Administrative Capability**

**Table 3-2 Administrative Capability** 

Administrative Tools (Agency, Departments or Program)	Yes or No
Jurisdiction Capabilities	
Board of Directors	Yes
Booster Clubs	No
Budget and Finance Department	Yes
CPR/Hepatitis B/HIV Training	Yes
District Website	Yes
Emergency Drills	Yes
Incremental Seismic Rehabilitation of School Buildings	No
Lahar Evacuation Routes and SOPs	No
Lahar Warning System and Evacuation Program	No
Parent Teachers Associations	Yes
School Resource Officers (SRO)	No
Superintendent	Yes
Regional Capabilities	
Educational Facilities Professionals (formerly APPA)	No
Pierce County Assessor-Treasurer	Yes
Pierce County View GIS	Yes
Pierce County Department of Emergency Management	Yes
Pierce County Fire Districts	Yes
Pierce County Fire Prevention Bureau	Yes
Pierce County Sheriff's Department	Yes
Pierce County Transportation Program	Yes
Pierce County Water Programs	No
Puget Sound Educational Service District	Yes
Rapid Responder System (statewide mapping program)	Yes
Safe Schools Healthy Students Initiative of Greater Pierce County	Yes
Tacoma Pierce County Health Department	Yes
Workman's Compensation Trust	Yes

## **Technical Capability**

**Table 3-3 Technical Capability** 

Technical Tools (Plans and Other)	Yes or No
Jurisdiction Capabilities	
Bomb Threat Assessment Guide	No
Capital Facilities Plan	Yes
Closure Telephone Plan	Yes
Emergency Management Plan	Yes
Evacuation Plans	Yes
Policies and Procedures	Yes
Strategic Plan	Yes
Student Rights & Responsibilities	Yes
Regional Capabilities	
Pierce County Flood Loss Plan	No

## **Fiscal Capability**

**Table 3-4 Fiscal Capability** 

Fiscal Tools (Taxes, Bonds, Funds and Fees)	Yes or No
Jurisdiction Capabilities	
TAXES:	
Authority to Levy Taxes	Yes
BONDS:	
Authority to Issue Bonds	Yes
FUNDS:	
Associated Student Body Fund	Yes
Capital Projects Fund	Yes
Debt Services Fund	Yes
General Fund	Yes
Transportation Vehicle Fund	Yes
Trust Funds	No
FEES:	
Mitigation Impact Fees	Yes
Regional Capabilities	
School Based Partnerships Grant Program	No

## **Specific Capabilities**

**Table 3-5 Specific Capabilities** 

Table 5-5 Specific Capabilities
Jurisdiction Specific Capabilities
Legal & Regulatory
RCW, WAC, WSSDA Policies
Administrative & Technical
Dieringer Building Safety Plans
Dieringer School Safety Committee
<u>Fiscal</u>
RCW, WAC, WSSDA Policies

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# Section 4

# **Risk Assessment Requirements**

### Identifying Hazards--- Requirement §201.6(c)(2)(i):

[The risk assessment **shall** include a] description of the type ... of all natural hazards that can affect the jurisdiction.

 Does the new or updated plan include a description of the types of all natural hazards that affect the jurisdiction?

### Profiling Hazards---Requirement §201.6(c)(2)(i):

[The risk assessment **shall** include a] description of the ... location and extent of all natural hazards that can affect the jurisdiction. The plan **shall** include information on previous occurrences of hazard events and on the probability of future hazard events.

- Does the risk assessment identify (i.e., geographic area affected) of each hazard being addressed in the new or updated plan?
- Does the risk assessment identify the extent (i.e., magnitude or severity) of each hazard addressed in the new or updated plan?
- Does the plan provide information on previous occurrences of each hazard addressed in the new or updated plan?
- Does the plan include the probability of future events (i.e., chance of occurrence) for each hazard addressed in the new or updated plan?

## Assessing Vulnerability: Overview---Requirement §201.6(c)(2) (ii):

[The risk assessment **shall** include a] description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description **shall** include an overall summary of each hazard and its impact on the community.

- Does the new or updated plan include an overall summary description of the jurisdiction's vulnerability to each hazard?
- Does the new or updated plan address the impacts of each hazard on the jurisdiction?

Assessing Vulnerability: Addressing Repetitive Loss Properties---Requirement §201.6(c)(2) (ii): [The risk assessment] must also address the National Flood Insurance Program (NFIP) insured structures that have been repetitively damaged by floods.

 Does the new or updated plan describe vulnerability in terms of the types and numbers of repetitive loss properties located in the identified hazard areas?

## Assessing Vulnerability: Identifying Structures---Requirement §201.6(c)(2) (ii)(A):

The plan **should** describe vulnerability in terms of the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas...

- Does the new or updated plan describe vulnerability in terms of the types and numbers of existing buildings, infrastructure, and critical facilities located in the identified hazard areas?
- Does the new or updated plan describe vulnerability in terms of the types and numbers of future buildings, infrastructure, and critical facilities located in the identified hazard areas?

## Assessing Vulnerability: Estimating Potential Losses---Requirement §201.6(c)(2) (ii)(B):

[The plan **should** describe vulnerability in terms of an] estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(ii)(A) of this section and a description of the methodology used to prepare the estimate...

- Does the new or updated plan estimate potential dollar losses for vulnerable structures?
- Does the new or updated plan describe the methodology used to prepare the estimate?

#### Assessing Vulnerability: Analyzing Development Trends---Requirement §201.6(c)(2) (ii)(c):

[The plan **should** describe vulnerability in terms of] providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

• Does the new or updated plan describe land uses and development trends?

# **SECTION 4**

# REGION 5 ALL HAZARD MITIGATION PLAN 2020-2025 EDITION DIERINGER SCHOOL DISTRICT RISK ASSESSMENT SECTION

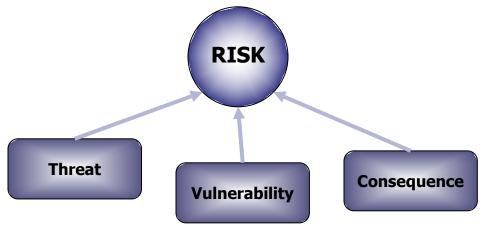
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# **Section Overview**

The Risk Assessment portrays the threats of natural hazards, the vulnerabilities of a jurisdiction to the hazards, and the consequences of hazards impacting communities. Each hazard is addressed as a threat and is identified and profiled in the Hazard Identification. The vulnerabilities to and consequences of a given hazard are addressed in the Vulnerability Analysis. Vulnerability is analyzed in terms of exposure of both population and infrastructure to each hazard. Consequences are identified as anticipated, predicted, or documented impacts caused by a given hazard when considering the vulnerability analysis and the characteristics of the hazard as outlined in its identification.



The WA Region 5 **Hazard Identification** was used for this plan. Each jurisdiction's Vulnerability and Consequence Analysis are based on the Region 5 Hazard Identification. The Region 5 Hazard Identification can be found in the Base Plan. Each hazard is identified in subsections. The subsections are grouped by hazard-type (i.e., geological, meteorological, and technological hazards) and then alphabetically within each type. A summary table of the WA Region 5 Hazard Identification is included in this section as Table 4-1a, Table 1b, and Table 4-1c.

The Vulnerability Analysis is displayed in six tables:

- o Table 4-2 General Exposure
- o Table 4-3 Population Exposure
- o Table 4-4 General Infrastructure Exposure
- o Table 4-5a Consequence Analysis Chart Geological
- o Table 4-5b Consequence Analysis Chart Meteorological
- o Table 4-5c Consequence Analysis Chart Technological

Each jurisdiction has its own Vulnerability Analysis, and it is included in this section.

The Consequence Identification is organized by Threat. Each threat page summarizes the hazard, graphically illustrates exposures from the Vulnerability Analysis, and lists corresponding Consequences. Each jurisdiction has its own Consequence Identification and it is included in this section: avalanche, earthquake, landslide, tsunami, volcanic, drought, flood, severe weather, wildland/urban interface fire, abandoned mines, civil disturbance, cyber-attack, dam failure,

energy emergency, epidemic, hazardous materials, pipeline, terrorism / active threat, and transportation accident.

Specific information and analysis of a jurisdiction's owned (public) infrastructure is addressed in the Infrastructure Section of its Plan.

# **Vulnerability and Hazard Impact Analysis**

Through the Mitigation, Hazard Identification and Risk Assessment (HIRA) and Comprehensive Emergency Management Plan (CEMP) planning processes, the Dieringer School District has identified fourteen major hazards that significantly affect the region. These hazards were chosen based on multiple criteria including high frequency and potential impact.

# Geography and Climate

The geography of the Dieringer School District is made up of steep hills and low valleys. The area is located around the north 2/3rds of the Lake Tapps reservoir and generally has mild and steady rainfall annually. The make-up of the land and nominal weather patterns make harsh weather an issue that needs to be accounted for and mitigated. Since the climate is typically mild, severe weather tends to hit the area harder and make a greater impact to certain critical services like transportation, communications and utilities. Additionally, the Dieringer School District is substantially in unincorporated Pierce and lacks access to services that are readily available to surrounding jurisdictions.

## Geological:

- Earthquake
- Landslide
- Volcanic

## Meteorological:

- Drought/WUI
- Flood
- Severe Weather

## Technological:

- Civil Disturbance
- Cyber-Attack
- Dam Failure
- Energy Emergency
- Epidemic
- Hazardous Materials/Pipelines
- Terrorism / Active Threat
- Transportation Accident

#### Introduction

- The National Threat and Hazard Identification and Risk Assessment (THIRA)<sup>1</sup> published by FEMA July 2019 provides scenarios and introduced an important concept: Plausible Concurrent Operations. Plausible Concurrent Operations represents ongoing response and recovery operations and are a way of recognizing that multiple events that have no connection to one another may overlap and impact an already vulnerable jurisdiction. An example of Plausible Concurrent Operations would be responding and recovering from a pandemic outbreak and then a month later there is an earthquake. Secondary hazards such as a tsunami, landslides, fires, liquefaction, hazardous material spills, energy emergency following an earthquake are incorporated with their primary hazard and are not listed as separate concurrent operations.
- May of 2020, we are several months into the COVID-19 pandemic outbreak as we are writing this analysis. The probability of a concurrent incident for all jurisdictions is extremely high during this COVID-19 outbreak.
- The concurrent scenarios/hazards of most concern include:
  - o epidemic/pandemic
  - o earthquake (includes tsunami, liquefaction, landslides, fire, hazardous material spills, energy emergency)
  - o a lahar
  - o severe weather
  - o terrorism and active threat / attack tactics
- Although not listed above civil disturbance can have a high consequence when paired with epidemic/pandemic.

The vulnerability and impact analysis incorporated many findings from other assessments for a holistic approach. The assessments and key findings are briefly captured here but additional details can be found in the Base Plan Section 4: Pierce County Hazard Identification & Risk Assessment.

# Geological

# *Earthquake*

The Dieringer School District averages at least one earthquake every ten years. More recently they have become more frequent. There are three distinct earthquake threats in our region. Deep earthquakes, like the 2001 Nisqually Earthquake, which was a magnitude 6.8; earthquakes on the Seattle or Tacoma Faults that could have a magnitude up to 8.0; and the Cascadia Subduction Zone located off the Washington Coast that could have a magnitude 9.0 or higher earthquake. Any of these types of earthquakes could cause millions, if not billions of dollars in damage within the region.

• In March of 2019 the Department of Homeland Security's Regional Resiliency Assessment Program (RRAP) published the Resiliency Assessment of Washington State

- Transportation Systems.<sup>2</sup> This assessment used a Cascadia Subduction Zone magnitude 9.0 earthquake and focused on WA surface transportation systems.
- Most buildings in the school district are composed of a variety of construction types, dating from 1976 to 2005, of which a major portion could be liquefiable or settle differentially in an earthquake.

More detailed information on the impacts of earthquakes in the Dieringer School District region can be found on the Pierce County Department of Emergency Management website, WA State Department of Natural Resources and through the US Geological Survey and in the Region 5 All Hazard Mitigation Plan-Base Plan.

#### Landslide

An infrastructure exposure review identified deep and shallow landslides as the costliest impact aside from our baseline impacts such as severe weather, epidemic, and more. The most at risk are areas near a body of water including creeks, rivers, lakes, the Puget Sound or where slopes exceed 15 percent. When these hillsides become wet, it is possible for the slope to fail. These areas are also at an increased risk of damage resulting from an earthquake or slope settlement.

Major transportation routes including East Valley Hwy E., Lake Tapps Pkwy E., Island Park Way E., are all highly susceptible to deep and shallow landslides.

Although the risk of a major slide is relatively low, the potential impact could be devastating to the students and staff's families, impact travel routes and isolating populations. Students and staff will not be directly impacted by landslides when in school buildings. The greatest impacts are students and staff unable to attend school. The community may be isolated for several weeks.

# Meteorological

# Drought and WUI

The Puget Sound region is susceptible to a Wildland Urban Interface (WUI) fire event. While individual communities have different exposures, the development of extended dry conditions in the summer months leads to increased risk. The causes of WUI fires range from weather related events to human caused. The district has several areas of terrain exposure where school properties are interspersed in a forest environment or where large tracts of the properties abut undeveloped land. While catastrophic WUI fires are a rare occurrence in Western Washington, the risk is increasing in many communities, including all of Pierce County.

#### Flood

There are very few areas identified in the district as being at risk for floods. The areas at risk do not flood often, but during periods of heavy rain it is possible. The district's proximity to the Carbon River increases the risk of flooding. The sluffing off of nearby hillsides have the potential to redirect the Carbon River and flood portions of the district. State Route 165 floods consistently between the Town of Wilkeson and Carbonado.

## Severe Weather

There have been a steadily increasing number of disaster declarations of severe storms affecting the Dieringer School District and the surrounding region such as windstorms, snowstorms, and ice storms. Harsh weather, creating severe storms, affects the Dieringer School District area at least once every year and the resultant damages/costs to our citizens can be high.

Windstorms and winter storms cause the most impact to communities. Windstorms are more frequent than winter storms but often have a short-term impact to communities. Rain and other conditions such as low temperatures are also typically associated with windstorms creating more hazardous conditions. Impacts include road closures, loss of electricity, cold homes, and downed trees. Downed trees are the greatest secondary hazard as they fall on houses, vehicles, and people. They can block utilities, road crews, and responders from locations and put our staff in danger.

Winter storms can be longer and less frequent. Winter storm Maya in February of 2019 was a back to back series where a large amount of snow fell and accumulated in short timeframes. Over the course of almost three weeks, some locations such as Lakewood and Tacoma saw snow accumulation 8-10 inches in others like Gig Harbor, Puyallup and rural Pierce County 10-14 inches. In addition to this there was not enough sand for road crews in the state, so some roads were left unplowed until the last round of snowfall as a conservation strategy of this scarce resource.

# Technological / Human-Caused

#### Civil Disturbance

Civil disturbances are the result of groups or individuals feeling their needs or rights are being infringed upon, either by society at large, a segment thereof, or the current overriding political system. When this results in community disruption where intervention is required to maintain public safety it has become a civil disturbance. Civil disturbance spans a wide variety of actions and includes, but is not limited to; labor unrest, strikes, civil disobedience, demonstrations, riots or rebellion. Triggers could include; racial tension, immigration status, religious conflict, unemployment, a decrease in normally accepted goods or services such as water, food, or gas shortages, or unpopular political actions. There has never been an issue with civil disturbances within the districts' borders, but they have occurred in the County. Civil disturbances can affect the region's economic vitality should businesses be forced to close or highways and other infrastructure severely impacted.

Pierce County experiences peaceful protests frequently and sometimes students participate in a walkout. Beginning on May 27, 2020 several locations within Pierce County experienced riots and destruction of property flowing the death of George Floyd in Minneapolis, MN. Although school was online during this time, the cascading impacts to mental and behavioral health is a great concern.

Cyber Attack

- Cyber Critical Infrastructure CyberSecurity Consultants provides services to many in Pierce County including South Sound 9-1-1, Pierce County Radio Communications, Washington State Patrol, and many other local agencies. In 2019 the top threats were:
  - 1. Phishing/spearphishing.
  - 2. Ransomware.
  - 3. Distributed Denial-of-Service (DDoS) attack.
  - 4. Advance Persistent Threat.
  - 5. Fileless Malware.
- The top vectors or common access points were:
  - 1. Email attachments/links.
  - 2. Drive-by or download.
  - 3. Webserver/Web app.
  - 4. USB drives.
- During times of disaster there is a significant increase in scams, phishing attacks, and Advance Persistent Threat attacks to gain access to financial and cyber systems.
- In COVID-19 there was a significant increase in attacks against medical centers and collaboration platforms.

#### Dam Failure

Failures at Lake Tapps or Mud Mtn. Dam would cause devastating impacts. The population in the district has greatly increased as further developments in the jurisdiction provide more opportunities and attractions. Lake Tapps is in the area but does not threaten the school district with major flooding. The risk of a dam failure, even in a Cascadia Subduction Zone magnitude 9.0 earthquake, is very low due to the strict regulations.

# Energy Emergency

A utility emergency may involve one or more of the following; natural gas, heating oil, gasoline, coal, electricity or water. These types of emergencies can create a great risk to the district.

FEMA Region X Power Grid Risk Profile: A Risk Analysis Profile from the Region X Threat and Hazard Analysis Report March 2019 key findings:

- Transmission grid is less extensively interconnected in comparison to power grids
  elsewhere in the US. This provides fewer redundancies in case of failure of part of the
  system.
- Difficult to replace equipment. Restoration timeline months-years. If a number of high-voltage transformers are damaged in an incident triggering an outage, restoration and recovery will be difficult because these transformers are not typically manufactured domestically, and their size and weight make transportation difficult.
- Utilities face financial difficulty that impedes investment in mitigation measures due to rate regulations. Restoration and recovery will require substantial expenditures from utilities at a time when their revenue stream from the sale of power is curtailed.

- Rural populations may be proportionately more impacted due to the unique geographic
  features of Pierce County making access difficult. The use of drones and helicopters help
  significantly but often surface transportation is needed for restoration. These populations
  already deal with more outages than their urban counterparts and may be better prepared
  and more resilient.
- Those dependent on powered medical devices or services such as dialysis face immediate threat to life. Community preparedness should identify these populations and plan for their survival.
- Most widespread impacts to an energy emergency are usually the result of severe weather or industrial accidents that have cascading impacts.
- Outages are often smaller in scale when power lines feeding the substation are impacted.
  Often communications service providers infrastructure such as comcast will be impacted
  concurrently. If a communications provider fiber line is damaged, then a community
  could be without internet, unable to use landlines and cell phones. Utility restoration may
  be delayed due to transportation impacts. Some cell phones may still work depending on
  your provider, but often rural communities will be isolated until both transportation and
  utilities are functioning.
- An earthquake in Pierce County or a catastrophic impact to a fuel producer can result in a shortage. Critical equipment such as generators, vehicles, and other operating machines could be impacted for a long time.

# **Epidemic**

- Throughout history, disease outbreaks have changed and shaped society. The impact of these diseases varies based on the severity of the disease, duration of the illness and spread within the community.
- The most threatening emergency management situation is the outbreak of a new disease with high rates of illness and death. New disease outbreaks can quickly overwhelm local hospitals, healthcare providers and decrease society's ability to maintain critical services.
- An outbreak can be characterized by the extent of spread of the disease. An outbreak is considered pandemic if the disease spreads throughout the world. The outbreak is considered epidemic if it's above normal disease levels within a geographical area. More common diseases are classified as endemic, as they are at or below normal levels within a community. Brand new diseases can quickly become an epidemic/pandemic if there is little or no immunity in the population.
- For the Dieringer School District, the Tacoma-Pierce County Health Department investigates and coordinates the Public Health surveillance of disease outbreaks. For information specific to the COVID-19 outbreak see the Unincorporated Pierce County Addendum.

## Hazardous Materials / Pipeline

There are several facilities in the district that are known to store and/or utilize hazardous materials. Assessing the known locations of hazardous materials and the routes those materials travel allows for preplanning and provides an overview of the level of risk from a hazardous

materials event. There are no known facilities in the district required to complete Tier II reporting. Tier II reports are forms that organizations and businesses through the United States with hazardous chemicals above certain quantities, are required by the EPA to complete. Another hazardous material that should be recognized is meth labs. Several have been found in wooded areas and are cleaned-up by Washington Department of Ecology. A natural gas pipeline runs through the district. Exposure analysis identifies 18% of the population at risk.

# Terrorism / Active Threat

- Attacks can be perpetrated by many different actors with different motivations, such as terrorists, violent extremists, and targeted violent offenders. All use violent tactics to harm people and/or property.
- The consequences of the attack depend on the tactics employed by the threat actor, such as active shooter(s) events, bombings, arson, murder, kidnapping, hostage-taking, maritime attack, hijacking or skyjacking, and vehicle ramming.
- The threat of terrorism and violent extremism has grown with the interconnectedness afforded by the internet. Terrorist organizations can reach anyone around the world to support or participate in attacks. The openness of the internet allows for the disconnected/autonomous sharing of ideas, tactics, and successes that motivate others to act. A social media presence can be both an indicator and an impact as our younger population including students in schools can feed off of the message and create localized issues.
- The number of active shooter incidents has increased significantly over the last five years. Intense media coverage of active shooter events has created a heightened sense of risk. It remains nearly impossible to predict violent attacks, but security and intervention measures are continuing to evolve with the use of new tactics employed by threat actors. There have been several incidents in local schools, but none have been tied to terrorist activity. There are many public spaces and locations vulnerable to attacks within the district.
- Incidents of terrorism and active threats have increased in the United States. Local and tribal police departments, local EMS and fire departments, the Sheriff's Department, Washington State Patrol, and regional partners have been training regularly for active threats such as a complex coordinated terrorist attack. The current threat environment is assessed annually by the Washington State Fusion Center.

# **Changes in Development**

Dieringer School District has had limited development over the last five years, mostly focusing on technological upgrades to improve communications and system reliability. In the last two years, the District has upgraded network capabilities – improving connectivity for students and staff. Looking ahead to planned development projects, the District will be moving to a cloud-based phone solution towards the end of 2020 and into 2021. In addition to the enhanced technological capabilities this project will bring, there are also benefits in the event of a disaster. The cloud-based system will allow files to be accessed remotely to aid the District in their continuity of operations planning and recovery efforts to return to "normal" operations. Other

than technological advances, Dieringer School District has not completed any new construction or building additions since the last mitigation plan update.			

