

# Jackson County Fire District #5 Addendum to the Jackson County NHMP

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*Photos courtesy of Oregon State Archives*

Effective:

December XX, 2023-December XX, 2028

Prepared for  
Fire District #5  
420 6<sup>th</sup> Avenue  
Fire District #5, OR 97525

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REVIEW DRAFT

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# Introduction

## Purpose

This is the first iteration of the Fire District #5 addendum to the Jackson County Multi-Jurisdictional Natural Hazard Mitigation Plan (MNHMP, NHMP). This addendum supplements information contained in Volume I (Basic Plan), which serves as the NHMP foundation and Volume II (Appendices), which provide additional information. This addendum meets the following requirements:

- Multi-Jurisdictional **Plan Adoption** §201.6(c)(5),
- Multi-Jurisdictional **Participation** §201.6(a)(3),
- Multi-Jurisdictional **Mitigation Strategy** §201.6(c)(3)(iv) and
- Multi-Jurisdictional **Risk Assessment** §201.6(c)(2)(iii).

Fire District #5 adopted their addendum to the Jackson County Multi-jurisdictional NHMP on [date], 2023. FEMA Region X approved the Jackson County NHMP on [date], 2023 and Fire District #5's addendum on [date], 2023. With approval of this NHMP, Fire District #5 is now eligible for non-disaster and disaster mitigation project grants through [date-1], 2028.

## NHMP Process, Participation and Adoption

This section of the NHMP addendum addresses 44 CFR 201.6(c)(5), *Plan Adoption* and 44 CFR 201.6(a)(3), *Participation*.

In addition to establishing a comprehensive District level mitigation strategy, the Disaster Mitigation Act of 2000 (DMA2K), and the regulations contained in Title 44 CFR Part 201, require that jurisdictions maintain an approved NHMP to receive federal funds for mitigation projects. Local adoption, and federal approval of this NHMP ensures that Fire District #5 will gain eligibility for non-disaster and disaster mitigation project grants.

The Oregon Partnership for Disaster Resilience (OPDR) at the University of Oregon's Institute for Policy Research and Engagement (IPRE) partnered with the Oregon Department of Emergency Management (OEM), Jackson County, and Fire District #5 to develop this NHMP. This project is funded through the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Grant Program. Members of the Fire District #5 NHMP steering committee also participated in the County NHMP update process (Volume II, Appendix B).

By creating a NHMP, locally adopting it, and having it approved by FEMA, Fire District #5 will gain eligibility for FEMA Hazard Mitigation Assistance grant program funds.

The Jackson County NHMP and Fire District #5 addendum are the result of a collaborative effort between residents, public agencies, non-profit organizations, the private sector, and regional organizations. A project steering committee guided the process of developing the NHMP.

## Convener and Committee

The Senior Engineer served as the designated convener of the NHMP development and will take the lead in implementing, maintaining, and updating the addendum to the Jackson County NHMP in collaboration with the designated convener of the Jackson County NHMP (Emergency Manager).

Representatives from the Fire District #5 steering committee met formally and informally, to discuss development of their addendum (Volume II, Appendix B). The steering committee reviewed and developed Fire District #5's addendum, with particular focus on the NHMP's risk assessment (hazards, community vulnerabilities, and capabilities) and mitigation strategy (action items).

The addendum reflects decisions made at the designated meetings and during subsequent work and communication with Jackson County Emergency Management and the OPDR.

The Fire District #5 Steering Committee was comprised of the following representatives:

- Convener, Charles Hanley, Fire Chief
- Aaron Buster, Assistant Chief
- Jennifer Snook, Chief of Police, Talent
- Joe Slaughter, Community and Economic Development Director, Phoenix
- Mike Winter
- Aaron Bustard, Assistant Chief
- Steve Maziarski, Battalion Chief
- David Meads, Captain

The steering committee was closely involved throughout the development of the NHMP and served as the local oversight body for the NHMP's development.

## NHMP Implementation and Maintenance

The Board of Directors will be responsible for adopting the Fire District #5 addendum to the Jackson County NHMP. This addendum designates a Steering Committee and a convener to oversee the development and implementation of action items. Because the district addendum is part of the County's multi-jurisdictional NHMP, the district will look for opportunities to partner with the County. Fire District #5's steering committee will convene after adoption of the NHMP addendum on an annual schedule. The County is meeting on a semi-annual basis and will provide opportunities for the cities and special districts to report on NHMP implementation and maintenance during their meetings. The convener will be responsible for assembling the steering committee.

The steering committee will be responsible for:

- Reviewing existing action items to determine suitability of funding;

- Reviewing existing and new risk assessment data to identify issues that may not have been identified at NHMP creation;
- Educating and training new steering committee members on the NHMP and mitigation actions in general;
- Assisting in the development of funding proposals for priority action items;
- Discussing methods for continued public involvement;
- Evaluating effectiveness of the NHMP at achieving its purpose and goals (use Table 4-1, Volume I, Section 4, as one tool to help measure effectiveness); and
- Documenting successes and lessons learned during the year.

The convener will also remain active in the County’s implementation and maintenance process (Volume I, Section 4).

The steering committee will be responsible for activities outlined in Volume I, Section 4.

Fire District #5 will utilize the same action item prioritization process as the County (Volume I, Section 4 and Volume II, Appendix D).