Table 4-1a WA Region 5 Hazard Identification Summary - Geological

		PROBABILITY/	MANG EVOLUNDES AND THANK HE	
		DATE/PLACE	RECURRENCE	MAPS, FIGURES AND TABLES
Geological	<u>AVALANCHE</u>	Not Applicable	Yearly in the mountainous areas of the County including Mt. Rainier National Park and the Cascades.	Slab Avalanche Areas Vulnerable to Avalanche Pierce County Avalanches of Record
	<u>EARTHQUAKE</u>	N/A7/22/2001 Nisqually Delta N/A6/10/2001 Satsop DR-1361-WA2/2001 Nisqually N/A7/2/1999 Satsop DR-196-WA4/29/1965 Maury Island, South Puget Sound N/A4/13/1949 South Puget Sound N/A2/14/1946 Maury Island	40 years or less occurrence Historical record—about every 23 years for intraplate earthquakes.	Types of Earthquakes Major Faults in the Puget Sound Basin Seattle and Tacoma Fault Segments Pierce County Seismic Hazard Major Pacific Northwest Earthquakes Notable Earthquakes Felt in Pierce County Salmon Beach, Tacoma Washington following Feb 2001 Earthquake Liquefaction Niigata Japan-1964 Lateral Spreading – March 2001
	LANDSLIDE	DR-1671-WA2006 DR-1361-WA2001 DR-1159-WA12/96-2/1997 DR-852-WA1/1990 DR-545-WA12/1977 State proclamations: 20-02 - 01/20/2020 17-08 - 05/18/2017 SR 410	Slides with minor impact (damage to five or less developed properties or \$1,000,000 or less damage) 10 years or less.  Slides with significant impact (damage to six or more developed properties or \$1,000,000 or greater damage) 100 years or less.	Northeast Tacoma Landslide January 2007 Pierce County Landslide Deposits, Scarps and Flanks, and Susceptibility Landslide Facts for Pierce County — Shallow Landslide Susceptibility Pierce County Deep Landslide Hazard Area Pierce County Shallow Landslide Hazard Area Pierce County Slope Stability Areas Pierce County Comparison of Landslide Susceptible Areas Notable Landslides in Pierce County Ski Park Road — Landslide January 2003 SR-165 Bridge Along Carbon River — Landslide February 1996 Aldercrest Drive — Landslide
	<u>TSUNAMI</u>	N/AA.D. 900 Seattle Fault EQ Sourced Tsunami N/A1894 Puyallup River Delta N/A1949 Tacoma Narrows	Due to the limited historic record, until further research can provide a better estimate a recurrence rate of plus or minus 100-200 years will be used.	Hawaii 1957 – Residents Explore Ocean Floor Before Tsunami Hawaii 1949 – Wave Overtakes a Seawall Tsunamis in Washington State Tsunami Inundation and Current Based on Earthquake Scenario Notable Tsunamis in Pierce County Salmon Beach, Pierce County 1949 – Tsunamigenic Subaerial Landslide Salmon Beach, Pierce County 1949 – Tsunamigenic Subaerial Landslide Damage in Tacoma from 1894 Tsunami
	VOLCANIC	DR-623-WA5/1980	The recurrence rate for either a major lahar (Case I or Case II) or a major tephra eruption is 500 to 1000 years. The recurrence rate for either a major lahar (Case I or Case II) or a major tephra eruption is 500 to 1000 years.	Volcano Hazards Tephra Types and Sizes Lahars, Lava Flows and Pyroclastic Hazards of Mt. Rainier Estimated Lahar Travel Times for Lahars 10 <sup>7</sup> to 10 <sup>8</sup> Cubic Meters in Volume Pierce County Eruptive Events and Lahars

Table 4-1b WA Region 5 Hazard Identification Summary – Meteorological

	Table 4-1b WA Region 5 Hazard Identification Summary – Meteorological					
	HAZARD	DECLARATION #	PROBABILITY/	MADE FICHDER AND TADLES		
		DATE/PLACE	RECURRENCE	MAPS, FIGURES AND TABLES		
	CLIMATE CHANGE	Not Applicable	Not Applicable	IPCC Models on Global Temperature Change: 1900 to 2100 Recent and Projected Temperatures for the Pacific Northwest Puget Sound Projected Warming Puget Sound Projected Precipitation Change Projected Decline in Snowpack Projected Sea Level Risk – Tacoma Sea Level Rise Inundation Area in 2100 Tacoma Tideflats Climate Impacts and Natural Hazards Comparison of the South Cascade Glacier: 1928 to 2003 Lower Nisqually Glacier Retreat: 1912 to 2001		
	<u>DROUGHT</u>	Many dry seasons but no declarations State proclamations: 18-057/31/2018	50 years or less occurrence	Sequence of Drought Impacts Palmer Drought Severity Index Pierce County Watersheds %Area of Basin in Drought Conditions Since 1895 %Time in Severe to Extreme Drought: 1895-2004 %Time in Severe to Extreme Drought: 1985-1995 Notable Droughts Affecting Pierce County Columbia River Basin USDA Climate Zones – Washington State		
<u>Meteorological</u>	FLOOD	DR-WA 181701/2009 DR-1734-WA12/2007 DR-1671-WA11/2006 DR-1499-WA10/2003 DR-1159-WA12/96-2/97 DR-1100-WA1-2/1996 DR-1079-WA11-12/1995 DR-896-WA11/1990 DR-883-WA11/1990 DR-852-WA11/1986 DR-545-WA12/1977 DR-492-WA12/1975 DR-328-WA2/1972 DR-185-WA12/1964	5 years or less occurrence  Best available sciencethe frequency of the repetitive loss claims indicates there is approximately a 33 percent chance of flooding occurring each year.	Lower Puyallup River Historical Flooding in Lower Puyallup River Levees and Revetments in the Lower Puyallup River Summary of Damages to Lower Puyallup River Facilities Middle Puyallup River Historical Flooding in Middle Puyallup River Levees and Revetments in the Middle Puyallup River Summary of Damages to Lower Middle River Facilities Upper Puyallup River Historical Flooding in Upper Puyallup River Levees and Revetments in the Upper Puyallup River Summary of Damages to Upper Puyallup River Facilities Lower White River Historical Flooding in Lower White River Levees and Revetments in the Lower White River Summary of Damages to Lower White River Facilities Upper White River Historical Flooding in Upper White River Levees and Revetments in the Upper White River Historical Flooding in Greenwater River Carbon River Historical Flooding in Carbon River South Prairie Creek Historical Flooding in South Prairie Creek Middle Nisqually River Historical Flooding in Middle Nisqually River Upper Nisqually River		

<u>Meteorological</u>	SEVERE WEATHER	DR-4056-WA - 01/2012 DR-1825- WA - 12/2008 - 01/2009 DR-1682-WA12/2006 DR-1159-WA12/96-2/1997 DR-1152-WA11/19/1996 DR-981-WA1/1993 Inauguration Day Storm DR-137-WA10/1962 Columbus Day Storm State proclamations: 19-0602/15/2019 (Dec. 2018 Winter Storm) 19-0502/14/2019 Winter Storm Maya 17-085/18/2017 Severe rain 17-033/14/2017 17-021/19/2017 Winter Storm 15-1812/24/2015 Windstorms and Flooding	The recurrence rate for all types of severe storms is 5 years or less.	Historical Flooding in Upper Nisqually River Levees and Revetments in the Upper Nisqually River Summary of Damages to Upper Nisqually River Facilities Mashel River Historical Flooding in Mashel River Nov 2006 Flooding River Park Estates – Along Puyallup River Fujita Tornado Damage Scale Windstorm Tracks Pierce County Severe Weather Wind Hazard – South Wind Event Pierce County Severe Weather Wind Hazard – Enumclaw East Wind Event Notable Severe Weather in Pierce County Snowstorm January 2004 Downtown Tacoma Satellite Image – Hanukkah Eve Windstorm Before/After Tornado Damage Greensburg KS May 2007 County Road December 2006 Windstorm Tacoma Narrows Bridge – November 1940 Windstorm
	WUI FIRE	EM-3372-WA Aug-Sept. 2015 State proclamations: 17-129/2/2017 Norse Peak Fire 15-116/26/2015	Based on information from WA DNR the probability of recurrence for WUI fire hazard to Pierce County is 5 years or less.	Washington State Fire Hazard Map Pierce County Forest Canopy Industrial Fire Precaution Level Shutdown Zones Carbon Copy Fire August 2006 Washington State DNR Wildland Fire Statistics: 1973-2007 DNR Wildland Response South Puget Sound Region: 2002-2007 Pierce County DNR Fires

Table 4-1c WA Region 5 Hazard Identification Summary – Technological

	HAZARD	DECLARATION #	PROBABILITY/	MARG ELCURES AND TABLES
		DATE/PLACE	RECURRENCE	MAPS, FIGURES AND TABLES
	ABANDONED MINES	Not Applicable	Based on information from WA DNR. The Pierce County Sheriff's Department reports that they have had very few incidents of citizens entering the abandoned mines in east Pierce Co.  Isolated issues of minor subsidence have occurred, typically following flood events i.e. 2009/2010.	Pierce County – Mine Hazard Areas Map Based on WA DNR Information Schasse, Koler, Eberle, and Christie, <u>The Washington State Coal Mine Map Collection: A Catalog, Index, and User's Guide</u> , Open File Report 94-7, June 1984 Pierce County 2014 HIRA
	<u>CIVIL</u> <u>DISTURBANCE</u>	Not Applicable	In the past 150 + years there have been eleven major incidents giving a recurrence rate of every seven years.	Pierce County Civil Disturbance High Probability Locations Map Pierce County Civil Disturbance High Probability Locations Zoomed In Map
	DAM FAILURE	Not Applicable	No occurrences in Pierce County 50+ years recurrence for WA State	Reasons for Dam Failures Nationally PC Dams that Pose a High or Significant Risk to the Public Pierce County High and Significant Risk Dams Dam Failures in WA State Mud Mt. Dam Intake
Technological	ENERGY EMERGENCY	Not Applicable	Power outages are the most frequent energy incident, via natural hazards (storms, ice) Recurrence rate – every five years (storms) Recurrence rate – 50+ years (major)	Tacoma Power Outage 1929, USS Lexington provides power
Tea	EPIDEMIC / PANDEMIC	EM-3507-WA 03/12/2020	Epidemic:  • 1976-2014 Ebola outbreaks  • Flu occurs annually Pandemics:  • 2009-2010 "Swine Flu" recurrence rate – 20 years	Individuals hoping to avoid contacting disease
	HAZARDOUS MATERIALS	Not Applicable	Dalco Passage oil spill of October 13, 2004     Chlorine Spill Port of Tacoma February 12, 2007  Large incidents five year recurrence Small incidents one week recurrence	List of constituents or ingredients found in Bakken crude oil Environmental Protection Agency's Identified Top Five Facilities Exxon Valdez Oil Spill, 1989 Pierce County Spill data from May 2018 to May 2019 Dalco Passage oil spill (October 13, 2004)
	<u>PIPELINE</u> <u>FAILURE</u>	Not Applicable	Northwest Pipeline Corporation natural gas incident May 1 <sup>st</sup> 2003, in Sumner 10 years recurrence	Cities and Towns with interstate pipelines within, or within 1 mile of city limits Olympic Pipeline Rupture 06/10/99 Pierce County Pipelines Whatcom Falls Park, 2003
	TERRORISM ACTIVE THREAT CYBER ATTACK	Not Applicable	Minor incident –recurrence 1-year Major Incident – recurrence 10 years	250 Active Shooter Incidents in the U.S. from 2000-2017: Incidents per year 250 Active Shooter Incidents in the U.S. from 2000-2017: Casualty Breakdown per year 250 Active Shooter Incidents in the U.S. from 2000-2017: Location Categories Occurrences in the Puget Sound

	TRANSPORTATION ACCIDENT	Not Applicable State proclamations: 17-1312/18/2017Amtrak derailment 15-054/16/2015 SR 410 Bridge 15-043/11/15 Damage to I-5 Overpass	Minor incidents – recurrence daily Major incidents - recurrence 10 years	Airports in Pierce County Ferry Services in Pierce County Transportation Accidents/Catastrophic Failures in Pierce County
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# **Hazard Maps and Overview of Data Source Descriptions**

The hazard maps provide a visual identification for the 19 hazards currently identified in the Region 5 All Hazards Mitigation Base Plan. Hazard maps were developed for each jurisdiction based on the hazard that was identified within their geographical boundaries. A few of the hazards are difficult to map and to what extent the hazards exists. For these hazards the planning team decided to include the entire jurisdictions boundaries indicating that the hazard could occur anywhere within their boundaries. Specifically, the technological/human-caused hazards are; civil disturbance, energy emergency, epidemic/pandemic, hazardous materials spills, terrorism / active threat / attack tactics / cyber-attack, and transportation accidents. Each of these hazards potentially could begin as an isolated incident and cascade into a larger event affecting a much greater area. Similarly, the natural hazards; avalanche, climate change and drought fall into this category too. Avalanche although isolated to the slopes of Mt. Rainier can occur anywhere within the National Park, National Forest and Wilderness Areas. Climate change and drought can have a spiraling effect on eco-systems, the economy and demographics throughout the Region 5 (Pierce County) area with a multitude of variability's making these hazards difficult to map as well. Lastly, the Wild Urban Interface (WUI) hazard areas within Pierce County are currently going through an update to identify areas not addressed. Specific areas of concern exist on the Key Peninsula and Gig Harbor Peninsula and additional areas within the eastern part of the county. The WUI hazards maps will be distributed to jurisdictions when this update is complete.

# Regulated Floodplain<sup>3</sup>

#### Summary:

The flood hazard map delineates the flood hazard risk of Dieringer School District. This map uses the new FEMA Flood Insurance Study (FIS) and Digital Flood Insurance Rate Map (DFIRM) for Pierce County, Washington and Incorporated Areas effective on March 7, 2017. These mapping products replace the FIS & FIRM issued to Unincorporated Pierce County in 1987 and the other incorporated communities between 1980 and 1985. The new DFIRM is a seamless countywide product adopted by every community participating in the National Flood Insurance Program (NFIP).

The intended purposes of this data are to support the National Flood Insurance Program so that flood insurance policies can be written for any qualifying structure in the community. In areas identified as Special Flood Hazard Areas (SFHA), a structure with a federally backed loan is required to purchase flood insurance. SFHA are designated as Zones beginning with the letter A or V (e.g. AE, AH and VE). Areas of moderate risk or areas suspected to be at risk of flooding but where no detailed flood study has been completed are shown as Zone X (Shaded). It is also to inform development in or near flood hazard areas so that new construction and redevelopment meets the purposes of the flood hazards areas described in Pierce County Code Title 18E.70.

#### Description:

The DFIRM is a composite of several flood studies, some dating back to the 1970s and as recent as 2016 that represent the best available date at the production deadline. The exception to this is the "secluded areas" that are near significant levees that effect the floodplain do not meet the

federal standard (44 Code of Federal Regulations 65.10) to show an area protected by the levee. The secluded areas, in the lower Puyallup River and the Carbon River and Puyallup River near the City of Orting, continue to show the understanding of risk prior to the establishment of 44CFR65.10 as shown on the first FIRM. There are more recent hydraulic studies that show a better understanding of flood risk and Unincorporated Pierce County regulates to this better data which has been added to the Regulated Floodplain 2017 feature class. In areas where the regulated flood hazard varies from the DFIRM there are attributions indicating a different "insurance zone" or "insurance BFE".

The Digital Flood Insurance Rate Map (DFIRM) Database depicts flood risk information and supporting data used to develop the risk data. The primary risk classifications used are the 1-percent-annual-chance flood event, the 0.2-percent-annual- chance flood event, and areas of minimal flood risk. The DFIRM Database is derived from Flood Insurance Studies (FISs), previously published Flood Insurance Rate Maps (FIRMs), and flood hazard analyses performed in support of the FISs and FIRMs, and new mapping data, where available. The FISs and FIRMs are published by the Federal Emergency Management Agency (FEMA).

The FIRM is the basis for floodplain management, mitigation, and insurance activities for the National Flood Insurance Program (NFIP). Insurance applications include enforcement of the mandatory purchase requirement of the Flood Disaster Protection Act, which "... requires the purchase of flood insurance by property owners who are being assisted by Federal programs or by Federally supervised, regulated or insured agencies or institutions in the acquisition or improvement of land facilities located or to be located in identified areas having special flood hazards, "Section 2 (b) (4) of the Flood Disaster Protection Act of 1973. In addition to the identification of Special Flood Hazard Areas (SFHAs), the risk zones shown on the FIRMs are the basis for the establishment of premium rates for flood coverage offered through the NFIP. The DFIRM Database presents the flood risk information depicted on the FIRM in a digital format suitable for use in electronic mapping applications. The DFIRM database is a subset of the Digital FIS database that serves to archive the information collected during the FIS.

#### Updates:

The October 2019 update to the Regulated Floodplain 2017shows the changed flood hazard areas modified by FEMA in two Letter of Map Revisions (LOMR).

Some coastal areas of Puget Sound were modified by LOMR 19-10-0588P that became effective 4/22/2019.

A new flood study of Deer Creek within the City of Puyallup modified the flood hazard areas with LOMR 18-10-0841P that became effective 4/4/2019.

# Landslide Susceptibility - Deep<sup>4</sup>

## Summary:

These data sets were produced to provide attribute and spatial information on deep-seated landslide susceptibility in Pierce County, by the Washington State Department of Natural Resources, Washington Division of Geology and Earth Resources (DGER). The goal of this data is to estimate the extent of deep-seated landslide susceptible areas. This data is only an estimate of deep-seated landslide susceptible areas and can occur outside of the bounds of these polygons. This data is nonregulatory and is intended for informational purposes. It may not be suitable for

legal, engineering, forestry, or surveying purposes; but it is intended to assist planners, homeowners, regulators, and others by identifying areas to seek further geologic investigation before developing, or areas to avoid. Users of this information should consider their intended application, and review or consult the accompanying documentation, to determine the usability of the data for themselves.

# Description:

This is a polygon feature class intended to estimate areas susceptible to deep-seated landslides. To create this susceptibility dataset a landslide inventory was first created by using the methods described in the report accompanying these data. The constructed landslide inventory was then used, along with other necessary datasets, to create this deep-seated landslide susceptibility dataset by following protocol from Special Paper 48 (Burns and Mickelson, 2016). This feature class is part of a larger landslide susceptibility dataset for Pierce County, Washington.

#### Use Limitations:

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# Landslide Susceptibility - Shallow<sup>5</sup>

#### Summary:

These data sets were produced to provide attribute and spatial information on shallow landslide susceptibility in Pierce County, by the Washington State Department of Natural Resources, Washington Division of Geology and Earth Resources (DGER). The goal of this data is to estimate the extent of shallow landslide susceptible areas. This data is only an estimate of shallow landslide susceptible areas and can occur outside of the bounds of these polygons. This data is non-regulatory and is intended for informational purposes. It may not be suitable for legal, engineering, forestry, or surveying purposes; but it is intended to assist planners, homeowners, regulators, and others by identifying areas to seek further geologic investigation before developing, or areas to avoid. Users of this information should consider their intended application, and review or consult the accompanying documentation, to determine the usability of the data for themselves.

# Description:

This is a polygon feature class intended to estimate areas susceptible to shallow landslides. To create this susceptibility dataset, the data listed in Special Paper 45 (Burns and others, 2012) as necessary data was obtained, and the Factor of Safety (FOS) portion of that protocol was

followed. This feature class is part of a larger landslide susceptibility dataset for Pierce County, Washington.

## Use Limitations:

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# Liquefaction Potential<sup>6</sup>

## Summary:

This is a subset of the original data clipped to Pierce County. The liquefaction susceptibility map details the risk potential throughout the Dieringer School District in a color gradient map.

The Washington State Department of Natural Resources, Division of Geology and Earth Resources received grant funding through the Hazard Mitigation Grant Program (HMGP) following the Nisqually earthquake of February 2001 (FEMA-1361-DRWA). This grant required the Division of Geology and Earth Resources to develop statewide liquefaction susceptibility and NEHRP (National Earthquake Hazards Reduction Program) site class maps.

Regional and local earthquake hazard maps such as these support hazard mitigation, emergency planning and response, planning of local zoning ordinances, and building code enforcement. The primary reason for producing this series of earthquake hazard maps is to support revisions to the State Hazard Mitigation Plan required in the implementation of final rules 44CFR201.4 and 44CFR201.6. These Federal code regulations require both state and local agencies to describe the location and extent of earthquake hazards that affect their jurisdictions. Additionally, these maps will serve a great variety of end-users that are crucial partners in earthquake hazard mitigation.

## Description:

These data contain polygons that provide information regarding the relative liquefaction potential for Pierce County, Washington. This feature class is part of a geodatabase that contains statewide ground response data for Washington State. Liquefaction is a natural phenomenon in which saturated, sandy soils lose their strength and behave as liquid. Liquefaction is caused by severe ground shaking during earthquake events. Polygons are classified as having 'very low' to 'high' relative liquefaction susceptibility. Areas underlain by bedrock or peat are mapped separately as these earth materials are not liquefiable, although peat deposits may be subject to permanent ground deformation caused by earthquake shaking and require site-specific analysis under the International Building Code. Water and ice are also separately designated.

Use Limitations:

The Washington Division of Geology and Earth Resources (DGER) shall not be held liable for improper or incorrect use of the data described and/or contained herein. This product is provided 'as is' without warranty of any kind, either expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular use. The Washington State Department of Natural Resources and the authors of this product will not be liable to the user of this product for any activity involving the product with respect to the following: (a) lost profits, lost savings, or any other consequential damages; (b) the fitness of the product for a particular purpose; or (c) use of the product or results obtained from use of the product. Although these data have been processed successfully on computers of DGER, no warranty, expressed or implied, is made by DGER regarding the use of these data on any other system, nor does the fact of distribution constitute or imply any such warranty. Appropriate use of these map data is the responsibility of each user. - Users must acknowledge the originators when using the data set as a source. - Data should not be used beyond the limits of the source scale. - The data set is not a survey document and should not be utilized as such. This map is meant only as a general guide to delineate areas prone to liquefaction. It is not a substitute for site-specific investigation to assess the potential for liquefaction for any development project. Because the data used in the liquefaction susceptibility assessment have been subdivided based on regional geologic mapping, this map cannot be used to determine the presence or absence of liquefiable soils beneath any specific locality. This determination requires a site-specific geotechnical investigation performed by a qualified practitioner.

# Volcanic – Lahar<sup>7</sup>

## Summary

This volcanic hazard zone is intended for use by public and private agencies to view, overlay with other Geographic Information System (GIS) datasets, and make maps of volcanic hazards from potential future eruptions of Mount Rainier, Washington. It is critical to understand the nature of the boundaries of the volcanic hazard zones. Although arcs serve as boundaries of hazard zones, the degree of hazard does not change abruptly at these boundaries. Rather, a volcanic hazard decreases gradually with increased distance from the volcano and above the valley floor. These volcanic hazards also span a range of size and recurrence. The hazard zones delineated in this data set portray volcanic events believed most likely from future activity at Mount Rainier, Washington. Areas outside the hazard zones, especially those having low relief, should not be regarded as hazard-free. Too many uncertainties exist in source, size, and mobility of future events to locate boundaries of zero-hazard zones with confidence.

#### Description

This is a combined dataset of a Case I, Case II and Case III lahar scenario into one dataset and does not include a pyroclastic dataset. Please contact Washington Division of Geology and Earth Resources to obtain these datasets or more information. For the planning purposes and identification of lahar risk within jurisdictions, the Case I scenario dataset is used to identify the worst-case scenario potentially possible, although again, areas outside the hazard zones, especially those having low relief, should not be regarded as hazard-free.

This dataset contains inundation zones for Case I lahars which are defined as areas that could be affected by cohesive lahars that originate as enormous avalanches of weak, chemically altered rock from the volcano. Case I lahars can occur with or without eruptive activity. The average time interval between Case I lahars on Mount Rainier is about 500 to 1000 years.

## Hazardous Material

The Hazardous Material map has outlined the main arterial routes, railroad lines, airports, marine ferry routes and Tier II sites for which the GIS spatial analysis was taken where there is the potential risk for hazardous materials to be located at any given time. A 2,500-foot buffer was placed around these identified areas, in accordance with the Emergency Response Guidebook (ERG) for potential contaminated zones. This zone does not go into detail of identifying 3 control zones during a hazmat incident. It is intended for general planning purposes only. If an actual incident were to occur instructions would be given by the Incident Commander on site and buffer zones would be determined by the type of hazardous material released. To reduce clutter and overlapping of data the 2,500-buffer zone was not included on the map, but data was analyzed from within those perimeters.

#### 2017 Tier II Sites

The Emergency Planning and Community Right-to-Know Act (EPCPA) of 1986 was created to help communities plan for chemical emergencies. It also requires industry to report on the storage, use and releases of hazardous substances to federal, state, and local governments. EPCRA requires state and local governments, and Indian tribes to use this information to prepare for and protect their communities from potentials risks. In 2017 Pierce County Emergency Management secured a project to identify reported 2017 Tier II Sites within Pierce County. These sites were mapped based on their geographical location of identified hazardous substances reported.

# Transportation Accidents / Incidents

The Transportation Accident map, like the Hazardous Material Map has also outlined the main arterial routes, railroad lines, airports, marine ferry routes for which the GIS spatial analysis was taken where there is the potential risk for transportation accidents/incidents to occur at any given time. A 2,500-foot buffer was placed around these identified areas also for potential hazard risks related to the accident/incident. It is intended for general planning purposes only. If an actual accident/incident were to occur instructions would be given by the Incident Commander on site and traffic control zones, barriers or alternate routes would be determined by the type of accident/incident. To reduce clutter and overlapping of data the 2,500-buffer zone was not included on the map, but data was analyzed from within those perimeters.

# Drought, Severe Weather, Civil Disturbance, Energy Emergency, Epidemic, and Terrorism / Active Threat / Attack Tactics / Cyber Attack

Due to the nature of these potential natural and human-caused hazards occurring anywhere within Pierce County or within a local jurisdiction, their total boundary figures are used when calculating the risk factors. These numbers will match their Base number's and will show the percent risk at 100% on the Vulnerability Analysis Tables for General Exposure, Population Exposure and General Infrastructure Exposure.

Hazard maps are not created for each of these hazards and for reference the Base map is in Profile Section 2 of this Mitigation Plan.

# Vulnerability Analysis Data

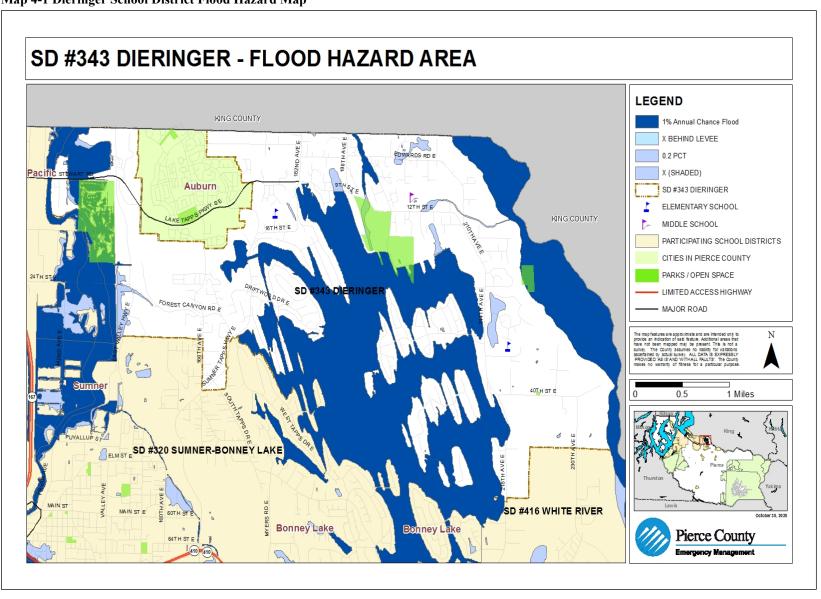
A vulnerability analysis was conducted on each hazard map to determine the General Exposure, Population Exposure, and general Infrastructure Exposure risk.

The Pierce County parcel geodatabase is derived from the Pierce County Assessor-Treasurer's Office and they edit and maintain their "parcel" geodatabases daily. The GIS polygon data includes condominium parcel information but does not include mobile home data. A "Total Base" value is determined for each jurisdiction based on their boundaries and then an analysis is performed to determine the risk percent of each hazard within those boundaries. The tax parcel geodatabase provides information for the square miles, parcels, land value, improved value and total assessed values for the analysis and is identified in Tables 4-3 and 4-4.

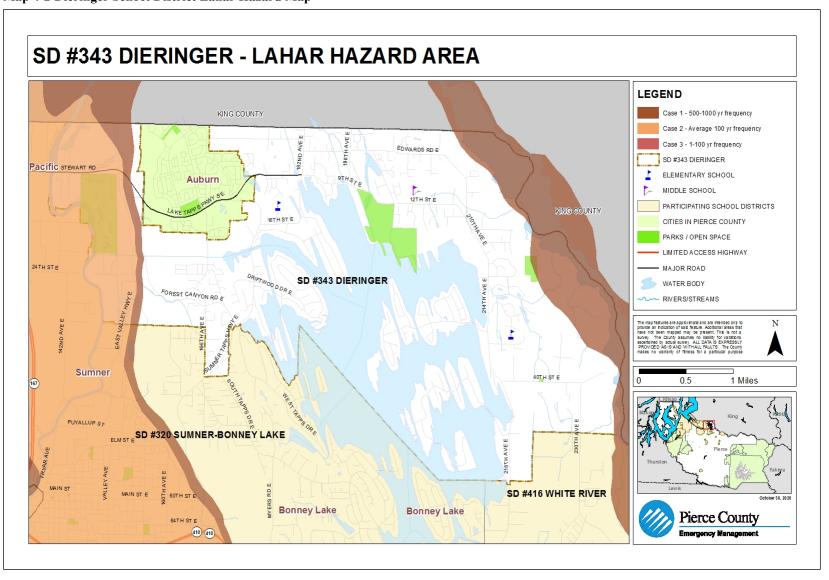
The original 2010 census data was downloaded by Pierce County GIS via the US Census Bureau server ftp and was available on October 14, 2011. All population base and hazard exposure data are derived from this dataset in determining the population exposure. At the current time with the mitigation plan updates this is the best available data that is county wide. As hazards do not have jurisdictional boundaries, a dataset is required that is county wide for analysis purposes. It is acknowledged that this population data is 10 years old and outdated and will be replaced within the plan once the 2020 census data becomes available sometime in 2021. Profile Section 2 provides a heading "Demographic Analysis" for jurisdictions to identify their current populations as best described by them.

The population density figures from Table 4-3 Vulnerability Analysis, Population Exposure calculate the total population density within each hazard area to identify the vulnerable population at risk. The population density is not calculated from the entire jurisdictional boundary.

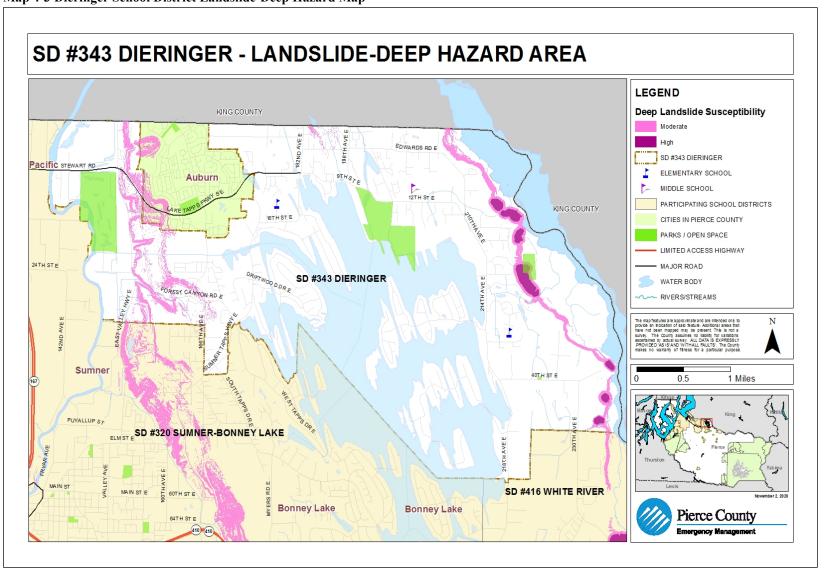
Map 4-1 Dieringer School District Flood Hazard Map



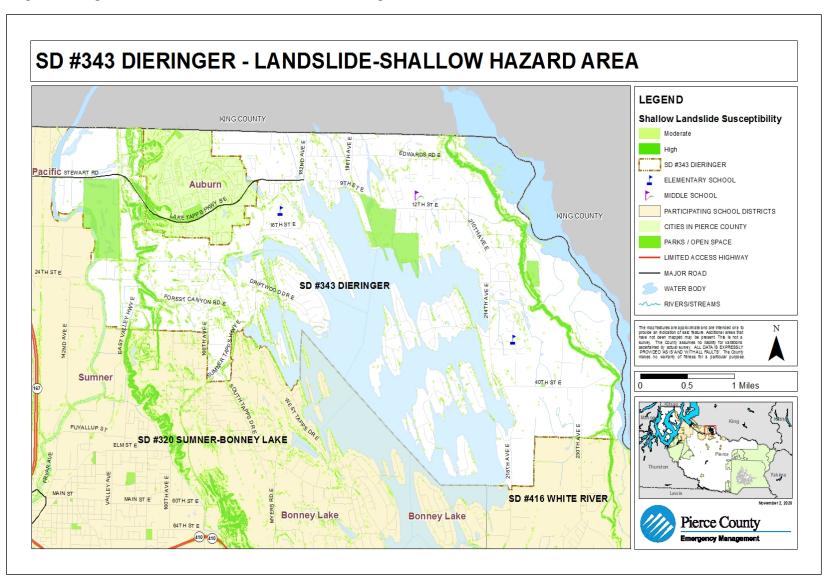
Map 4-2 Dieringer School District Lahar Hazard Map



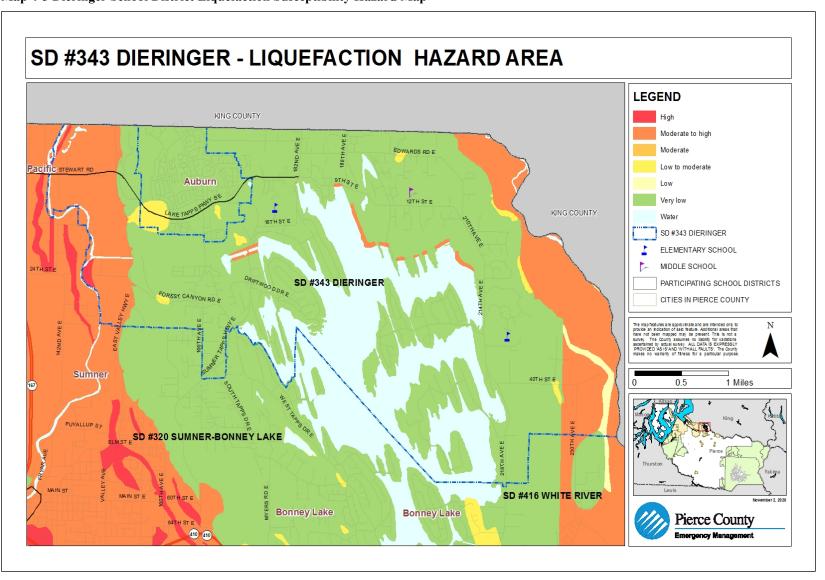
Map 4-3 Dieringer School District Landslide-Deep Hazard Map



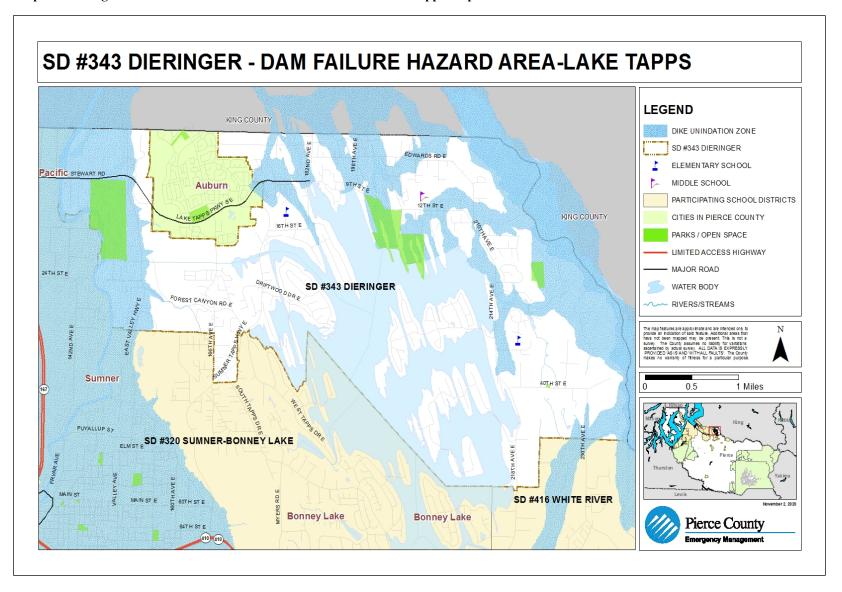
Map 4-4 Dieringer School District Landslide-Shallow Hazard Map



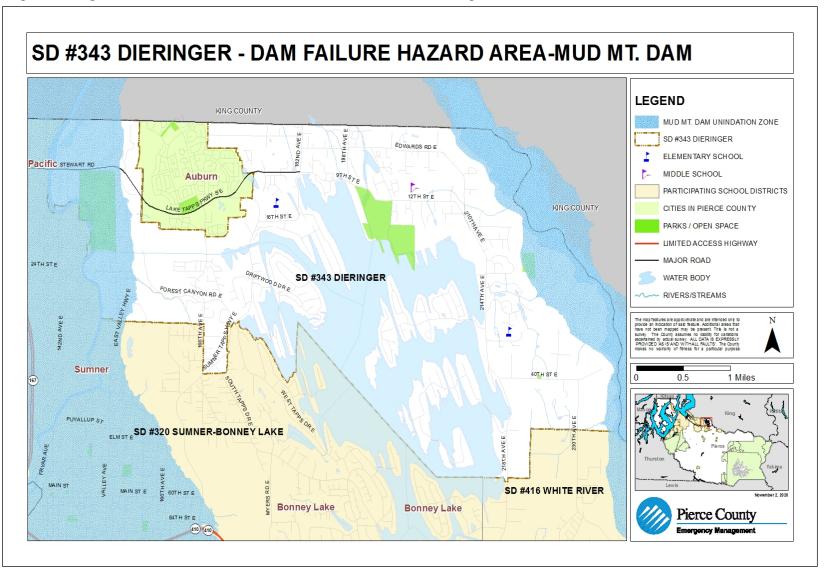
Map 4-5 Dieringer School District Liquefaction Susceptibility Hazard Map



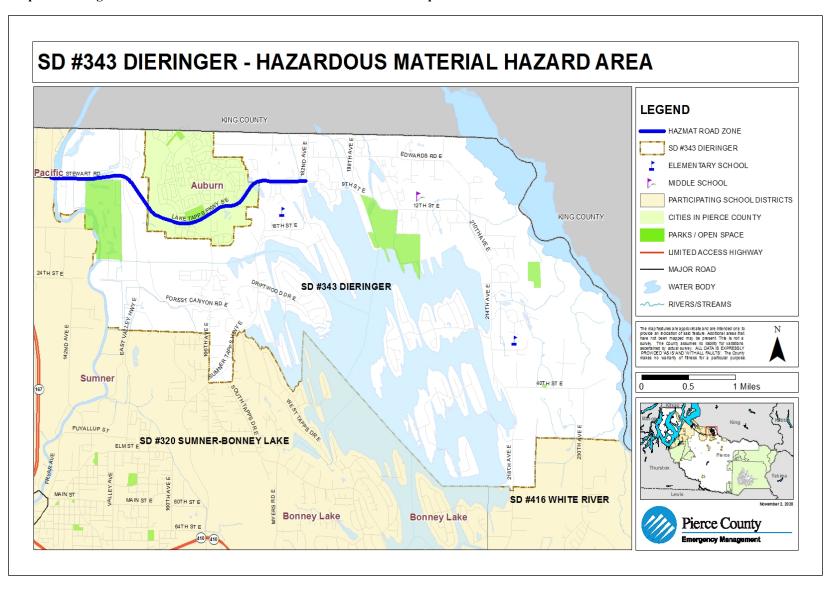
Map 4-5 Dieringer School District -Dam Failure Hazard Area -Lake Tapps Map



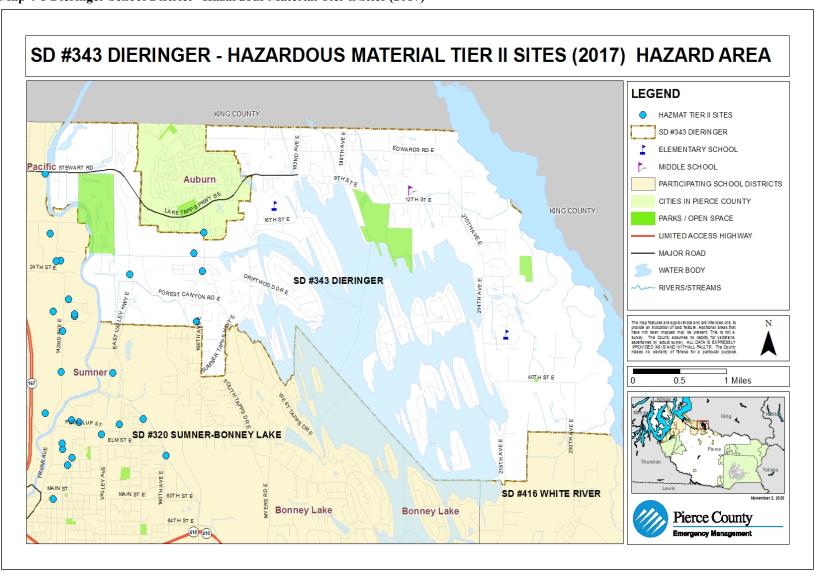
Map 4-6 Dieringer School District -Dam Failure Hazard Area -Mud Mt. Dam Map



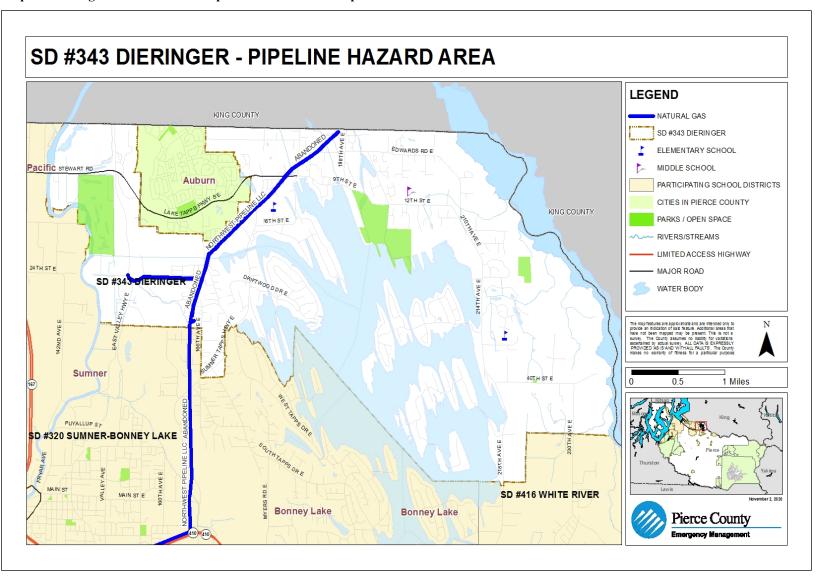
Map 4-7 Dieringer School District -Hazardous Material Hazard Area Map



Map 4-8 Dieringer School District -Hazardous Material Tier Il Sites (2017)



Map 4-9 Dieringer School District -Pipeline Hazard Area Map



Map 4-10 Dieringer School District -Transportation Emergency Hazard Area Map

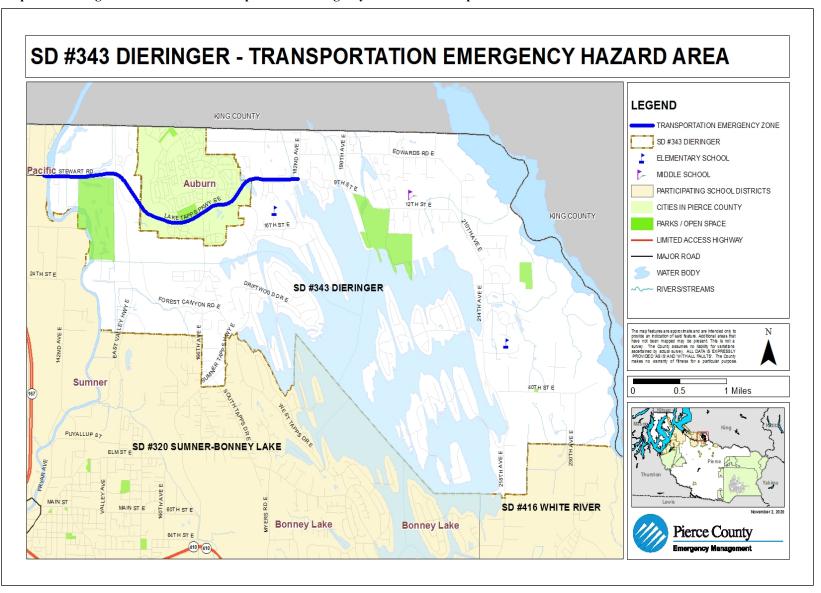


Table 4-2 Vulnerability Analysis: General Exposure<sup>8</sup>

	e 4-2 Vulnerability		(SQ MI)	PA	RCELS			
	THREAT <sup>9</sup>	Total	% Base	Total	% Base			
	BASE	12.26	100%	3,902	100%			
	Avalanche <sup>10</sup>	NA	NA	NA	NA			
	Deep Landslide	2.27	18.5%	316	8.10%			
Geological	Shallow Landslide	9.68	79.0%	1,902	48.74%			
Geola	Liquefaction Susceptibility <sup>11</sup>	4.16	33.9%	256	6.56%			
	Tsunami	NA	NA	NA	NA			
	Volcanic <sup>12</sup>	2.32	18.9%	241	6.18%			
1	Drought <sup>13</sup>	12.26	100%	3,902	100%			
ologica	Flood	8.04	65.6%	1,184	30.34%			
Meteorological	Severe Weather	12.26	100%	3,902	100%			
I	WUI Fire <sup>14</sup>	Insufficient GIS data to draw numbers from at this time or map susceptible areas.						
	Abandoned Mines <sup>15</sup>	NA	NA	NA	NA			
	Civil Disturbance <sup>16</sup>	12.26	100%	3,902	100%			
	Dam Failure <sup>17</sup>	5.77	47.11%	1,041	26.68%			
ical	Energy Emergency <sup>18</sup>	12.26	100%	3,902	100%			
Technological	Epidemic <sup>19</sup>	12.26	100%	3,902	100%			
Tec	Hazardous Material <sup>20</sup>	2.47	20.2%	849	21.76%			
	Pipeline Hazard <sup>21</sup>	1.83	14.95%	800	20.50%			
	Terrorism <sup>22</sup>	12.26	100%	3,902	100%			
	Transportation Accidents <sup>23</sup>	2.47	20.2%	849	21.76%			

Table 4-3 Vulnerability Analysis: Population Exposure

Tabl	e 4-3 Vulnerability		ULATIO				PULATIO SED POPULA		
	THREAT <sup>2</sup>	Total	% Base	Density	65+	-	20-	yrs	
	DAGE			(pop/sq mi)	#	%	#	%	
	BASE	9,077	100%	687	709	8%	2,591	29%	
	Avalanche	NA	NA	NA	NA	NA	NA	NA	
	Deep Landslide	2,795	30.79%	1,230.44	142	20.03%	826	31.88%	
Geological	Shallow Landslide	8,574	94.46%	886.12	667	94.08%	2,447	94.44%	
Geolo	Liquefaction Susceptibility	3,601	39.67%%	865.52	222	31.31%	1,046	40.37%	
	Tsunami	NA	NA	NA	NA	NA	NA	NA	
	Volcanic	1,692	19%	730.59	80	11.28%	10	.39%	
n	Drought	9,077	100%	687	709	8%	2,591	29%	
ologica	Flood	6,530	71.9%	811.96	512	72.2%	1,865	72%	
Meteorological	Severe Weather	9,077	100%	687	709	8%	2,591	29%	
V	WUI Fire	Insuffici	ent GIS data t	o draw number	rs from at this	time or map	susceptible are	as.	
	Abandoned Mines	NA	NA	NA	NA	NA	NA	NA	
	Civil Disturbance	9,077	100%	687	709	8%	2,591	29%	
	Dam Failure	4,574	50%	792.17	310	44%	1,279	49%	
ical	Energy Emergency	9,077	100%	687	709	8%	2,591	29%	
Technological	Epidemic	9,077	100%	687	709	8%	2,591	29%	
Tecl	Hazardous Material	5,994	66%	813.61	470	66.29%	1,694	65.38%	
	Pipeline Hazard	2,074	23%	1,112.49	144	20%	631	24%	
	Terrorism	9,077	100%	687	709	8%	2,591	29%	
	Transportation Accidents	5,994	66%	813.61	470	66.29%	1,694	65.38%	

Table 4-4 Vulnerability Analysis: General Infrastructure Exposure

		LAN	D VAL		IMPROVED VALUE			TOTAL ASSESSED VALUE			
]	ΓHREAT <sup>2</sup>	Total (\$)	% Base	Avg. Value (\$)	Total (\$)	% Base	Avg. Value (\$)	Total (\$)	% Base	Avg. Value (\$)	
	BASE	\$1,393,188,800	100%	\$357,045	\$1,218,541,400	100%	\$312,286	\$1,326,054,900	100%	\$342,031	
	Avalanche	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	Deep Landslide	\$120,669,000	8.66%	\$381,864	\$117,722,000	9.66%	\$372,538	\$238,391,000	9.13%	\$754,402	
Geological	Shallow Landslide	\$775,537,100	55.67%	\$407,748	\$635,597,400	52.16%	\$334,173	\$1,411,134,500	54.03%	\$741,921	
Geole	Liquefaction Susceptibility	\$210,700,100	15.12%	\$823,047	\$87,082,500	7.15%	\$340,166	\$297,782,600	11.40%	\$1,163,213	
	Tsunami	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	Volcanic	\$218,563,200	15.69%	\$906,901	\$117,557,600	9.65%	\$487,791	\$336,120,800	12.87%	\$1,394,692	
l l	Drought	\$1,393,188,800	100%	\$357,045	\$1,218,541,400	100%	\$312,286	\$1,326,054,900	100%	\$342,031	
logica	Flood	\$598,051,500	42.93%	\$505,111	\$425,919,300	34.95%	\$359,729	\$1,023,970,800	39.2%	\$864,840	
Meteorological	Severe Weather	\$1,393,188,800	100%	\$357,045	\$1,218,541,400	100%	\$312,286	\$1,326,054,900	100%	\$342,031	
W	WUI Fire			Insuffici	ent GIS data to draw nu	mbers from a	t this time or map so	usceptible areas.			
1	Abandoned Mines	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Technological	Civil Disturbance	\$1,393,188,800	100%	\$357,045	\$1,218,541,400	100%	\$312,286	\$1,326,054,900	100%	\$342,031	
echno	Dam Failure	\$414,643,900	29.76%	\$398,313	\$312,479,900	25.64%	\$300,173	\$727,123,800	27.84%	\$698,486	
	Energy Emergency	\$1,393,188,800	100%	\$357,045	\$1,218,541,400	100%	\$312,286	\$1,326,054,900	100%	\$342,031	

Epidemic	\$1,393,188,800	100%	\$357,045	\$1,218,541,400	100%	\$312,286	\$1,326,054,900	100%	\$342,031
Hazardous Material	\$351,925,400	25.26	\$414,518	\$277,660,300	22.79	\$327,044	\$629,585,700	24.11	\$741,561
Pipeline Hazard	\$174,872,500	12.55	\$218,591	\$128,951,300	10.58	\$201,157,700	\$303,823,800	11.63	\$379,780
Terrorism	\$1,393,188,800	100%	\$357,045	\$1,218,541,400	100%	\$312,286	\$1,326,054,900	100%	\$342,031
Transportation Accidents	\$351,925,400	25.26	\$414,518	\$277,660,300	22.79	\$327,044	\$629,585,700	24.11	\$741,561

Table 4-5a Consequence Analysis Chart – Geological<sup>24,25</sup>

	THREAT	CONSEQUENCE	YES OR NO
		Impact to the Public	No
		Impact to the Responders	No
		Impact to COG and/or COOP in the Jurisdiction	No
	Avalanche	Impact to Property, Facilities and Infrastructure	No
	_	Impact to the Environment	No
	_	Impact to the Jurisdiction Economic Condition	No
		Impact to Reputation or Confidence in Jurisdiction	No
		Impact to the Public	Yes
		Impact to the Responders	Yes
	_	Impact to COG and/or COOP in the Jurisdiction	Yes
	Earthquake	Impact to Property, Facilities and Infrastructure	Yes
		Impact to the Environment	Yes
		Impact to the Jurisdiction Economic Condition	Yes
		Impact to Reputation or Confidence in Jurisdiction	Yes
		Impact to the Public	Yes
al		Impact to the Responders	Yes
Geological		Impact to COG and/or COOP in the Jurisdiction	No
log	Landslide	Impact to Property, Facilities and Infrastructure	Yes
ieo		Impact to the Environment	Yes
0		Impact to the Jurisdiction Economic Condition	Yes
		Impact to Reputation or Confidence in Jurisdiction	No
		Impact to the Public	No
		Impact to the Responders	No
		Impact to COG and/or COOP in the Jurisdiction	No
	Tsunami	Impact to Property, Facilities and Infrastructure	No
		Impact to the Environment	No
		Impact to the Jurisdiction Economic Condition	No
		Impact to Reputation or Confidence in Jurisdiction	No
		Impact to the Public	Yes
		Impact to the Responders	Yes
		Impact to COG and/or COOP in the Jurisdiction	No
	Volcanic <sup>26</sup>	Impact to Property, Facilities and Infrastructure	Yes
		Impact to the Environment	Yes
		Impact to the Jurisdiction Economic Condition	No
		Impact to Reputation or Confidence in Jurisdiction	No

Table 4-5b Consequence Analysis Chart – Meteorological

	THREAT	CONSEQUENCE	YES OR NO
		Impact to the Public	Yes
		Impact to the Responders	No
		Impact to COG and/or COOP in the Jurisdiction	No
	Drought	Impact to Property, Facilities and Infrastructure	No
		Impact to the Environment	Yes
		Impact to the Jurisdiction Economic Condition	No
		Impact to Reputation or Confidence in Jurisdiction	No
		Impact to the Public	Yes
		Impact to the Responders	No
		Impact to COG and/or COOP in the Jurisdiction	No
	Flood	Impact to Property, Facilities and Infrastructure	Yes
ıal		Impact to the Environment	Yes
gic		Impact to the Jurisdiction Economic Condition	No
Meteorological		Impact to Reputation or Confidence in Jurisdiction	No
ore		Impact to the Public	Yes
ete		Impact to the Responders	Yes
W		Impact to COG and/or COOP in the Jurisdiction	No
	Severe Weather	Impact to Property, Facilities and Infrastructure	Yes
		Impact to the Environment	Yes
		Impact to the Jurisdiction Economic Condition	Yes
		Impact to Reputation or Confidence in Jurisdiction	No
		Impact to the Public	Yes
		Impact to the Responders	Yes
		Impact to COG and/or COOP in the Jurisdiction	No
	WUI Fire	Impact to Property, Facilities and Infrastructure	Yes
		Impact to the Environment	Yes
		Impact to the Jurisdiction Economic Condition	Yes
		Impact to Reputation or Confidence in Jurisdiction	No

Table 4-5c Consequence Analysis Chart – Technological<sup>27</sup>

THREAT	CONSEQUENCE	YES OR NO
	Impact to the Public	No
	Impact to the Responders	No
	Impact to COG and/or COOP in the Jurisdiction	No
Abandoned Mines	Impact to Property, Facilities and Infrastructure	No
	Impact to the Environment	No
	Impact to the Jurisdiction Economic Condition	No
	Impact to Reputation or Confidence in Jurisdiction	No
	Impact to the Public	Yes
	Impact to the Responders	Yes
G1 11 TA	Impact to COG and/or COOP in the Jurisdiction	No
Civil Disturbance	1 3/	Yes
	Impact to the Environment	No
	Impact to the Jurisdiction Economic Condition	No
	Impact to Reputation or Confidence in Jurisdiction	No
	Impact to the Public	Yes
	Impact to the Responders	Yes
D E 1	Impact to COG and/or COOP in the Jurisdiction	Yes
Dam Failure	Impact to Property, Facilities and Infrastructure	Yes
	Impact to the Environment	No
	Impact to the Jurisdiction Economic Condition	Yes
	Impact to Reputation or Confidence in Jurisdiction	Yes
	Impact to the Public	Yes
	Impact to the Responders	Yes
Energy	Impact to COG and/or COOP in the Jurisdiction	Yes
Emergency	Impact to Property, Facilities and Infrastructure	Yes
<b>%</b>	Impact to the Environment Impact to the Jurisdiction Economic Condition	No Vas
	Impact to the Jurisdiction Economic Condition  Impact to Reputation or Confidence in Jurisdiction	Yes No
Emergency	Impact to the Public	Yes
	Impact to the Fubile  Impact to the Responders	Yes
	Impact to COG and/or COOP in the Jurisdiction	Yes
Epidemic	Impact to Coos and of Coos in the surrentent	Yes
Epidemie	Impact to the Environment	No
	Impact to the Jurisdiction Economic Condition	Yes
	Impact to Reputation or Confidence in Jurisdiction	No
	Impact to the Public	Yes
	Impact to the Responders	Yes
Hazardous	Impact to COG and/or COOP in the Jurisdiction	Yes
Materials	Impact to Property, Facilities and Infrastructure	No
Materials	Impact to the Environment	No
	Impact to the Jurisdiction Economic Condition	Yes
	Impact to Reputation or Confidence in Jurisdiction	Yes
	Impact to the Public	Yes
	Impact to the Responders	Yes
	Impact to COG and/or COOP in the Jurisdiction	No
Pipeline Hazards	Impact to Property, Facilities and Infrastructure	Yes
	Impact to the Environment	Yes
	Impact to the Jurisdiction Economic Condition	No
	Impact to Reputation or Confidence in Jurisdiction	No
	Impact to the Public	Yes
	Impact to the Responders	Yes
Terrorism	Impact to COG and/or COOP in the Jurisdiction	No
	Impact to Property, Facilities and Infrastructure	Yes
	Impact to the Environment	No

	Impact to the Jurisdiction Economic Condition	Yes
	Impact to Reputation or Confidence in Jurisdiction	Yes
	Impact to the Public	Yes
	Impact to the Responders	Yes
T	Impact to COG and/or COOP in the Jurisdiction	Yes
Transportation	Impact to Property, Facilities and Infrastructure	Yes
Accident	Impact to the Environment	No
	Impact to the Jurisdiction Economic Condition	No
	Impact to Reputation or Confidence in Jurisdiction	No

#### **Endnotes**

<sup>1</sup> A THIRA expands on the existing hazard identification and risk assessment and provides a comprehensive approach for assessing risks and associated impacts using a scenario to assess a range of capabilities.

<sup>2</sup> This project was to prioritize highway transportation routes that will be best able to reopen quickly to establish post-disaster emergency supply chains.

- <sup>4</sup> Data source information for the Deep Landslide Susceptibility GIS Feature Class hazard layer is from the Metadata. For additional information contact the Washington Geological Survey.
- <sup>5</sup> Data source information for the Shallow Landslide Susceptibility GIS Feature Class hazard layer is from the Metadata. For additional information contact the Washington Geological Survey.
- <sup>6</sup> Liquefaction susceptibility is assigned based on criteria described in: Palmer, Stephen P.; Magsino, Sammantha L.; Bilderback, Eric L.; Poelstra, James L.; Folger, Derek S.; Niggemann, Rebecca A., 2007, Liquefaction susceptibility and site class maps of Washington State, by county: Washington Division of Geology and Earth Resources Open File Report 2004-20, 78 plates, with 45 p. text.

http://www.dnr.wa.gov/ResearchScience/Topics/GeologyPublicationsLibrary/Pages/pub\_ofr04-20.aspx. Data source information for the Liquefaction Susceptibility GIS Feature Class hazard layer is from the Metadata. For additional information contact the Washington Geological Survey, Washington Division of Geology and Earth Resources. Last updates to this data set on 2017-01-03.

<sup>7</sup> Lahar parcel and lahar study area were added by The Washington Division of Geology and Earth Resources. Lahar case 1, Lahar case 2, lahar case 3, postlahar, and pyroclastic originated from USGS Open-File Report 2007-2005: Schilling, S. P.; Doelger, S.; Hoblitt, R. P.; Walder, J. S.; Driedger, C. L.; Scott, K. M.; Pringle, P. T.; Vallance, J. W., 2008, Digital data for volcano hazards from Mount Rainier, Washington; Revised 1998: U.S. Geological Survey Open-File Report 2007-1220, ArcInfo coverages and shapefiles.

http://pubs.usqs.gov/of/2007/1220/data.html. This digital data accompanies Volcano Hazards from Mount Rainier, Washington; Revised 1998 (U.S. Geological Survey Open-File Report 98-428): Hoblitt, R. P.; Walder, J. S.; Driedger, C. L.; Scott, K. M.; Pringle, P. T.; Vallance, J. W., 1998, Volcano Hazards from Mount Rainier, Washington; Revised 1998: U.S. Geological Survey Open-File Report 98-428 http://vulcan.wr.usgs.gov/Volcanoes/Rainier/Hazards/OFR98-428/OFR98-428.pdf

<sup>8</sup> Info obtained from Pierce County GIS application, CountyView Pro (12/09).

<sup>&</sup>lt;sup>3</sup> Data source information for the Regulated Floodplain 2017 GIS Feature Class hazard layer is from the Metadata. For additional information contact Dennis Dixon with Pierce County, Planning and Public Works, Surface Water Management Division.

<sup>&</sup>lt;sup>9</sup> Currently the expanding body of empirical data on climate change supports its basic premise that the long term average temperature of the earth's atmosphere has been increasing for decades (1850 to 2008). This trend is continuing and will create dramatic changes in the local environment of Pierce County. Today, questions revolve around the overall increase in local temperature and its long term effects. Climate change today refers to variations in either regional or global environments over time. Time can refer to periods ranging in length from a few decades to other periods covering millions of years. A number of circumstances can cause climate change. Included herein are such diverse factors as solar cycles, volcanic eruptions, changing ocean current patterns, or even something as unusual as a methane release from the ocean floor. Over the past 150 years good temperature records have allowed comparisons to be made of global temperatures from year-to-year. This has shown an overall increase of approximately 0.7° C during this period. An increasing body of scientific evidence implies that the primary impetus driving climate change today is an increase in atmospheric green house gases.

<sup>&</sup>lt;sup>10</sup> Jurisdiction is not vulnerable to this hazard, therefore it is marked NA or non-applicable.

<sup>&</sup>lt;sup>11</sup> It should be noted here that although all residents, all property and all infrastructure of the Dieringer School District are vulnerable to earthquake shaking, not all are subject to the affects of liquefaction and liquefiable soils which is what is represented here.

<sup>&</sup>lt;sup>12</sup> The threat of volcanic ashfall affects the entire Region 5 however some jurisdictions are specifically threatened by lahar flows directly from Mt. Rainier; an active volcano.

<sup>&</sup>lt;sup>13</sup> The entire jurisdiction is vulnerable to drought. There are three things that must be understood about the affect of drought on the jurisdiction: 1) Drought is a Region wide event. When it does affect Pierce County, it will affect every jurisdiction, 2) Drought will gradually develop over time. It is a gradually escalating emergency that may take

from months to years to affect the jurisdiction. Initially lack of water may not even be noticed by the citizens. However, as the drought continues, its effects will be noticed by a continually expanding portion of the community until it is felt by all, and 3) Jurisdictions will be affected differently at different times as a drought develops. This will vary depending on the needs of each local jurisdiction. Some examples are: jurisdictions that have industry that requires a continuous supply of a large quantity of water; others have agriculture that requires water, but may only require it at certain times of the year; and, some jurisdictions have a backup source of water while others do not. <sup>14</sup> According to the most recent information from the Department of Natural Resources, the Dieringer School District while undergoing development does not have large areas of forested land that could develop into a wildland/urban interface fire. Further study is needed to determine the extent of the area that could be affected. <sup>15</sup> The definition of Abandoned Mines comes from the 2010 Pierce County HIRA: Abandoned mines are any excavation under the surface of the earth, formerly used to extract metallic ores, coal, or other minerals, and that are no longer in production.

- <sup>16</sup> The definition of Civil Disturbance comes from the 2010 Pierce County HIRA: Civil Disturbance (unrest) is the result of groups or individuals within the population feeling, rightly or wrongly, that their needs or rights are not being met, either by the society at large, a segment thereof, or the current overriding political system. When this results in community disruption of a nature where intervention is required to maintain public safety it has become a civil disturbance. Additionally, the Region 5 Strategic Plan includes Operational Objectives 3 & 4: Intelligence Gathering, Indicators, Warnings, etc; and Intelligence and Information Sharing.
- <sup>17</sup> The definition of Dam Failure comes from the 2010 Pierce County HIRA: A dam is any "barrier built across a watercourse for impounding water.<sup>17</sup>" Dam failures are catastrophic events "characterized by the sudden, rapid, and uncontrolled release of impounded water. The vulnerability analysis was based on the potential dam failure from Mud Mountain Dam and Lake Tapps using Pierce County's GIS data which originated from each of the dams emergency plans inundation maps.
- <sup>18</sup> The definition of an Energy Emergency comes from the 2010 Pierce County HIRA: Energy emergency refers to an out-of-the-ordinary disruption, or shortage, of an energy resource for a lengthy period of time. Additionally the Region 5 Strategic Plan addresses Energy Emergencies in its Operational Objective 32, Restoration of Lifelines which addresses the restoration of critical services such as oil, gas, natural gas, electric, etc.
- <sup>19</sup> The definition of epidemic comes from the TPCHD Flu Plan of 2005: A Pandemic is an epidemic occurring over a very wide area and usually affecting a large proportion of the population. Pandemics occur when a wholly new subtype of influenza A virus emerges. A "novel" virus can develop when a virulent flu strain that normally infects birds or animals infects a human who has influenza; the two viruses can exchange genetic material, creating a new, virulent flu virus that can be spread easily from person-to-person. Unlike the flu we see yearly, no one would be immune to this new flu virus, which would spread quickly, resulting in widespread epidemic disease – a pandemic. (DOH Plan & U.S. Dept. of HHS).
- <sup>20</sup> The definition of Hazardous Materials comes from the 2010 Pierce County HIRA: Hazardous materials are materials, which because of their chemical, physical or biological properties, pose a potential risk to life, health, the environment, or property when not properly contained. A hazardous materials release then is the release of the material from its container into the local environment. A general rule of thumb for safety from exposure to hazardous material releases is 1000ft; the Emergency Response Guidebook 2008, established by the US Dept of Transportation, contains advice per specific materials. The vulnerability analysis was broken into two sub sections for a better understanding of the hazard using Pierce County's GIS data with a 500 foot buffer on either side of the railroads and major roadways.
- <sup>21</sup> The definition of Pipeline Emergency comes from the 2010 Pierce County HIRA: While there are many different substances transported through pipelines including sewage, water and even beer, pipelines, for the purpose of this chapter, are transportation arteries carrying liquid and gaseous fuels. They may be buried or above ground
- <sup>22</sup> The definition of Terrorism comes from the 2010 Pierce County HIRA: Terrorism has been defined by the Federal Bureau of Investigation as, "the unlawful use of force or violence against persons or property to intimidate or coerce a Government, the civilian population or any segment thereof, in furtherance of political or social objectives." These acts can vary considerably in their scope, from cross burnings and the spray painting of hate messages to the destruction of civilian targets. In some cases, violence in the schools has also been labeled as a form of terrorism.
- <sup>23</sup> The definition of Transportation Accident comes from the 2010 Pierce County HIRA: Transportation accidents as used in this assessment include accidents involving a method of transportation on the road, rail, air, and maritime

systems within the confines of Pierce County. The vulnerability analysis was broken into three sub sections for a better understanding of the hazard using Pierce County's GIS data; Commencement Bay to include inland rivers and streams, railroads, and roads. A 200 foot buffer was applied to all the shorelines and a 500 foot buffer on either side of the railroads and roadways.

<sup>24</sup> In the Impact to Property, Facilities and Infrastructure, both Tables 4-5a and 4-5b, look at the impact to all property, facilities and infrastructure existing in the jurisdiction, not just to that owned by the jurisdiction.

- <sup>25</sup> The consideration for each of these hazards, in both Tables 4-5a and 4-5b, as to whether an individual hazard's consequences exist, or not, is based on a possible worst case scenario. It must also be understood that a "yes" means that there is a good possibility that the consequence it refers to could happen as a result of the hazard, not that it will. Conversely "No" means that it is highly unlikely that that consequence will have a major impact, not that there will be no impact at all.
- <sup>26</sup> While the major volcanic hazard from Mt. Rainier is from a lahar descending the main river valleys surrounding the mountain, it is not the only problem. Most jurisdictions could receive tephra in greater or lesser amounts, sometimes with damaging results. Consequence analyses in this section take into account the possibility of tephra deposition in addition to a lahar.
- <sup>27</sup> The Technological Consequences are added herein to acknowledge the role of human-caused hazards in the health and safety of unincorporated Pierce County. The consequences noted are under the same criteria as natural hazards given their impacts to the departmental assets.

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

#### Identification and Analysis of Mitigation Actions---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.

[The mitigation strategy] must also address the jurisdiction's participation in the National Flood Insurance Program (NFIP), and continued compliance with NFIP requirements, as appropriate.

- Does the new or updated plan identify and analyze a comprehensive range of specific mitigation actions and projects for each hazard?
- Do the identified actions and projects address reducing the effects of hazards on new buildings and infrastructure?
- Do the identified actions and projects address reducing the effects of hazards on existing buildings and infrastructure?
- Does the new or updated plan describe the jurisdiction(s) participation in the NFIP?
- Does the mitigation strategy identify, analyze and prioritize actions related to continued compliance with the NFIP?

#### Implementation of Mitigation Actions---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 new or updated mitigation strategy include how the actions are prioritized? (For example, is there a
  discussion of the process and criteria used?)
- Does the new or updated mitigation strategy address how the actions will be **implemented and administered**, including the responsible department, existing and potential resources and the timeframe to complete each action?
- Does the new or updated prioritization process include an emphasis on the use of cost-benefit review to maximize benefits?
- Does the updated plan identify the completed, deleted or deferred mitigation actions as a benchmark for progress, and if activities are unchanged (i.e., deferred), does the updated plan describe why no changes occurred?

#### **SECTION 5**

# REGION 5 ALL HAZARD MITIGATION PLAN 2020-2025 EDITION DIERINGER SCHOOL DISTRICT MITIGATION STRATEGY SECTION

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# **Mitigation Measure Overview**

The measures having been identified, defined, and evaluated; the rest of the process involved prioritization. The process relied upon the identified risks and vulnerabilities, the planning team's local expertise, public participation, each organization's needs and capabilities, a cost/benefit review, and input from the chief elected officials. In order to promote implementation of the measures, they were grouped based on the level at which they would be implemented, as described in the Plan Maintenance Section. These levels were:

- **Startup Mitigation Measures:** Those mitigation measures already in existence within the organization and including the maintenance of the Mitigation Plan.
- **Hazard Mitigation Forum (HMF):** Multi-organizational implementation mechanism.
- Organization-Wide Mitigation Measures: Mechanism depends on organization.
- **Public Education Mitigation Measures:** Localized level based on targeted communities and their needs and vulnerabilities.

The measures are prioritized within each implementation category. In order to provide consistency, the evaluation process including the eight categories, was used as the basis for the prioritization of measures. This allows for emphasis on the extent to which each measure is cost-effective.

The planning team members from each organization prioritized their organization's potential mitigation measures based on goals addressed with special attention paid to the measure's benefit-cost review, its ability to be implemented, and the extent to which it would mitigate one or multiple relevant hazards.

# **Prioritization of Measures**

The list was prioritized based on the ongoing work and projects within the school district. Development is occurring within the school district and the inevitable growth that follows helps and hinders some of the projects and mitigation strategies. We based the school district's mitigation measures on what seemed reasonable, possible, and plausible given the abilities and time of the district and its staff members.

**Table 5-1 Dieringer School District Mitigation Strategy Matrix** 

					P	lan	Goa	ıls	
Implementation Mechanism	Mitigation Measure (Hazard(s)) <sup>1</sup>	Lead Jurisdiction(s) / Department(s)	Timeline (years)	Life and Property	Operations Continuity	Partnerships	Natural Resources	Preparedness	Sustainable Economy
Stortun	1. Existing Mitigation Actions ( <i>E,L,V,D,F,WUI,SW,MM</i> )	Dieringer School District	Ongoing	✓	✓	✓	✓	✓	✓
<u>Startup</u>	2. Plan Maintenance (E,L,V,D,F,WUI,SW,MM)	Dieringer School District	Ongoing	✓	✓	✓	✓	✓	✓
<u>HMF</u>	1. Pierce County Hazard Mitigation Forum ( <i>E,L,V,D,F,WUI,SW,MM</i> )	PC DEM; Dieringer School District	Ongoing	<b>✓</b>	✓	✓	✓	✓	✓
	1. Capability Identification and Evaluation ( <i>E</i> , <i>L</i> , <i>V</i> , <i>D</i> , <i>F</i> , <i>WUI</i> , <i>SW</i> , <i>MM</i> )	Dieringer School District	1-2		N/A		/A		
	2. Develop and Review Building Emergency Plans ( <i>E,L,V,D,F,WUI,SW,MM</i> )	Dieringer School District	1-2	<b>✓</b>	<b>✓</b>	✓		<b>√</b>	
	3. Develop a Business Risk Reduction Plan (continuity plan) ( <i>E</i> , <i>L</i> , <i>V</i> , <i>D</i> , <i>F</i> , <i>WUI</i> , <i>SW</i> , <i>MM</i> )	Dieringer School District	1-2	<b>✓</b>	✓	✓			✓
	4. Annually Contact Williams Pipeline to Address Risk/Hazard ( <i>E</i> , <i>WUI</i> , <i>MM</i> )	Dieringer School District	1-2	✓	✓	✓			
School District	5. Review Hazard Mitigation Plan on an Annual Basis ( <i>E,L,V,D,F,WUI,SW,MM</i> )	Dieringer School District	1-2	<b>✓</b>	✓	✓			
	6. Develop a Continuity of Critical Business Operations ( <i>E</i> , <i>L</i> , <i>V</i> , <i>D</i> , <i>F</i> , <i>WUI</i> , <i>SW</i> , <i>MM</i> )	Dieringer School District	1-2	✓	✓	✓		✓	
	7. Investigate Additions at All School Facilities to Determine Appropriate Seismic Loading (Advance Assistance) ( <i>E,SW,MM</i> )	Dieringer School District	1-2	✓	✓	✓			
	8. Acquire Generator for 12 <sup>th</sup> Street Middle School ( <i>E,L,V,D,F,WUI,SW,MM</i> )	Dieringer School District	1-2	✓	✓			✓	
Public Education	1. Partner with Sumner-Bonney Lake School District for CPR/First Aid Training ( <i>E,L,V,F,SW,WUI,MM</i> )	Dieringer School District with Sumner-Bonney Lake School District	Ongoing	<b>✓</b>		✓		<b>✓</b>	

# **Startup Mitigation Measures**

#### **Existing Mitigation Actions**

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

Dieringer School District will integrate the hazard mitigation plan into existing plans, ordinances, and programs to dictate land uses within the jurisdiction. Further, Dieringer School District 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) = Dieringer School District
- **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.

Status Update: 2020 - 2025 Edition

Complete	Ongoing	Partially Complete	Deferred				
	X						
Comments							
The Dieringer School District will use the All Hazard Mitigation Plan to inform other existing plans such							
as the fire safety plans/o	occupant emerg	gency plans, emergency operations plan	, and capital improvement				

plan through the district's Board of Directors, administrative cabinet team, and safety committee.

#### Origin

Previous Plan	Current Plan	
X		

#### Plan Maintenance

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

Dieringer School District 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)** = Dieringer School District
- 5. Timeline = Ongoing6. Benefit = Area-Wide
- 7. **Life of Measure** = Perpetual
- **8. Community Reaction** = the proposal is likely to be endorsed by the entire community.

# Status Update: 2020 – 2025 Edition

Complete	Ongoing	Partially Complete	Deferred
	X		
Comments			
The Dieringer School District participated in the Pierce County Department of Emergency Management			
led plan update. Attended 5 meetings.			

# Origin

Previous Plan	Current Plan
X	

# **Hazard Mitigation Forum**

## Pierce County Hazard Mitigation Forum

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

Dieringer School District 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; Dieringer School District
- **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.

Status Update: 2020 - 2025 Edition

Complete	Ongoing	Partially Complete	Deferred
	X		
Comments			
The Dieringer School District participated in the Annual Pierce County Hazard Mitigation Forum, hosted			
by Pierce County Department of Emergency Management. This is an ongoing project that occurs annually.			

#### Origin

Previous Plan	Current Plan	
X		

# **School District Mitigation Measures**

# Capability Identification and Evaluation

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

Dieringer School District 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. Furthermore, 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) = Dieringer School District
- **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.

Status Update: 2020 – 2025 Edition

Complete	Ongoing	Partially Complete	Deferred
	X		
Comments			
The Dieringer School District has a regularly assembled safety committee that represents all			
functions/departments of the district. This committee evaluates potential hazards and considers appropriate			
remedies or policy recommendations to address any identified areas of concern or deficiencies.			

#### Origin

Previous Plan	Current Plan	
X		

# Develop and Review Building Emergency Plans

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

Annually review all building emergency preparedness plans and procedures to include the following: Emergency Communications Plans, Emergency Drills, Lock Down Procedures and Drills, and Evacuation Plans.

- **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 = Staff time and materials any special equipment

- **3. Funding Source and Situation** = Funding could be obtained through local budget and grants.
- **4.** Lead Jurisdiction(s) = Dieringer School District

Ongoing

- **5. Timeline** = Short-term
- **6. Benefit** = School district staff and students, first responders, community and regional partners

Partially Complete

Deferred

- 7. **Life of Measure** = Perpetual
- **8. Community Reaction** = the proposal is likely to be endorsed by the entire community.

Status Update: 2020 - 2025 Edition

Complete

Complete	Ongoing	Tartany complete	Deletieu	
	X			
Comments				
The Dieringer School District has a regularly assembled safety committee that represents all				
functions/departments of the district. This committee evaluates potential hazards and considers appropriate				

remedies or policy recommendations to address any identified areas of concern or deficiencies. Additionally, each building conducts emergency drills as required by the Office of the Superintendent of Washington State and analyzes the performance of staff and students at the end of each drill to improve emergency preparedness.

#### Origin

Previous Plan	Current Plan	
X		

# Develop a Business Risk Reduction Plan

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

Following the development parameters from Office of Superintendent for Public Instruction (OSPI), develop a business risk reduction plan.

- **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** = Staff time and materials
- **3. Funding Source and Situation** = Funding could be obtained through local budget and grants.
- **4. Lead Jurisdiction(s)** = Dieringer School District
- **5. Timeline** = Short-Term
- **6. Benefit** = School district staff and students, community
- 7. **Life of Measure** = Perpetual
- **8. Community Reaction** = the proposal is likely to be endorsed by the entire community.

Status Update: 2020 - 2025 Edition

Complete	Ongoing	Partially Complete	Deferred
	X		
Comments			

The Dieringer School District has a regularly assembled safety committee that represents all functions/departments of the district. This committee evaluates potential hazards and considers appropriate remedies or policy recommendations to address any identified areas of concern or deficiencies. Additionally, each building conducts emergency drills as required by the Office of the Superintendent of

Washington State and analyzes the performance of staff and students at the end of each drill to improve

emergency preparedness.

#### Origin

Previous Plan	Current Plan	
X		

# Annually Contact Williams Pipeline to Address Risk/Hazard

Hazards: E, WUI, MM<sup>2</sup>

Maintain ongoing communications with utilities on/adjacent to school property such as Williams Pipeline. Talk to them annually to address risk/hazard.

- **1. Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; 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.
- **4.** Lead Jurisdiction(s) = Dieringer School District
- **5. Timeline** = Short-term
- **6. Benefit** = School district staff and students, community and regional partners
- **7. Life of Measure** = Perpetual
- **8. Community Reaction** = the proposal is likely to be endorsed by the entire community.

Status Update: 2020 - 2025 Edition

Complete	Ongoing	Partially Complete	Deferred	
	X			
Comments				
Annually contact Williams Pipeline to assess any hazards or proposed maintenance within district				
boundaries.				

#### Origin

Previous Plan	Current Plan
X	

# Review Hazard Mitigation Plan on an Annual Basis

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

The Dieringer School District is participating in developing a Hazard Mitigation Plan with Pierce County DEM and the school district will elect to review their plan on an annual basis to make any changes or additions prior to the required five-year update and review.

**1. Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.

- **2. Cost of Measure** = Staff time and materials
- **3. Funding Source and Situation** = Funding could be obtained through local budget.
- **4.** Lead Jurisdiction(s) = Dieringer School District
- **5. Timeline** = Short-Term
- **6. Benefit** = School district staff and students, community and regional partners
- **7. Life of Measure** = Perpetual
- **8.** Community Reaction = the proposal is likely to be endorsed by the entire community.

#### Status Update: 2020 - 2025 Edition

Complete	Ongoing	Partially Complete	Deferred
	X		
Comments			
Annually, district stakeholders (safety committee, administration, board, etc.) will review the hazard			
mitigation plan to inform planning and decision making with regard to potential risks and hazards.			

#### Origin

Previous Plan	Current Plan
X	

# Develop a Continuity of Critical Business Operations Plan

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

Following the development of parameters from Office of Superintendent for Public Instruction (OSPI), develop plans for continuity of critical business operations plan.

- **1. Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
- **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) = Dieringer School District
- **5. Timeline** = Short-term
- **6. Benefit** = School staff and students, community and regional partners
- 7. **Life of Measure** = Perpetual
- **8. Community Reaction** = the proposal is likely to be endorsed by the entire community.

#### Status Update: 2020 – 2025 Edition

Complete	Ongoing	Partially Complete	Deferred
	X		
Comments			
The district will use the hazard mitigation to inform the ongoing development of its critical business operations plan.			

#### Origin

Previous Plan	Current Plan
X	

# Investigate Additions at All School Facilities to Determine Appropriate Seismic Loading (Advance Assistance)

Hazards: E, WUI, SW, MM

Following the completion of a number of additions/renovations to its facilities, the Dieringer School District will contract with a qualified architectural firm to determine that all buildings meet or exceed requirements of seismic loading.

- 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 budget or grants.
- **4. Lead Jurisdiction(s)** = Dieringer School District
- **5. Timeline** = Short-term
- **6. Benefit** = School staff and students, community and regional partners
- **7. Life of Measure** = Perpetual
- **8. Community Reaction** = the proposal is likely to be endorsed by the entire community.

Status Update: 2020 – 2025 Edition

Complete	Ongoing	Partially Complete	Deferred
	X		
Comments			
The Dieringer School District will contract with a qualified architectural firm to determine that all			
buildings meet or exceed requirements of seismic loading to ensure the protection of life and property.			

#### Origin

Previous Plan	Current Plan
	X

# Install a Generator at North Tapps Middle School

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

In order to maintain facilities capable of being utilized in the event of a disaster, a generator needs to be installed at North Tapps Middle School.

- **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 budget or grants.
- **4.** Lead Jurisdiction(s) = Dieringer School District
- **5. Timeline** = Short-term
- **6. Benefit** = School staff and students, community and regional partners
- 7. **Life of Measure** = Perpetual

**8. Community Reaction** = the proposal is likely to be endorsed by the entire community.

# Status Update: 2020 - 2025 Edition

Complete	Ongoing	Partially Complete	Deferred
	X		
Comments			
In order to best serve the needs of the district and community, in the event of a disaster, North Tapps			
Middle School would be utilized as a community-based shelter as it is the only facility within district			
boundaries equipped to provide basic life/health/safety essentials.			

# Origin

Previous Plan	Current Plan
	X

# **Public Education Mitigation Measure**

# Partner with Sumner-Bonney Lake School District for CPR/First Aid Training

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

Make sure required and additional staff is trained to current CPR/First Aid standards each year through a cooperative agreement with Sumner-Bonney Lake School District.

- **1. Goal(s) Addressed** = Protect Life and Property; Establish and Strengthen Partnerships for Implementation: Increase Public Preparedness for Disasters.
- **2. Cost of Measure** = Staff time and cost of classes
- **3. Funding Source and Situation** = Funding could be obtained through local budget.
- **4. Lead Jurisdiction(s)** = Dieringer School District and Sumner-Bonney Lake School District
- **5. Timeline** = Ongoing
- **6. Benefit** = School staff and students, first responders, community and regional partners
- 7. **Life of Measure** = Perpetual
- **8. Community Reaction** = the proposal is likely to be endorsed by the entire community.

#### Status Update: 2020 – 2025 Edition

Complete	Ongoing	Partially Complete	Deferred
	X		
Comments			
Annually, the district will identify staff who are in need of CPR/First Aid training and partner with the			
Sumner-Bonney Lake School District to provide staff with said training.			

#### Origin

Previous Plan	Current Plan
X	X

# **Endnotes**

<sup>1</sup> 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.

<sup>&</sup>lt;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.

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#### **SECTION 6**

# REGION 5 HAZARD MITIGATION PLAN DIERINGER SCHOOL DISTRICT INFRASTRUCTURE SECTION

The Infrastructure Section is exempt from public disclosure pursuant to RCW 42.56.420. Request for public disclosure of this document or parts thereof should be referred immediately to the Dieringer School District's Superintendent.

Distribution or changes to this document without the express written consent of the Dieringer School District's Superintendent is prohibited.

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#### Section 7

# **Plan Maintenance Procedures Requirements**

Monitoring, Evaluating, and Updating the Plan---Requirement §201.6(c)(4)(i):

[The plan maintenance process **shall** include a] section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.

- Does the new or updated plan describe the method and schedule for monitoring the plan, including the responsible department?
- Does the new or updated plan describe the method and schedule for evaluating the plan, including how, when and by whom (i.e. the responsible department)?
- Does the new or updated plan describe the method and schedule for updating the plan within the five-year cycle?

#### Incorporation into Existing Planning Mechanisms---Requirement §201.6(c)(4) (ii):

[The plan **shall** include a] process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate...

- Does the new or updated plan identify other local planning mechanisms available for incorporating the mitigation requirements of the mitigation plan?
- Does the new or updated plan include a process by which the local government will incorporate the mitigation strategy and other information contained in the plan (e.g., risk assessment) into other planning mechanisms, when appropriate?
- Does the updated plan explain how the local government incorporated the mitigation strategy and other information contained in the plan (e.g., risk assessment) into other planning mechanisms, when appropriate?

#### Continued Public Involvement---Requirement §201.6(c)(4) (iii):

[The plan maintenance process **shall** include a] discussion on how the community will continue public participation in the plan maintenance process.

• Does the new or updated plan explain how continued public participation will be obtained? (For example, will there be public notices, an on-going mitigation plan committee, or annual review meetings with stakeholders?)

# **SECTION 7**

# REGION 5 ALL HAZARD MITIGATION PLAN 2020-2025 EDITION DIERINGER SCHOOL DISTRICT PLAN MAINTENANCE SECTION

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The planning process update began in the spring of 2019 and is the continuing building foundation for breaking the disaster cycle by planning for a disaster resistant Dieringer School District and Pierce County Region 5. This Section details the formal process that will guarantee the Dieringer Hazard Mitigation Plan remains an active and relevant document. The Plan Maintenance Section includes a description of the documentation citing the Plan's formal adoption by the Board of Directors. The Section also describes: the method and schedule of monitoring, evaluating, and updating within a five-year cycle; the process for incorporating the mitigation strategy into existing mechanisms; and, the process for integrating public participation throughout the plan maintenance. The Section serves as a guide for implementation of the hazard mitigation strategy.

# **Plan Adoption**

Upon completion of the Dieringer School District Plan, it will be submitted to Washington State Emergency Management Division (EMD) for a Pre-Adoption Review. The EMD has 30 days to then act on the Plan and forward it to the Federal Emergency Management Agency (FEMA) Region X for review. This review, which is allowed 45 days by law, will address the federal criteria outlined in FEMA Interim Final Rule 44 CFR Part 201.6. In completing this review there may be revisions requested by the EMD and/or FEMA. Revisions could include changes to background information, editorial comments, and the alteration of technical content. Pierce County Department of Emergency Management (PC DEM) will call a Planning Team Meeting to address any revisions needed and resubmit the changes.

The Dieringer School District Board of Directors is responsible for the District's adoption of the Plan after the Pre-Adoption Review is completed. Once the District adopts the Plan, the Program Coordinator of the Mitigation and Recovery Division of Emergency Management will be responsible for submitting it, with a copy of the resolution, to the State Hazard Mitigation Officer at the Washington State EMD. EMD will then act on the Plan and forward it to the FEMA Region X for final approval. Upon approval by FEMA, the District will gain eligibility for both Hazard Mitigation Grant Program and Pre-Disaster Mitigation Grant Program funds.

Appendix A will list the dates and include a copy of the signed Resolution from the jurisdiction as well as a copy of the FEMA approval of the jurisdiction's Plan. In future updates of the Plan, Appendix C will be used to track changes and/or updates. This plan will have to be re-adopted and re-approved prior to the five-year deadline in 2025.

# **Maintenance Strategy**

The District's maintenance strategy for implementation, monitoring, and evaluation provides a structure that encourages collaboration, information transference, and innovation. Through a multi-tiered implementation method, the District will provide its citizens a highly localized approach to loss reduction while serving their needs through coordinated policies and programs. The method's emphasis on all levels of participation promotes public involvement and adaptability to changing risks and vulnerabilities. Finally, it will provide a tangible link

between citizens and the various levels of government service, ranging from community action to the Department of Homeland Security. Through this strategy, the School District will continue to break the disaster cycle and achieve a more disaster resistant community.

# **Implementation**

The Dieringer School District has and will continue to evaluate and update its policies, procedures, and practices to implement this plan. Specifically, components of the mitigation plan have been incorporated into the District's Safety Plan to ensure both plans work in congruence. Throughout the update process the public was informed and had the opportunity to comment.

In order to ensure efficient and effective implementation, Dieringer School District will make use of its capabilities, infrastructure, and dedicated population. The School District will implement its mitigation strategy over the next five years primarily through its annual budget process and varying grant application processes.

The Dieringer School District Board of Directors will work in conjunction with those organizations identified under each mitigation measure to initiate the overall mitigation strategy. For example, any infrastructure-related measures will be implemented through the Dieringer School District Capital Facilities Plan and the Maintenance and Operations Department through the normal budget schedule. Because the School District has no land use or regulatory authority, it must rely heavily on collaboration with neighboring jurisdictions. For example, for density-related issues, the District will work with Pierce County and the Hazard Mitigation Forum to implement recommendations into the Pierce County Comprehensive Plan. Other measures will be implemented through collaboration with the identified jurisdictions/departments listed under each measure's evaluation.

These efforts fall under a broader implementation strategy that represents a county-wide effort. This strategy must be adaptable to change while being consistent in its delivery.

The mitigation implementation strategy is a three-tiered method that emphasizes localized needs and vulnerabilities while addressing both District and multi-jurisdictional policies and programs. The first tier is implementation through individual citizen level—existing Public Education Programs in the District (for example, at the individual level through the 911 presentations and evacuation drills). The second is the Safety Committee, a District-wide mechanism for implementation comprised of District employees. The third tier is a more external and multi-jurisdictional mechanism, the Hazard Mitigation Forum (HMF).

This method ensures that implementation speaks to unique vulnerabilities at the most local level, allows for coordination among and between levels, and promotes collaboration and innovation. Further, it provides a structured system of monitoring implementation. Finally, it is a method that can adapt to the changing vulnerabilities of the District, the region, and the times. These three levels and their means of implementation and collaboration are described below.

#### Public Education Programs

At the individual citizen level, Public Education Programs provide the School District with a localized mechanism for implementation. This approach to mitigation can adapt to the varying vulnerabilities and needs within a growing region. Public Education Programs are also a means for involving the public in mitigation policy development. Currently the School District pursues a variety of mitigation-related programs that help students, staff and citizens to better prepare for and respond to disasters.

#### Jurisdiction-Wide: Dieringer School District Safety Committee

The Dieringer School District Safety Committee will be the body responsible for determining the direction of the Plan's implementation. The Team will ultimately provide a mechanism for coordination among those groups engaged in mitigation to ensure that a comprehensive and efficient approach be undertaken in the District's efforts at all-hazards mitigation. The Dieringer School District Safety Committee will be coordinated by the Superintendent or designee.

The Safety Committee will be responsible for the overall review of the Plan and will designate mitigation measures to those departments responsible for their implementation. This will be done with assistance from the Director of Operations and Transportation. The Safety Committee will monitor and evaluate the plan's implementation throughout the year and will update the Plan on an annual basis during one of its regularly scheduled meetings. The Board of Directors will address these updates annually at one of its regularly scheduled meetings. Recommendations will be made to coincide with the District's normal budgeting processes and provide an ample time period for review and adoption of any necessary changes to the implementation schedule.

## Hazard Mitigation Forum

The PC Hazard Mitigation Forum (HMF) represents a broader and multi-jurisdictional approach to mitigation implementation. The PC HMF will be comprised of representatives from unincorporated Pierce County and all jurisdictions, partially or wholly, within its borders, that have undertaken mitigation planning efforts. The PC HMF will serve as coordinating body for projects of a multi-jurisdictional nature and will provide a mechanism to share successes and increase the cooperation necessary to break the disaster cycle and achieve a disaster resistant Pierce County. Members of the PC HMF will include the following jurisdictions who have completed, or who have begun the process of completing, DMA compliant plan:

- City of Bonney Lake
- City of DuPont
- City of Fife
- City of Gig Harbor
- City of Milton

- City of Buckley
- City of Edgewood
- City of Fircrest
- City of Lakewood
- City of Orting

- City of Puyallup
- City of Sumner
- City of University Place
- Town of Eatonville
- Town of Steilacoom
- Unincorporated Pierce County
- East Pierce Fire and Rescue #22
- Graham Fire and Rescue #21
- Orting Valley Fire and Rescue #18
- Riverside Fire and Rescue #14
- Anderson Island Fire and Rescue #27
- West Pierce Fire and Rescue #3
- Clover Park School District
- Eatonville School District
- Franklin Pierce School District
- Pacific Lutheran University
- Puyallup School District
- Sumner School District
- University Place School District
- Crystal River Ranch HOA
- Pierce Transit
- Riviera Community Club
- Clear Lake Water District
- Fruitland Mutual Water Company
- Lakeview Light and Power
- Mt. View-Edgewood Water Company
- Parkland Light and Water Company
- Spanaway Water Company
- Valley Water District
- Community Health Care
- Kaiser Permanente
- Western State Hospital
- Tacoma Pierce County Health Dept.

- City of Roy
- City of Tacoma
- Town of Carbonado
- Town of South Prairie
- Town of Wilkeson
- Central Pierce Fire and Rescue #6
- Gig Harbor Fire and Medic One #5
- Key Peninsula Fire Department #16
- Browns Point Fire Department #13
- Ashford Elbe Fire District #23
- South Pierce Fire and Rescue #17
- Carbonado School District
- Dieringer School District
- Fife School District
- Orting School District
- Peninsula School District
- Steilacoom School District
- Tacoma School District
- Crystal Village HOA
- Metropolitan Park District
- Port of Tacoma
- Taylor Bay Beach Club
- Firgrove Mutual Water Company
- Graham Hill Mutual Water Company
- Lakewood Water District
- Ohop Mutual Light Company
- Peninsula Light Company
- Summit Water and Supply Company
- Cascade Regional Blood Services
- Franciscan Health System
- MultiCare Health System
- Puyallup Tribe of Indians
- Bethel School District

PC HMF will meet annually in November and will be coordinated by PC DEM. The School District will be an active participant in the PC HMF and will be represented by the Emergency Programs Manager. Only through this level of cooperation can these jurisdictions meet all of their mitigation goals.

# Regional Mitigation Planning

Pierce County, Region 5 was configured into 5 planning groups based on a commonality in geographical hazards for the 2020-2025 mitigation plan update to foster relationship building

and resiliency planning amongst jurisdictions. Although much of the meeting and planning time focused on plan updates and fostered relationship building the resiliency planning component will continue within multi-jurisdictional groups working together to further reduce risk. This provides another opportunity for continued collaboration planning amongst jurisdictions working and partnering together. The meeting frequency will be driven by the mitigation implementation strategy and combines the three-tiered approach. The Dieringer School District will continue to engage within the "northeast group" geographical planning area and will provide the specific department representative to engage in and implement mitigation activities within this geographical group.

### Plan Evaluation and Update

It should be noted this planning process began in early 2019 following the then current CFR 201.6 Hazard Mitigation Planning Requirements. Based on new requirements in the Stafford Act, the Dieringer School District will evaluate and update the plan to incorporate these new requirements as necessary. Furthermore, if there are additional Stafford Act changes affecting CFR 201.6 in the coming years, the planning process will incorporate those as well.

The Dieringer School District Plan will guide the District's mitigation efforts for the foreseeable future. School District representatives on the Planning Team have developed a method to ensure that regular review and update of the Plan occur within a five-year cycle.

PC DEM will collaborate with the Dieringer School District Safety Committee and the PC HMF to help monitor and evaluate the mitigation strategy implementation. PC DEM will track this implementation through Pierce County's GIS database. Findings will be presented and discussed at the annual meeting.

The Dieringer School District Safety Committee will provide a report of the Plan's implementation to the School Board at the annual meeting. This report will drive the meeting agendas and will include the following:

- Updates on implementation throughout the School District;
- Updates on the PC HMF and mitigation activities undertaken by neighboring jurisdictions;
- Changes or anticipated changes in hazard risk and vulnerability at the School District, county, regional, State, FEMA and Homeland Security levels;
- Problems encountered or success stories;
- Any technical or scientific advances that may alter, make easier, or create measures.

The Dieringer School District Safety Committee will decide on updates to the strategy based on the above information and a discussion of:

- The various resources available through budgetary means as well as any relevant grants;
- The current and expected political environment and public opinion;

• Meeting the mitigation goals with regards to changing conditions.

PC DEM will work with the Dieringer School District Safety Committee or the Superintendent or designee to review the Risk Assessment Section to determine if the current assessment should be updated or modified based on new information. This will be done during the regularly scheduled reviews of the regional partners Hazard Identification and Vulnerability Analyses and the Comprehensive Emergency Management Plans.

Additional reviews of this Plan will be required following disaster events and will not substitute for the annual meeting. Within ninety days following a significant disaster or an emergency event impacting the District, the Superintendent or designee will provide an assessment that captures any "success stories" and/or "lessons learned." The assessment will detail direct and indirect damages to the District and its critical facilities, response and recovery costs, as part of the standard recovery procedures that use EMD Forms 129, 130, and 140. This process will help determine any new mitigation initiatives that should be incorporated into the Plan to avoid or reduce similar losses due to future hazard events. In this manner, recovery efforts and data will be used to analyze mitigation activities and spawn the development of new measures that better address any changed vulnerabilities or capabilities. Any updates to the Plan will be addressed at the ensuing regularly scheduled Board of Directors meeting.

As per 44 CFR 201.6, the Dieringer School District must re-submit the Plan to the State and FEMA with any updates every five years. This process will be coordinated by PC DEM through the Pierce County Hazard Mitigation Forum. In 2020 and every five years following at the Hazard Mitigation Forum, the Dieringer School District Superintendent or designee will submit the updated plan to PC DEM. PC DEM's Mitigation and Recovery Program Coordinator will collect updates from the Region 5 Plan jurisdictions and submit them to the State EMD and FEMA.

### **Continued Public Involvement**

The Dieringer School District is dedicated to continued public involvement and education in review and updates of the Plan. The District will retain copies of the Plan and will post it on the Dieringer School District website. Announcements regarding the Plan's adoption and the annual updates to the Plan will be advertised on the Dieringer School District website.

The three-tiered implementation method provides an opportunity for continuous public involvement. Public Education campaigns are a means of informing the public on updates and implementation activities. Board of Directors' meetings are open to the public and as such, the annual meeting regarding mitigation will provide the public a forum to express concerns, opinions, or ideas about the Dieringer School District Plan. Further, prior to submitting the Plan to WA EMD and FEMA for the five-year review, the Dieringer School District Safety Committee will hold a public information and comment meeting. This meeting will be advertised in the School District through a variety of media, including the Dieringer School District newsletter and District webpage.

The Dieringer School District will conduct a review on a yearly basis to ensure all elements of the mitigation plan are updated and accurate. Each of the 76 jurisdictions has been tasked with having to provide documentation on public involvement including a brief description for each public hearing held, a summary on attendance, any feedback received from the public and an overall description of what was accomplished. Even further, the Dieringer School District will provide proof of their attempts for public involvement such as screenshots of websites including date ranges, flyers and other relevant material documenting the public involvement process. Lastly, the Dieringer School District will look for new innovative ways for public involvement.

http://www.dieringer.wednet.edu/

### **APPENDIX A**

## REGION 5 ALL HAZARD MITIGATION PLAN 2020-2025 EDITION DIERINGER SCHOOL DISTRICT

## **Plan Adoption**

The "Region 5 Hazard Mitigation Plan" was adopted by the Dieringer School District's Board of Directors on April 26, 2021 by resolution number 07-20-2021. The following page shows a copy of that resolution.

#### **RESOLUTION NO. 2021-01**

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF SOUTH PRAIRIE, WASHINGTON, ADOPTING THE REGION 5 ALL HAZARD MITIGATION PLAN – 2020-2025 EDITION AND THE TOWN OF SOUTH PRAIRIE ADDENDUM TO THE REGION 5 HAZARD MITIGATION PLAN.

WHEREAS, the Federal Disaster Mitigation Act of 2000 requires that, for all disasters declared on or after November 1, 2004, applicants for sub-grants following any disaster must have an approved Natural Hazard Mitigation Plan in accordance with 44CFR 201.6 prior to receipt of Hazard Mitigation Grant Program project funding; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 requires that for Pre-Disaster Mitigation grant program project funding on or after November 1, 2003, applicants must have an approved Natural Hazard Mitigation Plan in accordance with 44CFR 201.6 prior to receipt of project funding; and

WHEREAS, the All Hazard Mitigation Plan Update represents the commitment of the Town of South Prairie along with other surrounding government entities to reduce the risks from natural, man-made and technological hazards, serving as a guide for decision makers as they commit resources to reducing the effects of hazards, and it is in the public interest to proceed with the planning process in a timely manner; and

WHEREAS, Town of South Prairie has participated with the Pierce County Department of Emergency Management in the development of the Town's All Hazard Mitigation Plan Update, and recognizes the economic loss, personal injury, and damage that can arise from these hazards; and

WHEREAS, reduction of these impacts can be achieved through a comprehensive coordinated planning process which includes an updated risk assessment that provides the factual basis for activities proposed in the mitigation strategies to reduce losses and vulnerabilities, a five-year cycle for plan maintenance, and documentation of formal adoption by Town of South Prairie; and

WHEREAS, the 2020-2025 Region 5 All Hazard Mitigation Plan Edition has been completed and approved by the State and the Federal Emergency Management Agency; and

WHEREAS, the Town of could risk not receiving future disaster funding if the All Hazard Mitigation Plan Update is not adopted;

WHEREAS, the South Prairie Town Council reviewed the All Hazard Mitigation Plan Update.

#### NOW THEREFORE, BE IT RESOLVED that:

<u>Section 1</u>. The Region 5 All Hazard Mitigation Plan, 2020-2025 Edition, is hereby adopted as set forth in Exhibit A, attached.

<u>Section 2</u>. The South Prairie Addendum to the Region 5 Hazard Mitigation Plan, an update to the Town All Hazard Mitigation Plan, is hereby adopted and shall be in full force and effect upon passage and signatures hereon.

**Section 3.** This Resolution shall be effective immediately upon passage by the Town Council.

RESOLVED the 8<sup>th</sup> day of June 2021.

APPROVED:

ATTEST/AUTHENTICATED:

Anthony Caldwell, Mayor

Terri Berry, MMC, Town Clerk/Treasurer

The plan was reviewed and approved as follows:

AGENCY	REPRESENTATIVE	DATE
Washington State		
Military Dept.,	Kevin Zerbe	Approved—December 23, 2020
Emergency Management	State Mitigation Strategist	Approved—December 23, 2020
Division	-	
	John Schelling	Plan Approved Pending
FEMA Region X	Hazard Mitigation Planning	Adoption—January 25, 2021,
	Manager	2021
EEMA Docion V	Kristen Meyers, Director	Approved—
FEMA Region X	Mitigation Division	August 4, 2021

FEMA letter of pre-approval and letter of approval follows below.

#### LOCAL MITIGATION PLAN REVIEW TOOL

The Local Mitigation Plan Review Tool demonstrates how the Local Mitigation Plan meets the regulation in 44 CFR §201.6 and offers States and FEMA Mitigation Planners an opportunity to provide feedback to the community.

- The <u>Regulation Checklist</u> provides a summary of FEMA's evaluation of whether the Plan has addressed all requirements.
- The <u>Plan Assessment</u> identifies the plan's strengths as well as documents areas for future improvement.
- The <u>Multi-jurisdiction Summary Sheet</u> is an optional worksheet that can be used to
  document how each jurisdiction met the requirements of the each Element of the
  Plan (Planning Process; Hazard Identification and Risk Assessment; Mitigation
  Strategy; Plan Review, Evaluation, and Implementation; and Plan Adoption).

The FEMA Mitigation Planner must reference this *Local Mitigation Plan Review Guide* when completing the *Local Mitigation Plan Review Tool*.

<b>Jurisdiction:</b> Dieringer School District	<b>Title of Plan:</b> Die District, Addendo Region 5 All Haza Plan 2020-2025 I	um B-3 ard Mitigation	Date of Plan: November 6, 2020
Local Point of Contact: Debbie Bailey		Address:	
Title: Mitigation Coordinator/GIS		2501 S 35 <sup>th</sup> St. Ste. D Tacoma, WA 98409	
Agency: Pierce County Emergency Management			
<b>Phone Number:</b> 253-798-6366		E-Mail: <u>Debbie.ba</u>	ailey@piercecountywa.gov

State Reviewer: Kevin Zerbe	<b>Title:</b> State Mitigation Strategist	Date: 12/23/2020
FEMA Reviewer:	Title:	Date:
Claire Fetters	CERC Planner	1/21/2021
John McCandless	Hazard Mitigation Planner	1/25/2021
John.McClandless@fema.dhs.gov		
Date Received in FEMA Region 10	12/23/2020	
Plan Not Approved		
Plan Approvable Pending Adoption	1/25/2021	
Plan Approved		

**Local Mitigation Plan Review Tool** 

A-1



August 4, 2021

The Honorable Bruce Dammeier Executive, Pierce County 930 Tacoma Avenue South, Room 737 Tacoma, Washington 98402

Dear Mr. Dammeier:

On November 23, 2020, the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) Region 10, approved the Pierce County Hazard Mitigation Plan as a multi-jurisdictional local plan as outlined in Code of Federal Regulations Title 44 Part 201. This approval provides the below jurisdictions eligibility to apply for the Robert T. Stafford Disaster Relief and Emergency Assistance Act's, Hazard Mitigation Assistance grants through November 22, 2025, through your state.

Town of Eatonville	City of Fife	City of Sumner
Gig Harbor #5	Graham Fire #21	Mt. View-Edgewood
Orting School District	Port of Tacoma	Carbonado School District
Town of Steilacoom	West Pierce Fire #3	City of Bonney Lake
City of Buckley	City of Edgewood	City of Orting
Town of Carbonado	Town of Wilkeson	White River School District
Spanaway Water Company	Riverside Fire & Rescue #14	Clover Park School District
Central Pierce Fire #6	City of Lakewood	City of Puyallup
Town of South Prairie	Unincorporated Pierce County	Dieringer School District
Peninsula School District	Parkland Light and Water	

The updated list of approved jurisdictions includes the City of Lakewood, City of Puyallup, Town of South Prairie, Unincorporated Pierce County, Dieringer School District, Peninsula School District, and Parkland Light and Water that recently adopted their respective addendums to the Pierce County Natural Hazards Mitigation Plan. To continue eligibility, jurisdictions must review, revise as appropriate, and resubmit the plan within five years of the original approval date.

If you have questions regarding your plan's approval or FEMA's mitigation grant programs, please contact, Kevin Zerbe, State Mitigation Strategist with Washington Emergency Management Division, at (253) 512-7467, who coordinates and administers these efforts for local entities.

Sincerely,

Digitally signed by KRISTEN C MEYERS Date: 2021.08.06 12:17:23 -07'00'

Kristen Meyers, Director Mitigation Division

cc: Tim Cook, Washington Emergency Management Division

Enclosure

www.fema.gov

### **APPENDIX A**

## REGION 5 ALL HAZARD MITIGATION PLAN 2015-2020 EDITION DIERINGER SCHOOL DISTRICT

## **Plan Adoption**

The "Region 5 Hazard Mitigation Plan" was adopted by the Dieringer School District's Board of Directors on July 27, 2015 by resolution number 10-14-15. The following page shows a copy of that resolution.

#### RESOLUTION NO.10-14-15

A Resolution of the Board of Directors of Dieringer School District adopting the Region 5
All Hazard Mitigation Plan - 2015-2020 Edition and the Dieringer School District
Addendum to the Region 5 Hazard Mitigation Plan; and Updating the 2004 Pierce
County Natural Hazard Mitigation Plan.

WHEREAS, the Federal Disaster Mitigation Act of 2000 requires that for all disasters declared on or after November 1, 2004, applicants for sub-grants following any disaster must have an approved Natural Hazard Mitigation Plan in accordance with 44CFR 201.6 prior to receipt of Hazard Mitigation Grant Program project funding; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 requires that for Pre-Disaster Mitigation grant program project funding on or after November 1, 2003, applicants must have an approved Natural Hazard Mitigation Plan in accordance with 44CFR 201.6 prior to receipt of project funding; and

WHEREAS, the All Hazard Mitigation Plan Update represents the commitment of the Dieringer School District along with other surrounding government entities to reduce the risks from natural, man-made and technological hazards, serving as a guide for decision makers as they commit resources to reducing the affects of hazards, and it is in the public interest to proceed with the planning process in a timely manner; and

WHEREAS, Dieringer School District has participated with the Pierce County Department of Emergency Management in the development of the District's All Hazard Mitigation Plan Update, and recognizes the economic loss, personal injury, and damage that can arise from these hazards; and

WHEREAS, adoption of this plan obligates the District to make improvements in facilities that mitigate identified hazards within a reasonable timeframe and these improvements will increase safety for students, staff, and others who utilize district facilities; and

WHEREAS, reduction of these impacts can be achieved through a comprehensive coordinated planning process which includes an updated risk assessment that provides the factual basis for activities proposed in the mitigation strategies to reduce losses and vulnerabilities, a five-year cycle for plan maintenance, and documentation of formal adoption by Dieringer School District; and

WHEREAS, the 2015-2020 Region 5 All Hazard Mitigation Plan Edition has been completed and approved by the State of Washington and preliminarily approved by the Federal Emergency Management Agency; and

WHEREAS, Board adoption will allow the final approval of the Dieringer School District All Hazard Mitigation Plan by the Federal Emergency Management Agency, and final approval of the plan will qualify the District for future disaster relief funding from the federal government;

# NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of Dieringer School District, Pierce County, Washington,

Section 1. The Region 5 Hazard Mitigation Plan, 2015-2020 Edition, is hereby adopted as set forth in Exhibit A, which is attached.

Section 2. The Dieringer School District Addendum to the Region 5 Hazard Mitigation Plan, an update to the Dieringer School District Natural Hazard Mitigation Plan is hereby adopted and shall be in full force and effect upon passage and signatures hereon.

ADOPTED by the Board of Directors this 27 day of July 2015, in regular, open session.

Board of Directors:

Board President

Board Vice-President

Board Member

Board Member

Board Membe

Board Member

ATTEST:

Secretary to the Board

The plan was reviewed and approved as follows:

AGENCY	REPRESENTATIVE	DATE
Washington State Military Dept., Emergency Management Division	Tim Cook Hazard Mitigation Programs Manager	Approved—
FEMA Region X	Tamra Biasco Chief, Risk Analysis Branch Mitigation Division	Approved— February 2, 2015

FEMA Pre-Adoption Review and Letter of approval follows below.

U.S. Department of Homeland Security
FEMA Region X
Federal Regional Center
130 228th Street, SW
Bothell, WA 98021-8627

February 2, 2015

Mr. Tim Cook Hazard Mitigation Programs Manager Washington State Emergency Management Division Building 20, MS TA-20 Camp Murray, Washington 98430-5122

Dear Mr. Cook:

As requested, the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) has completed a pre-adoption review of the *Region 5 Hazard Mitigation Plan*. The plan successfully contains the required criteria, excluding the adoption, for hazard mitigation plans, as outlined in 44 CFR Part 201. This letter serves as Region 10's commitment to approve the plan upon receiving documentation of its adoption by the participating jurisdictions.

The plan will not be formally approved by FEMA until it is adopted. Each jurisdiction is not eligible for mitigation project grants until the plan is formally approved by FEMA.

Please contact our Regional Mitigation Planning Manager, Kristen Meyers, at (425) 487-4543 with any questions.

Sincerely,

Tamra Biasco Chief, Risk Analysis Branch Mitigation Division

KM:bb

www.fema.gov

U.S. Department of Homeland Security FEMA Region 10 130 228th Street, SW Bothell, Washington 98021-8627



October 9, 2018

The Honorable Douglas Richardson Chair, Pierce County Council 930 Tacoma Avenue South Tacoma, Washington 98402

#### Dear Chair Richardson:

On July 23, 2015, the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) Region 10, approved the *Region 5 (Pierce County) Hazard Mitigation Plan* as a multi-jurisdictional local plan as outlined in Code of Federal Regulations Title 44 Part 201. This approval provides the below jurisdictions eligibility to apply for the Robert T. Stafford Disaster Relief and Emergency Assistance Act's, Hazard Mitigation Assistance grants through July 22, 2020, through your state.

COUNTY / CITIES / TOWNS		
City of Bonney Lake	City of Lakewood	Town of Eatonville
City of Buckley	City of Milton	Town of Carbonado
City of DuPont	City of Orting	Town of South Prairie
City of Edgewood	City of Roy	Town of Steilacoom
City of Fife	City of Sumner	Town of Wilkeson
City of Fircrest	City of Tacoma	Pierce County
City of Gig Harbor	City of Puyallup	
FIRE PROTECTION DISTRIC	TS	
Anderson Island Fire & Rescue	East Pierce Fire and Rescue	Orting Valley Fire & Rescue
(PCFD #27)-		(PCFD #18)
Ashford Fire (PCFD #23)-	Gig Harbor Fire & Medic One	South Pierce Fire & Rescue
	(PCFD #5)	(PCFD #17)
Browns Point - Dash Point Fire	Graham Fire & Rescue	Riverside Fire & Rescue
(PCFD #13)	(PCFD #21)	(PCFD #14)
Central Pierce Fire & Rescue	Key Peninsula Fire	West Pierce Fire & Rescue
(PCFD #6)	(PCFD #16)	(PCFD #3)
SCHOOL AND PARK DISTRI	CTS	
Carbonado SD	Franklin Pierce SD	Steilacoom Historic SD No. 1
Clover Park SD	Metro Parks Tacoma	Sumner SD
Dieringer SD	Orting SD	Tacoma SD #10
Eatonville SD	Peninsula SD	University Place SD
Fife SD	Puyallup SD	White River SD
WATER DISTRICTS AND OT	HERS	
Clear Lake WD	Lakewood Water District	Pierce Transit
Port of Tacoma	Community Health Care	

www.fema.gov

Chair Richardson October 9, 2018 Page 2

The updated list of approved jurisdictions includes the City of Puyallup and Community Health Care that recently adopted the City of Puyallup Addendum to the *Region 5 (Pierce County) Hazard Mitigation Plan*. To continue eligibility, jurisdictions must review, revise as appropriate, and resubmit the plan within five years of the original approval date.

Additionally, this letter acknowledges that the following organizations, while not local governments, participated in, and adopted the plan. These organizations may be eligible to apply for the Hazard Mitigation Grant Program as private non-profits.

#### OTHER PLAN PARTICIPANTS

Pacific Lutheran University	Firgrove Mutual Inc.	Fruitland Mutual Water Company
Graham Hill Mutual Water Co., Inc.	Mt. View-Edgewood Water Company	Ohop Mutual Light Company
Spanaway Water Company	Summit Water & Supply Company	Tanner Electric Company
Herron Island Homeowners Association	Crystal Village Homeowners Association	Taylor Bay Beach Club
Raft Island Improvement Association	Riviera Community Club	Crystal River Ranch Association
Cascade Regional Blood Services	Dynamic Partners	Group Health Cooperative
Western State Hospital	Lakeview Light & Power	Franciscan Health System

If you have questions regarding your plan's approval or FEMA's mitigation grant programs, please contact Derrick Hiebert, State Mitigation Strategist with Washington Emergency Management Division, at (253) 512-7142, who coordinates and administers these efforts for local entities.

. h /www

Mark Carey Director Mitigation Division

Enclosures

cc: Tim Cook, Washington Emergency Management Division

KS:rg

### **APPENDIX A**

## REGION 5 HAZARD MITIGATION PLAN 2008-2013 EDITION DIERINGER SCHOOL DISTRICT

## **Plan Adoption**

The "Region 5 Hazard Mitigation Plan" was adopted by the Dieringer School District's School Board on October 27, 2008. The following page shows a copy of that resolution to adopt.



### IERINGER SCHOOL DISTRICT

Educating every child for

Confidence today and

Contribution tomorrow

#### MITIGATION PLAN ADOPTION

Dieringer School District has been working in conjunction with a planning consortium that includes East Pierce Fire and Pierce County Sheriff's Department under the lead of Pierce County Emergency Management. Through the efforts of this planning team the Dieringer School District Natural Hazard Mitigation Plan has been formulated.

Adoption of this plan obligates the District to develop and maintain hazard mitigation plans to include facility maintenance and disaster plans.

The Dieringer School District Natural Hazard Mitigation Plan has been approved by the State of Washington and preliminarily approved by the Federal Emergency Management Agency. Board adoption will allow the final approval of the Dieringer School District Natural Hazard Mitigation Plan by the Federal Emergency Management Agency. Final approval of the plan will qualify the District for future disaster relief funding from the Federal government.

The Dieringer School District Natural Hazard Mitigation Plan was formally adopted at the regular meeting of the Board of Directors of the Dieringer School District held this 27<sup>th</sup> day of October, 2008, with the following members present and voting.

BOARD OF DIRECTORS

Vice Chair

\_\_\_\_\_

Director

ATTEST:

Board Secretary

1320 - 178th Avenue East • Lake Tapps, Washington 98391 • (253) 862-2537 • FAX (253) 862-8472

Dieringer School District #343 is an Equal Opportunity Institution

10/28/2008 TUE 08:06 [TX/RX NO 6488] 2002

The plan was reviewed and approved as follows:

AGENCY	REPRESENTATIVE	DATE
FEMA Region X	Mark Carey	Approved—November 24,
	Mitigation Division Director	2008

Letter of approval follows below.



January 30, 2009

Mr. Steven C. Bailey, Director Pierce County Department of Emergency Management 2501 South 35th Street Tacoma, Washington 98409-7405

Dear Mr. Bailey:

On November 28, 2008, the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) approved the *Region 5 Hazard Mitigation Plan* as a multijurisdictional local plan as outlined in 44 CFR Part 201. With approval of this plan, the following entities are now eligible to apply for the Robert T. Stafford Disaster Relief and Emergency Assistance Act's hazard mitigation project grants through November 28, 2013:

Cities and Towns:	Fire Districts:	School Districts:	Utilities:
City of Buckley	Lakewood Fire Department (PCFD #2)	Carbonado SD	Clear Lake Water District
City of Dupont	Gig Harbor Fire & Medic One (PCFD #5)	Dieringer SD	Fruitland Mutual Water Company
City of Edgewood	Central Pierce Fire & Rescue (PCFD #6)	Eatonville SD	Graham Hill Mutual Water Company
City of Fife	PCFD #8	Fife SD	Lakeview Light and Powe
City of Fircrest	PCFD #13	Franklin Pierce SD	Lakewood Water District
City of Gig Harbor	South Pierce Fire & Rescue (PCFD #15)	Orting SD	Mt. View-Edgewood Water Company
City of Orting	Key Peninsula Fire Department (PDFD #16)	Peninsula SD	Port of Tacoma
Town of Eatonville	Graham Fire and Rescue (PCFD #21)	University Place SD	Summit Water and Supply Company
Town of South Prairie	PCFD #23	White River SD	
Town of Wilkeson		Pacific Lutheran University	

The list of approved jurisdictions has been updated to include the jurisdictions in italics above, which have recently adopted the Region 5 Hazard Mitigation Plan. To continue eligibility, the plan must be reviewed, revised as appropriate, and resubmitted within five years of the original approval date.

www.fema.gov

Mr. Steven C. Bailey, Director January 30, 2009 Page 2

If you have questions regarding your plan's approval or FEMA's mitigation grant programs, please contact our State counterpart, Washington Emergency Management Division, which coordinates and administers these efforts for local entities.

Sincerely,

Mark Carey, Director Mitigation Division

cc: Mark Stewart, Washington Emergency Management Division

KM:bb

### **APPENDIX B**

## REGION 5 ALL HAZARD MITIGATION PLAN 2020-2025 EDITION DIERINGER SCHOOL DISTRICT

# **Region 5 Hazard Mitigation Planning Team**

**Dieringer School District** 

NAME	TITLE	JURISDICTION-DEPARTMENT
Kirsten Parker	Director of Human Resources	Dieringer School District
Vicky Welsh	Paraeducator	Dieringer School District
Michael Farmer	Superintendent	Dieringer School District

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APPENDIX PAGE B-2

### **APPENDIX C**

## REGION 5 ALL HAZARD MITIGATION PLAN 2020-2025 EDITION DIERINGER SCHOOL DISTRICT

### **Plan Revisions**

RECORD OF CHANGES					
Change Number	Description of Change (with page numbers)	Date	Authorized by:		

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	APPENDIX PAGE C-2			

#### **APPENDIX D**

## REGION 5 ALL HAZARD MITIGATION PLAN 2020-2025 EDITION DIERINGER SCHOOL DISTRICT

#### **OVERVIEW**

This appendix contains the spatial results from the Hazus Earthquake Scenario results showing the Essential Facilities for 90% functionality for Day 1 and Day 7 following an earthquake event based on three earthquakes scenarios. Information was based on ShakeMaps developed by U.S. Geological Survey for a 7.1M earthquake occurring on the Tacoma Fault, 7.2M earthquake on the Nisqually Fault and a 7.2M earthquake on the SeaTac Fault. There was a total of four Essential Facilities that were modeled; fire stations, police stations, schools and hospitals. Additional information can be found in the Risk Assessment Section of the Pierce County All Hazard Mitigation Plan.

#### **Inherent Errors**

As a special note to the Gig Harbor and Key Peninsula areas St. Anthony's Hospital is not identified on Maps D-6, D-7, D-15, D-16, D-24 or D-25 due to the recent construction of St. Anthony's Hospital and lack of data. With future updates of the Region 5 All Hazard Mitigation Plan, St. Anthony's Hospital will be included in the scenario analysis. If this information becomes available prior to the five-year update in 2020, revised analysis will be done and the revised maps will be distributed to the City of Gig Harbor, Gig Harbor Fire & Medic One and the Key Peninsula Fire Department.

It has been identified that the police station located to the west side of Orting is not in the correct location as seen on Maps: D-4, D-5, D-13, D-14, D-22 and D-23. The police department shares a building with the Fire District #18 at 401 Washington Ave S, which is located in the middle of town. As Hazus-MH is updated the police station will show a co-location with the fire station at this same location. If this information becomes available prior to the five-year update in 2020, revised analysis will be done and the revised maps will be distributed to the City of Orting and to Pierce County Fire District #18.

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Map D-1 Pierce County Tacoma Fault Scenario Total Losses Map Kitsap **PIERCE COUNTY** 7.1M TACOMA SCENARIO TOTAL LOSSES FOR GENERAL BUILDING STOCK King Thurston Yakima TOTAL DOLLAR LOSS FOR BUILDINGS
\*All Values in Thousands of Dollars
90.00 - \$5,000.00 \$5,000.01 - \$10,000.00 Pierce County \$10,000.01 - \$25,000.00

Lewis

\$25,000.01 - \$65,000.00

\$65,000.01 - \$198,201.13

Map D-2 Pierce County Tacoma Fault Scenario Fire Department Functionality Day 1 Map Kitsap **PIERCE COUNTY** 7.1M TACOMA FAULT SCENARIO **FIRE DEPARTMENTS FUNCTIONALITY DAY 1** 90% CONFIDENCE VALUE Kittitas Thurston Yakima **FIRE DEPARTMENTS FUNCTIONING DAY 1** 

21.4 - 90.0 90.1 - 100.0

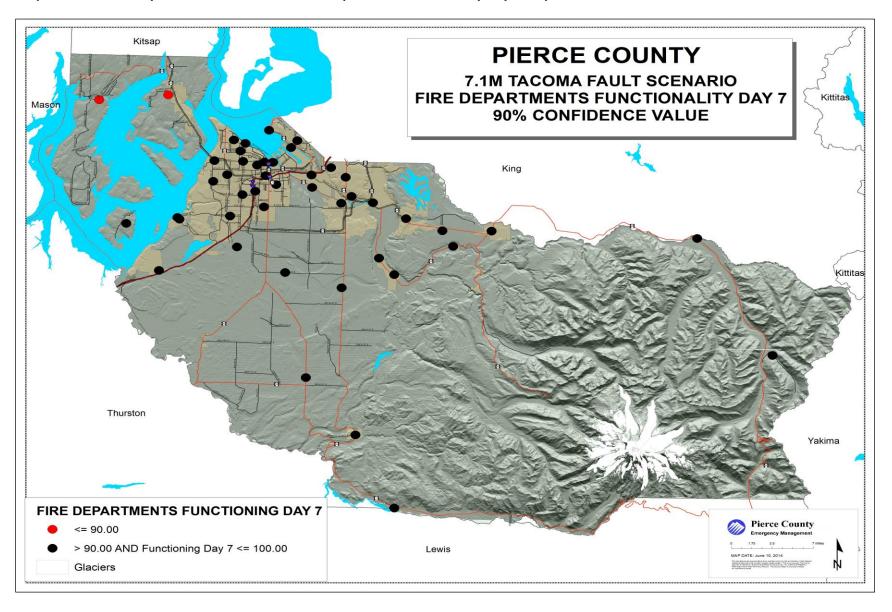
Glaciers

Lewis

Pierce County

MAP DATE: June 10, 2014

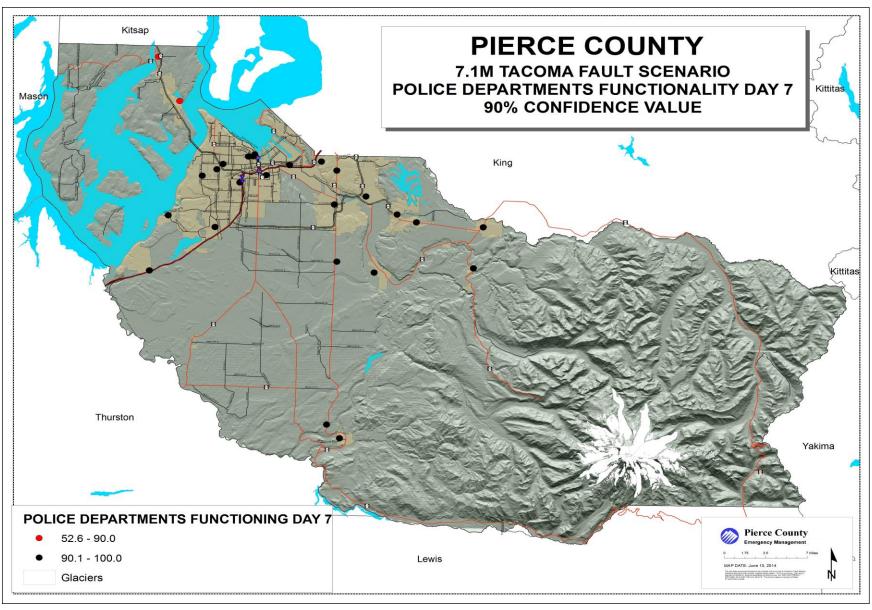
Map D-3 Pierce County Tacoma Fault Scenario Fire Department Functionality Day 7 Map



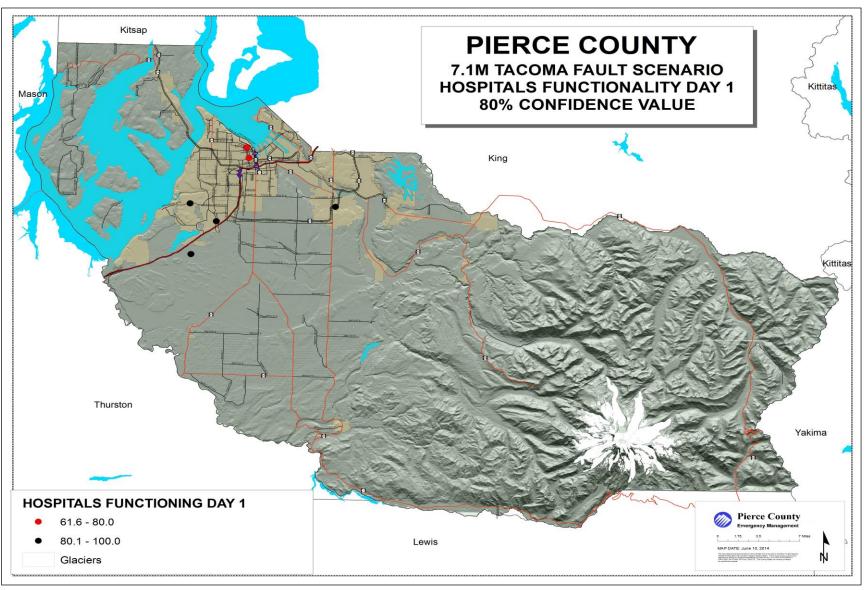
Kitsap **PIERCE COUNTY** 7.1M TACOMA FAULT SCENARIO **POLICE DEPARTMENTS FUNCTIONALITY DAY 1** 90% CONFIDENCE VALUE King Kittitas Thurston Yakima POLICE DEPARTMENTS FUNTIONING DAY 1 Pierce County 5.6 - 90.0 90.1 - 100.0 Lewis Glaciers

Map D-4 Pierce County Tacoma Fault Scenario Police Department Functionality Day 11

Map D-5 Pierce County Tacoma Fault Scenario Police Department Functionality Day 7 Map<sup>2</sup>



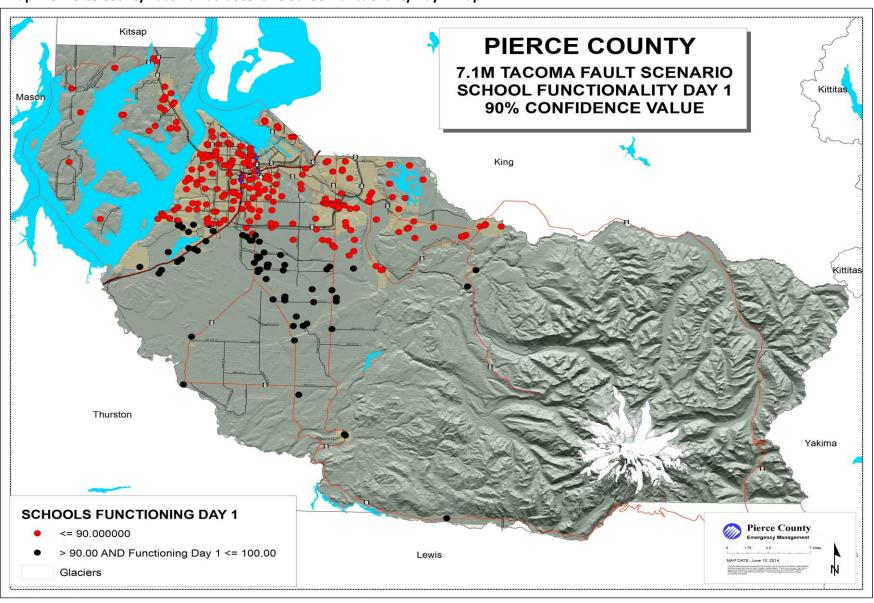
Map D-6 Pierce County Tacoma Fault Scenario Hospitals Functionality Day 1 Map<sup>3</sup>



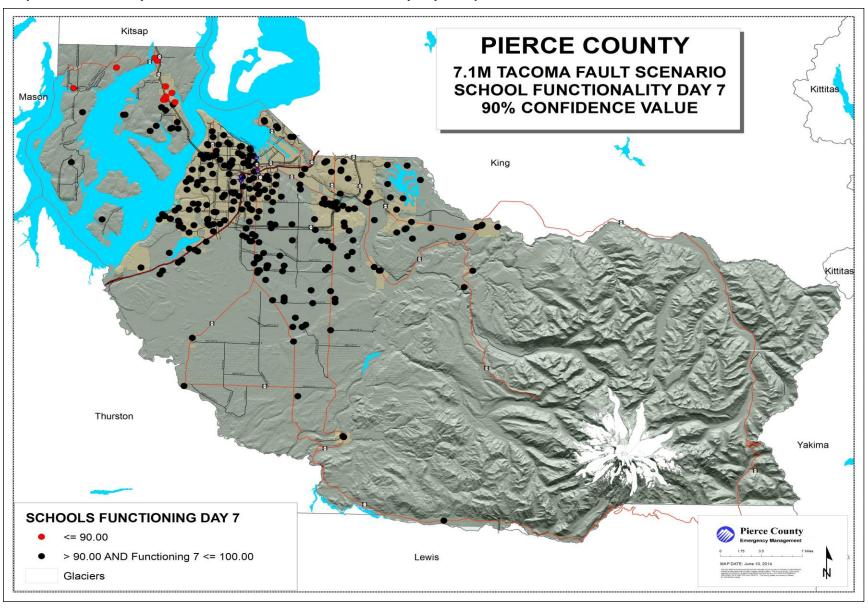
Kitsap **PIERCE COUNTY** 7.1M TACOMA FAULT SCENARIO **HOSPITALS FUNCTIONALITY DAY 7 80% CONFIDENCE VALUE** King Thurston Yakima **HOSPITALS FUNCTIONING DAY 7 Pierce County** 95.9 96.0 - 100.0 Lewis Glaciers

Map D-7 Pierce County Tacoma Fault Scenario Hospitals Functionality Day 7 Map<sup>4</sup>

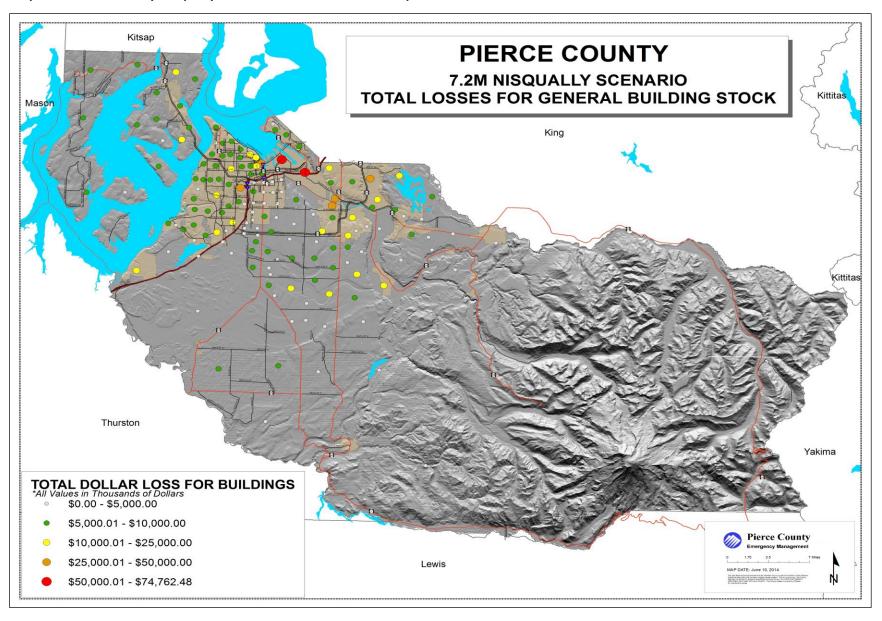
Map D-8 Pierce County Tacoma Fault Scenario School Functionality Day 1 Map



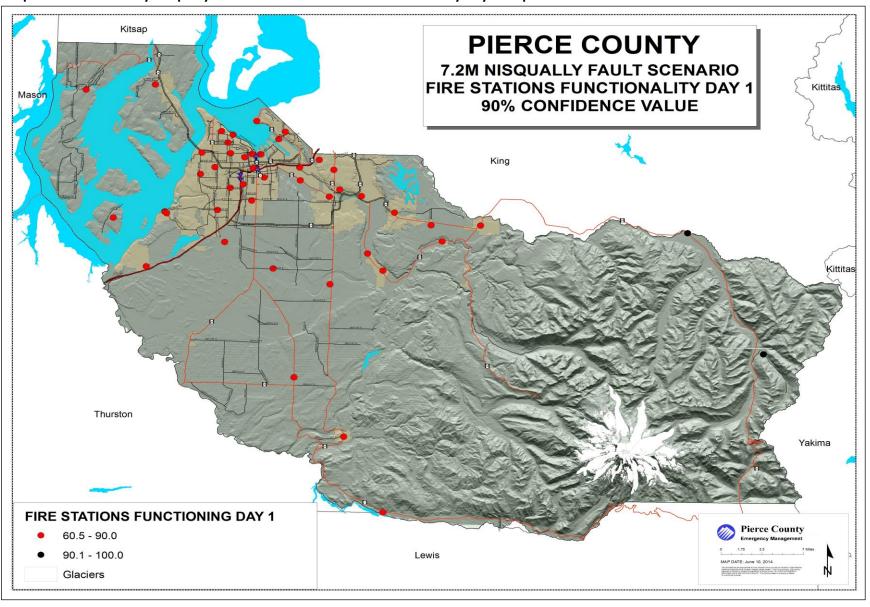
Map D-9 Pierce County Tacoma Fault Scenario School Functionality Day 7 Map



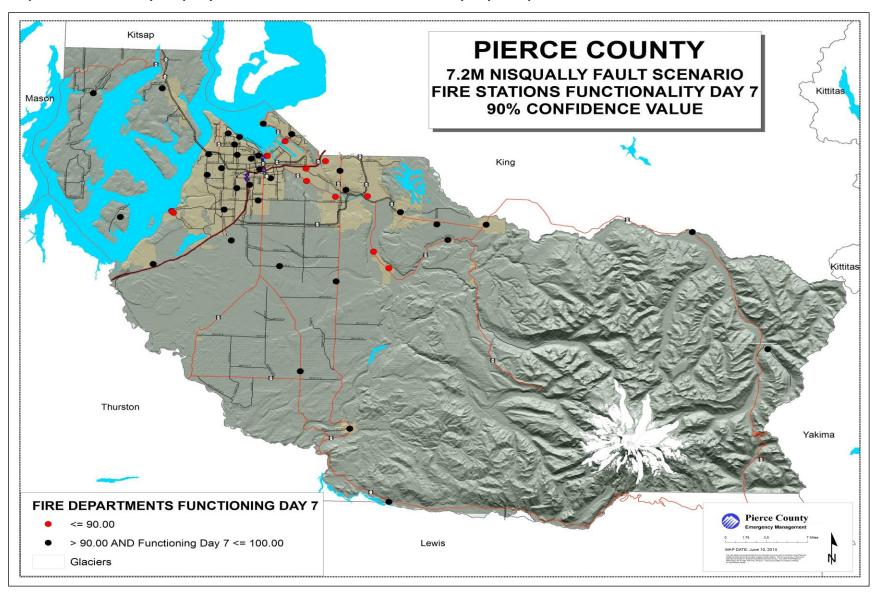
Map D-10 Pierce County Nisqually Fault Scenario Total Losses Map



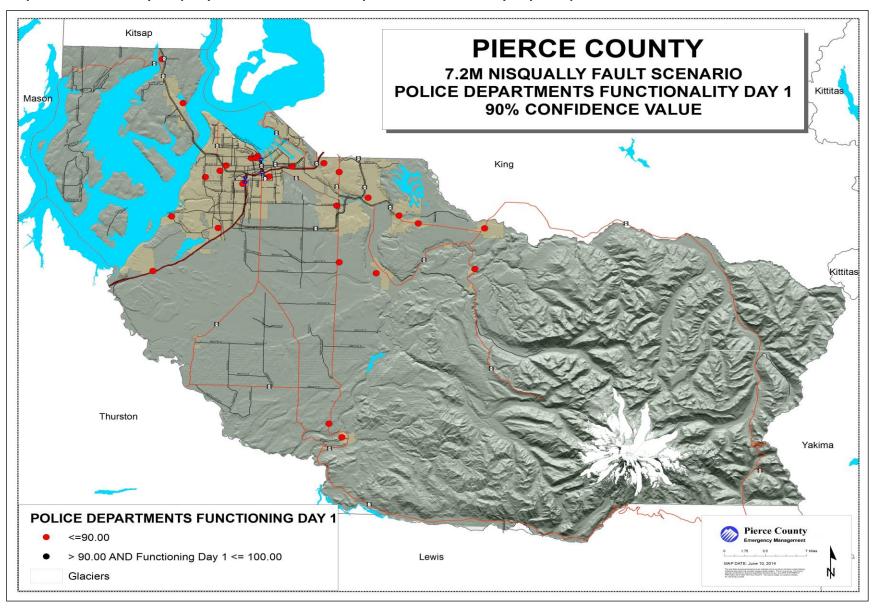
Map D-11 Pierce County Nisqually Fault Scenario Fire Stations Functionality Day 1 Map



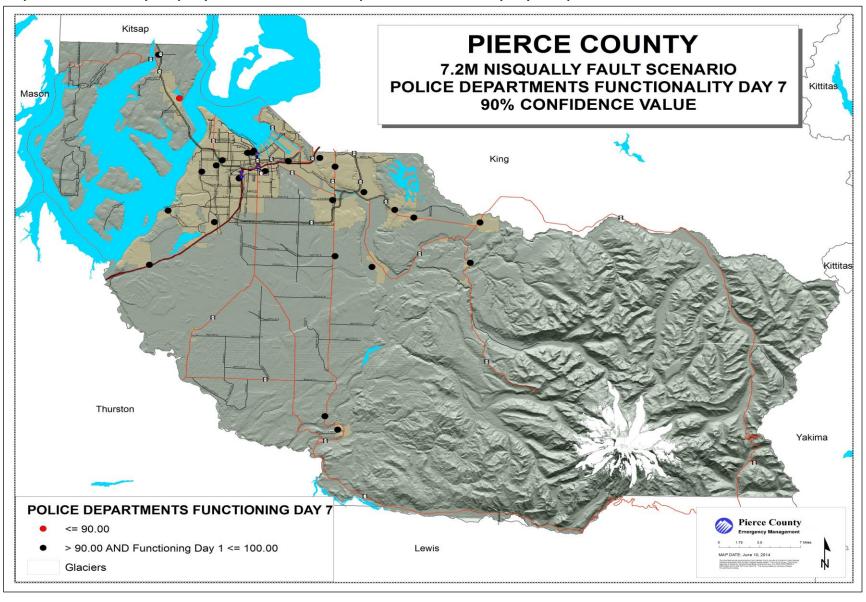
Map D-12 Pierce County Nisqually Fault Scenario Fire Stations Functionality Day 7 Map



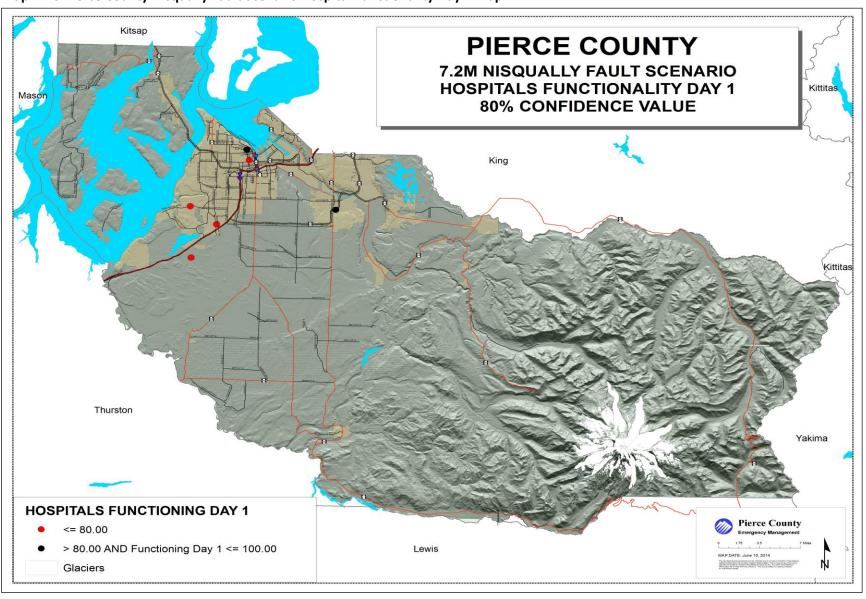
Map D-13 Pierce County Nisqually Fault Scenario Police Departments Functionality Day 1 Map<sup>5</sup>



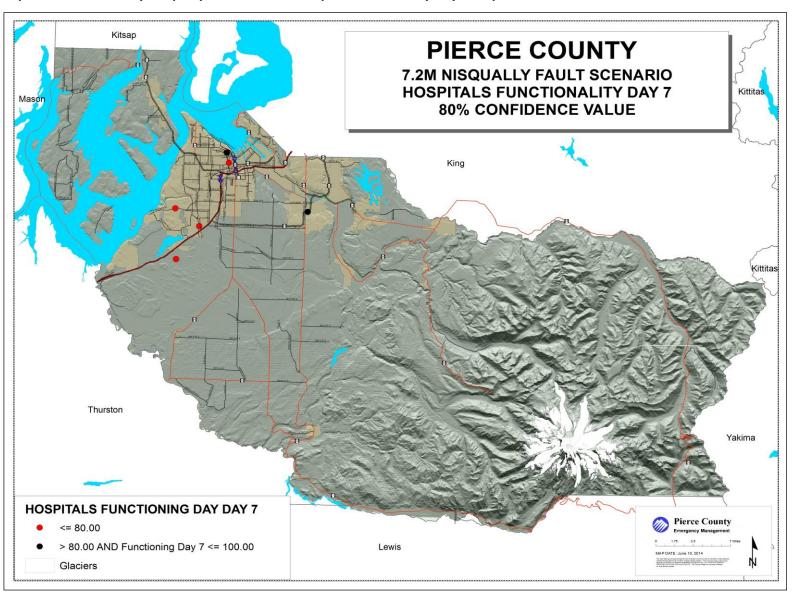
Map D-14 Pierce County Nisqually Fault Scenario Police Departments Functionality Day 7 Map<sup>6</sup>



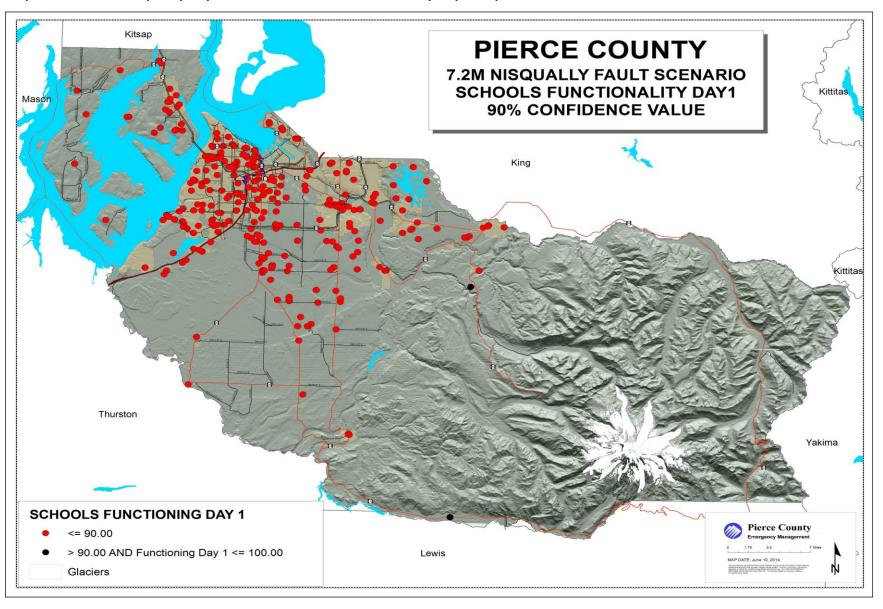
Map D-15 Pierce County Nisqually Fault Scenario Hospital Functionality Day 1 Map<sup>7</sup>



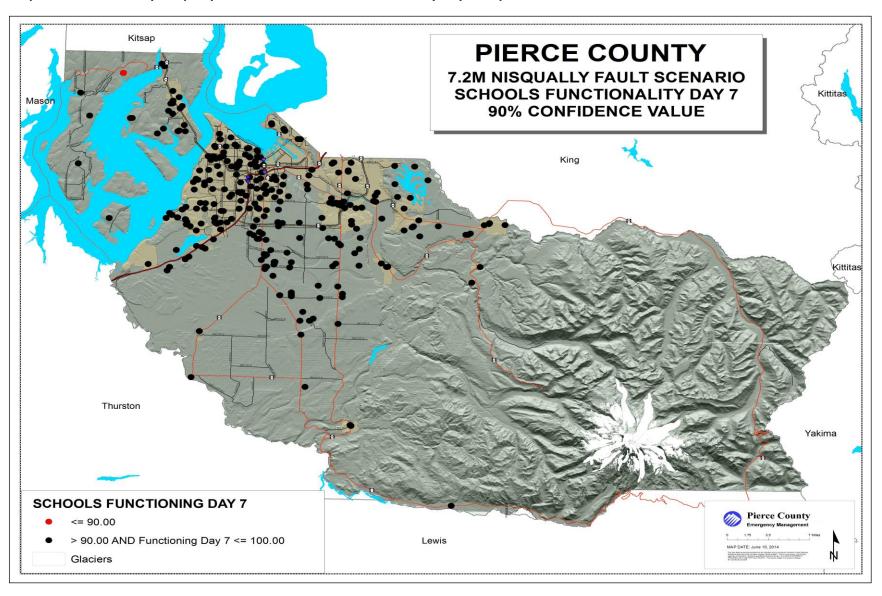
Map D-16 Pierce County Nisqually Fault Scenario Hospital Functionality Day 7 Map<sup>8</sup>



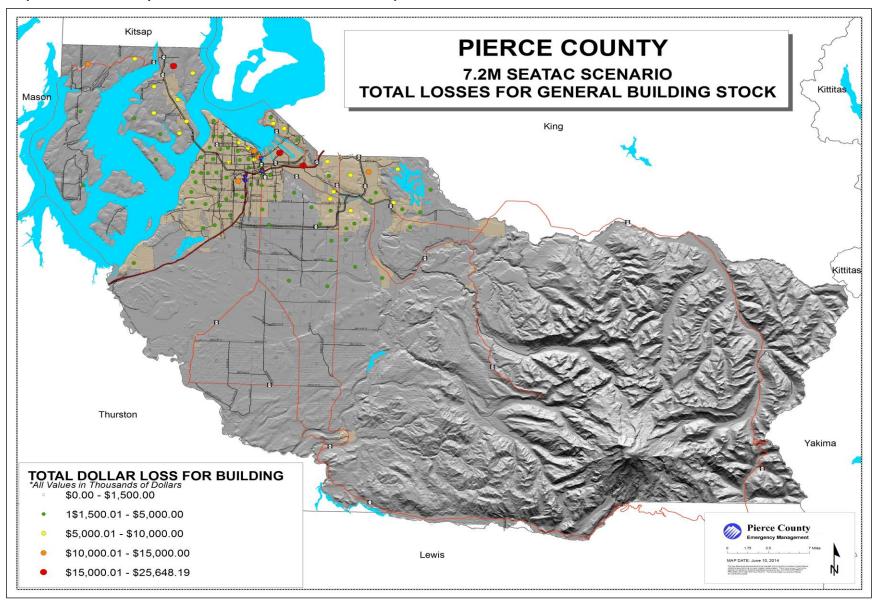
Map D-17 Pierce County Nisqually Fault Scenario Schools Functionality Day 1 Map



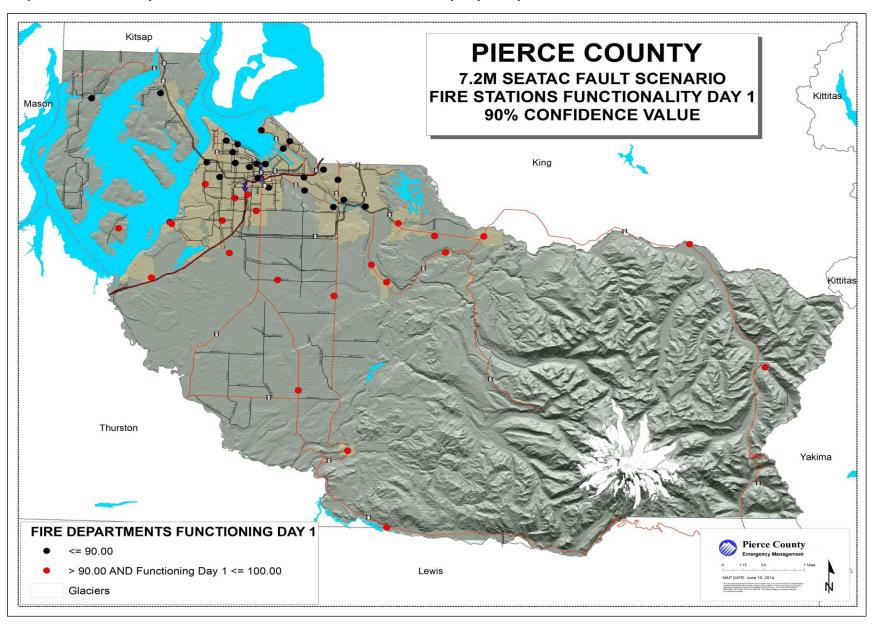
Map D-18 Pierce County Nisqually Fault Scenario Schools Functionality Day 7 Map



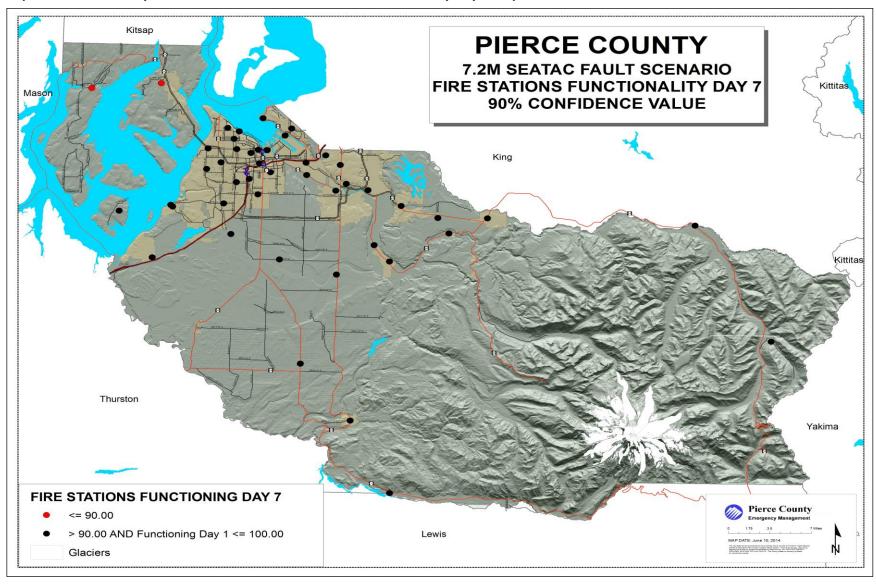
Map D-19 Pierce County SEATAC Fault Scenario Total Losses Map



Map D-20 Pierce County SEATAC Fault Scenario Fire Stations Functionality Day 1 Map



Map D-21 Pierce County SEATAC Fault Scenario Fire Stations Functionality Day 7 Map



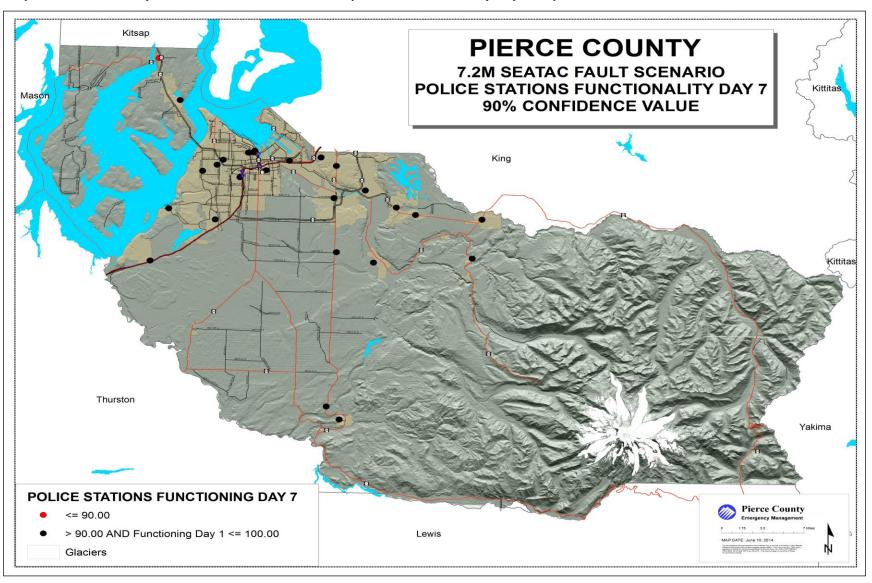
Map D-22 Pierce County SEATAC Fault Scenario Police Department Functionality Day 1 Map<sup>9</sup> Kitsap **PIERCE COUNTY** 7.2M SEATAC FAULT SCENARIO **POLICE STATIONS FUNCTIONALITY DAY 1** 90% CONFIDENCE VALUE King Thurston Yakima **POLICE STATIONS FUNCTIONING DAY 1** Pierce County

Lewis

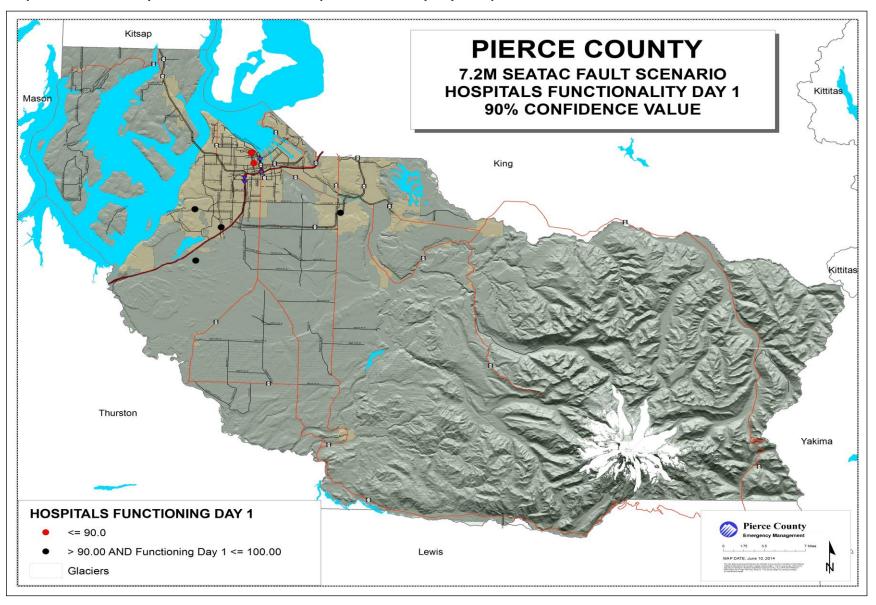
> 90.00 AND Functioning Day 1 <= 100.00

Glaciers

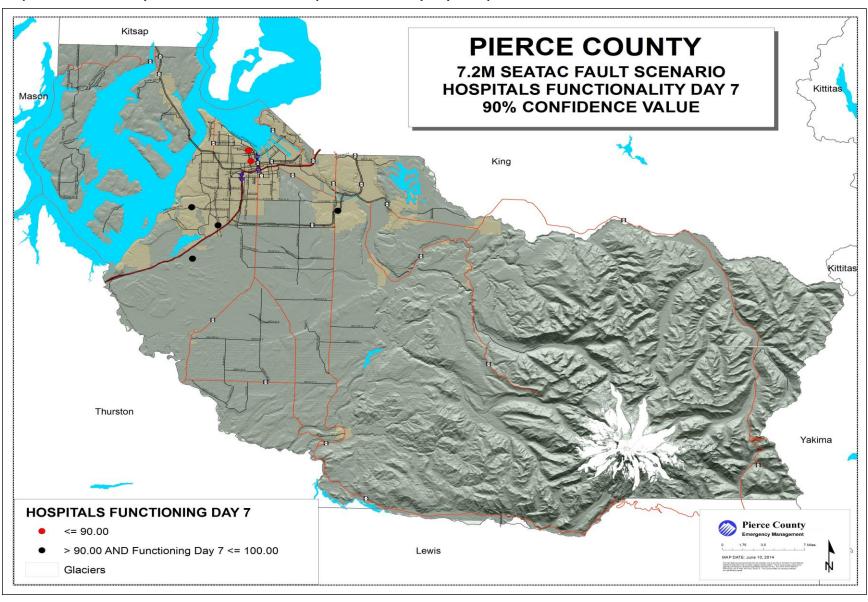
Map D-23 Pierce County SEATAC Fault Scenario Police Department Functionality Day 7 Map<sup>10</sup>



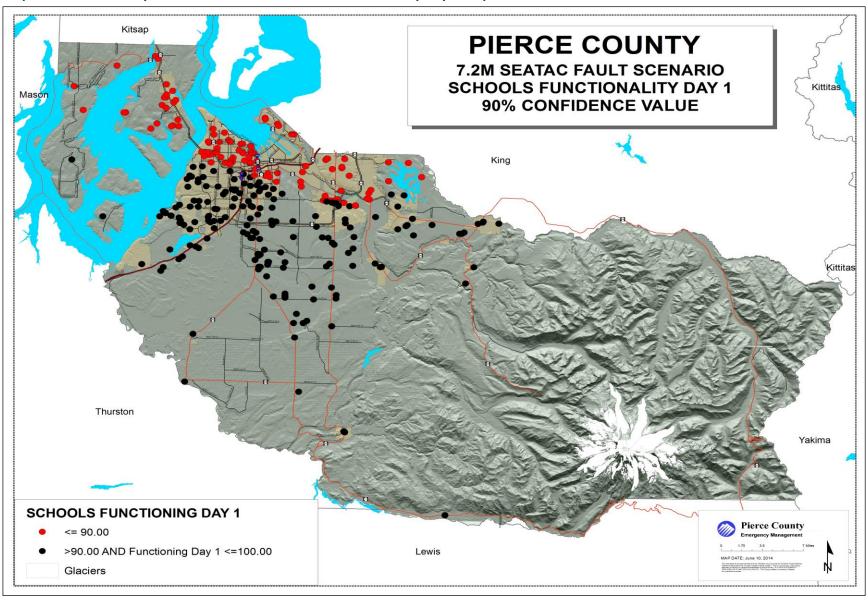
Map D-24 Pierce County SEATAC Fault Scenario Hospital Functionality Day 1 Map<sup>11</sup>



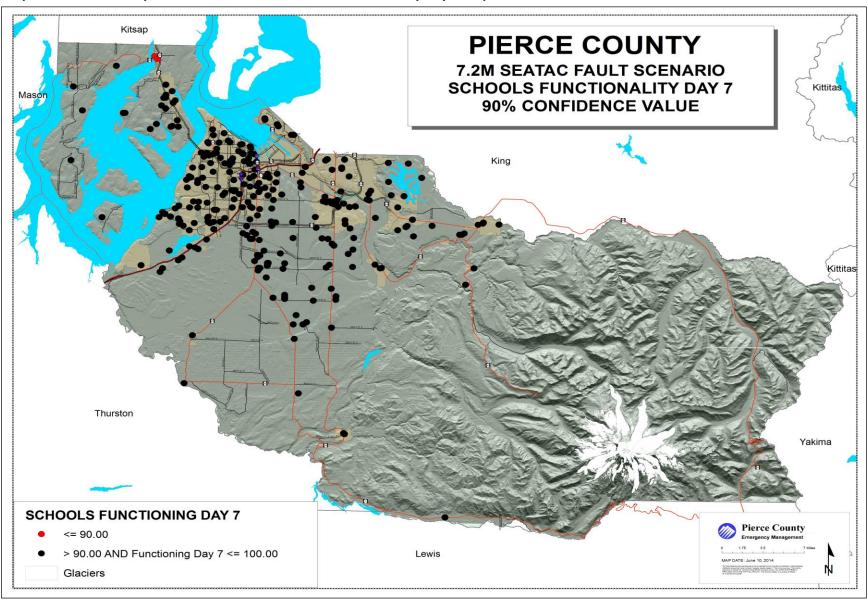
Map D-25 Pierce County SEATAC Fault Scenario Hospital Functionality Day 7 Map<sup>12</sup>



Map D-26 Pierce County SEATAC Fault Scenario Schools Functionality Day 1 Map



Map D-27 Pierce County SEATAC Fault Scenario Schools Functionality Day 7 Map



#### **Endnotes**

<sup>1</sup> Hazus has placed the police station location incorrectly for the City of Orting. It should be located in the middle of the city with Fire District #18 as they share the same building.

- <sup>3</sup> St. Anthony's Hospital is not included on the map due to the recent construction of the hospital lack of data at the time the analysis was done.
- <sup>4</sup> St. Anthony's Hospital is not included on the map due to the recent construction of the hospital lack of data at the time the analysis was done.
- <sup>5</sup> Hazus has placed the police station location incorrectly for the City of Orting. It should be located in the middle of the city with Fire District #18 as they share the same building.
- <sup>6</sup> Hazus has placed the police station location incorrectly for the City of Orting. It should be located in the middle of the city with Fire District #18 as they share the same building.
- <sup>7</sup> St. Anthony's Hospital is not included on the map due to the recent construction of the hospital lack of data at the time the analysis was done.
- <sup>8</sup> St. Anthony's Hospital is not included on the map due to the recent construction of the hospital lack of data at the time the analysis was done.
- <sup>9</sup> Hazus has placed the police station location incorrectly for the City of Orting. It should be located in the middle of the city with Fire District #18 as they share the same building.
- <sup>10</sup> Hazus has placed the police station location incorrectly for the City of Orting. It should be located in the middle of the city with Fire District #18 as they share the same building.
- <sup>11</sup> St. Anthony's Hospital is not included on the map due to the recent construction of the hospital lack of data at the time the analysis was done.
- <sup>12</sup> St. Anthony's Hospital is not included on the map due to the recent construction of the hospital lack of data at the time the analysis was done.

<sup>&</sup>lt;sup>2</sup> Hazus has placed the police station location incorrectly for the City of Orting. It should be located in the middle of the city with Fire District #18 as they share the same building.

### **APPENDIX E**

# REGION 5 ALL HAZARD MITIGATION PLAN 2020-2025 EDITION DIERINGER SCHOOL DISTRICT DOCUMENTATION RECORDS

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SECOND PUBLIC OUTREACH REQUIREMENT – TBD	

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## **ELECTED OFFICIALS MEETING DOCUMENTATION**

Elected Officials Meeting – February 24, 2020

At the February 24, 2020 Dieringer School District's Board of Directors meeting, staff discussed the update process with the Board members, accepted public comment of which there was none, and received Board's acknowledgement that staff had their approval to work on the plan.

# PUBLIC COMMENT DOCUMENTATION FOR 2020-2025 EDITION

Online Community Preparedness Survey – October 31, 2019

The Dieringer School District provided an opportunity for public feedback for the final review of



the plan through an online survey. The Community Preparedness Survey was developed to determine how prepared a jurisdiction's citizens are and collect any suggestions provided for mitigating local hazards. The Dieringer School District provided the survey link to families and the community. The survey has been available since November 11, 2019 to all residents of Pierce County. The first question in the survey asks residents what jurisdiction they live in so that individual's responses can be counted for a specific jurisdiction. Pierce County Department of Emergency Management has access to the database of survey results and provides updates to jurisdictions as requested. This method of public outreach provides a more inclusive approach to communities that may not be able to attend in-person meetings like traditional outreach events that have been held in the past. Providing an online option ensures that the whole community is being involved in the planning process for the Dieringer School District's All Hazard Mitigation Plan.

## Second Public Outreach Requirement – TBD

Due to the restrictions on public gatherings resulting from COVID-19, Dieringer School District's second public outreach event has been postponed to a later date when these events are allowed. The District will have their completed mitigation plan available for the community to review and provide feedback on further improvements. The District will collect and incorporate this feedback, as appropriate, to ensure the mitigation plan stays current and maintains its status as a working document. This outreach event will be properly documented in the mitigation plan and available for review in the next update process.

In the meantime, the District will post the updated plan on their website and/or social media to provide access to the community.

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	APPENDIX PAGE E-6	

# APPENDIX F COMPLETED/DEFERRED MITIGATION STRATEGIES

# REGION 5 ALL HAZARD MITIGATION PLAN 2020-2025 EDITION DIERINGER SCHOOL DISTRICT

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REPLACE TELEPHONE COMMUNICATIONS SYSTEM	
Upgrade School Radio System	
REPLACE TRANSPORTATION FACILITY TO EXCEED CURRENT SEISMIC CODES	
ENDNOTES	7

# **Deferred or Completed Mitigation Strategies**

The following mitigation strategies were removed from the Section 5 Mitigation Plan and place in Appendix F to retain them. They have either been deferred or completed. In the future as mitigation strategies are completed, they will be moved to this location to provide a history of accomplishments. Deferred mitigation strategies can be moved back into the "working" mitigation strategies of Section 5 at any time.

**Table 5-1 Dieringer School District Mitigation Strategy Matrix** 

	out of the second of the secon			Plan Goal			ls		
Implementation Mechanism	Mitigation Measure (Hazard(s)) <sup>1</sup>	Lead Jurisdiction(s) / Department(s)	Status	Life and Property	Operations Continuity	Partnerships	Natural Resources	Preparedness	Sustainable Economy
	<ol> <li>Acquire, Install, and Train on AEDs for Each School (E,L,V,D,F,SW,WUI,MM)</li> </ol>	Dieringer School District	Complete	✓		✓		✓	
Completed  2. Replace Telephone Communications System (E,L,V,D,F,WUI,SW,MM)  Dieringer School District		Complete		<b>✓</b>					
	3. Upgrade School Radio System ( <i>E,L,V,D,F,WUI,SW,MM</i> )	Dieringer School District	Complete	✓	<b>✓</b>	✓			
<u>Deferred</u>	4. Replace Transportation Facility to Exceed Current Seismic Codes ( <i>E</i> , <i>SW</i> , <i>MM</i> )	Dieringer School District	Deferred	<b>✓</b>	<b>✓</b>			✓	

## Acquire, Install and Train on AEDs for Each School

Hazards: E, L, V, D, F, WUI, SW1, MMError! Bookmark not defined.

Partner with PTSAs and East Pierce Fire District to install AEDs at each school facility in the district and provide proper training to school personnel and community members.

- 1. Goal(s) Addressed = Protect Life and Property; Establish and Strengthen Partnerships for Implementation; Increase Public Preparedness for Disasters.
- 2. Cost of Measure = Cost of equipment, installation and training
- **3. Funding Source and Situation** = Funding could be obtained through local budget and grants.
- **4.** Lead Jurisdiction(s) = Dieringer School District
- **5. Timeline** = Short-term
- **6. Benefit** = School district staff and students, first responders, community and regional partners
- 7. **Life of Measure** = 5 years
- **8. Community Reaction** = the proposal is likely to be endorsed by the entire community.

#### Status Update: 2020 - 2025 Edition

Complete	Ongoing	Partially Complete	Deferred	
X				
Comments				
Installed AEDs in all three schools and transportation. Staff receives training annually and the				
maintenance staff services them based on manufacturer recommended schedule.				

#### Origin

Previous Plan	Current Plan
X	

# Replace Telephone Communications System

Hazards: E, L, V, D, F, WUI, SW<sup>1</sup>, MMError! Bookmark not defined.

Within the next two years, replace the existing telephone system in the school district.

- **1. Goal(s) Addressed** = Ensure Continuity of Operations.
- **2. Cost of Measure** = Cost of equipment and installation (also training)
- 3. Funding Source and Situation = Funding could be obtained through local budget and grants.
- **4.** Lead Jurisdiction(s) = Dieringer School District
- **5. Timeline** = Short-Term
- **6. Benefit** = School district staff and students, first responders, community and regional partners
- 7. **Life of Measure** = 5-10 years
- **8. Community Reaction** = the proposal is likely to be endorsed by the entire community.

Status Update: 2020 - 2025 Edition

Complete	Ongoing	Partially Complete	Deferred
X			
		Comments	
This project has been	completed.		

#### Origin

Previous Plan	Current Plan
X	

## Upgrade School Radio System

Hazards: E, L, V, D, F, WUI, SW<sup>1</sup>, MMError! Bookmark not defined.

Upgrade existing school radio communication systems within the next year.

- **1. Goal(s) Addressed** = Protect Life and Property; Ensure Continuity of Operations; Establish and Strengthen Partnerships for Implementation.
- **2. Cost of Measure** = Cost of equipment and training for staff
- **3. Funding Source and Situation** = Funding could be obtained through local budget and grants.
- **4.** Lead Jurisdiction(s) = Dieringer School District
- **5. Timeline** = Short-term
- **6. Benefit** = School district staff and students, first responders, community and regional partners
- 7. **Life of Measure** = 5-10 years
- **8. Community Reaction** = the proposal is likely to be endorsed by the entire community.

Status Update: 2020 - 2025 Edition

Complete	Ongoing	Partially Complete	Deferred
X			
		Comments	
This project has been	completed.		

#### Origin

Previous Plan	Current Plan
X	

# Replace Transportation Facility to Exceed Current Seismic Codes

Hazards: E, SW, MM

The transportation facility is in need of being retrofitted or replaced with a structure built beyond current seismic codes.

- **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 local budget and grants.

- **4.** Lead Jurisdiction(s) = Dieringer School District
- 5. Timeline = Long-Term
  6. Benefit = School district staff and students, community and regional partners
- 7. **Life of Measure** = 50 years
- **8. Community Reaction** = the proposal would be somewhat controversial.

## Status Update: 2020 - 2025 Edition

Complete	Ongoing	Partially Complete	Deferred
			X
	•	Comments	
Will address as soon as	funding is ava	ilable through state and/or local funds.	

## Origin

Previous Plan	Current Plan
X	

# **Endnotes**

<sup>1</sup> Hazard Codes:

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

where necessary, the specific nazards addressed are noted as follows.			
A:	Avalanche		
E:	Earthquake		
F:	Flood		
D:	Drought		
T:	Tsunami		
V (L OR	Volcanic (lahar or tephra-specific)		
<b>T</b> ):			
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.		

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APPENDIX F-8	
APPENDIA F-0	