## Implementation through Existing Programs

Many of the Natural Hazard Mitigation Plan’s recommendations are consistent with the goals and objectives of Fire District #5’s existing plans and policies. Where possible, Fire District #5 will implement the NHMP’s recommended actions through existing plans and policies. Plans and policies already in existence have support from residents, businesses, and policy makers. Many land-use, comprehensive, and strategic plans get updated regularly, allowing them to adapt to changing conditions and needs. Implementing the NHMP’s action items through such plans and policies increases their likelihood of being supported and implemented.

Fire District #5 currently has the following plans and programs that relate to natural hazard mitigation. For a complete list visit Fire District #5’s [website](#).

- Strategic Plan
- Facilities Master Plan
- Standard of Care
- [Rogue Valley Integrated Community Wildfire Protection Plan](#) (RVIFP, updated 2019)

During the development of this NHMP District plans, including the strategic plan, were reviewed to identify possible natural hazard mitigation strategies (action items).

### **Expand and Improve Capabilities and Integration Process**

Funding and staff resource availability is the primary constraint to achieving natural hazard mitigation priorities. As such Fire District #5 has identified actions (Table FD5-1) that seek to expand and improve capabilities to achieve natural hazard mitigation.

In addition, Fire District #5 will seek opportunities to integrate the plan’s data, information, and hazard mitigation goals and actions into other planning mechanisms (e.g., budgets, strategic plans, etc.). See Volume I, Section 4 for additional information.

# Mitigation Strategy

This section of the NHMP addendum addresses 44 CFR 201.6(c)(3(iv), *Mitigation Strategy*.

Fire District #5's mitigation strategy (action items) was developed during the 2023 NHMP planning process. The steering committee assessed risk, identified potential issues, and developed a mitigation strategy (action items). Fire District #5 developed actions specific to their community after first reviewing a list of recommended actions developed by the County or recommended by OPDR.

## Mitigation Successes

Fire District #5 has several examples of hazard mitigation including the following projects funded through FEMA [Hazard Mitigation Assistance](#) and the Oregon Infrastructure Finance Authority's [Seismic Rehabilitation Grant Program](#)<sup>1</sup>.

### FEMA Funded Mitigation Successes

- None to date

### Seismic Rehabilitation Grant Program Mitigation Successes

- 2021: Station 4 Seismic Rehab, Jackson County Fire District #5 (\$1,630,515)

### Other Mitigation Successes

- 2023: Wildfire Mitigation (defensible space, fuels reduction equipment) – Oregon State Fire Marshall (\$247,600)
- March 2024: Station 3 Reconstruction as Phoenix Public Safety Center (\$19.4 million, Oregon House Bills 5006 and 5202, FEMA matching funds). New building includes city hall, fire station, and police station. Serves as emergency operations center and community learning center (in-service training, CPR, CERT, public meetings, etc.) Action Items

Table FD5-1 documents the title of each action along with, the lead organization, partners, timeline, cost, and potential funding resources.

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<sup>1</sup> The Seismic Rehabilitation Grant Program (SRGP) is a state of Oregon competitive grant program that provides funding for the seismic rehabilitation of critical public buildings, particularly public schools, and emergency services facilities.

**Table FD5-1 Action Items**

Action Item #	Mitigation Actions	Potential Funding Resources	Lead	Partners	Timeline	Cost
<b>Multi-Hazard</b>						
1.1	Relocate district facility located at Emigrant Creek Road and Dead Indian Memorial Road.	District Funding Resources	District Administration	N/A	M	H
1.2	Construct fire facility for fire protection for I-5 area at Oregon border.	District Funding Resources	District Administration	N/A	L	H
1.3	Construct fire facility for fire protection in Phoenix.	District Funding Resources	District Administration	City of Phoenix	S	H
1.4	Co-locate with Talent Irrigation District and remodel existing fire station for a new emergency operations center (EOC).	District Funding Resources, Talent Irrigation District Funding	District Administration	Talent Irrigation District	L	H
1.5	Continue to investigate fire prevention and community outreach options, as capacity allows.	District Funding Resources	District Administration	Jackson County (JaCo) Emergency Management, Cities, Media	O	L
1.6	Consider value engineering and leasing space on existing towers to improve communications signals and study additional tower siting.	District Funding Resources, Utility Partners	District Administration	JaCo Emergency Management, Utility Partners	M	L-M
1.7	Deploy ruggedized and reliable communication tools, including portable radios and tablets, to emergency responders.	District Funding Resources, FEMA HMA	District Administration	JaCo Emergency Management, Cities, OEM	M	L-M
1.8	Support development of redundancy in 911 and civilian communication networks.	District Funding Resources, FEMA HMA	District Administration	JaCo Emergency Management, Cities	O	H



Action Item #	Mitigation Actions	Potential Funding Resources	Lead	Partners	Timeline	Cost
1.9	Develop sustainability of emergency response service provision in rural service areas by hardening critical roadways against hazards.	District Funding Resources, FEMA HMA	District Administration	JaCo Emergency Management, Roads; ODOT	O	H
1.10	Develop emergency coordinator position to service Talent, Phoenix, and Fire District #5.	District Funding Resources	District Administration	Cities of Phoenix and Talent	M	H
1.11	Collaborate with City and County efforts in addressing NHMP priorities.	District Funding Resources, FEMA HMA	District Administration	JaCo Emergency Management, Cities, OEM	O	L
1.12	Develop a centralized location for integration of video and incident analytics in support of incident management.	District Funding Resources	District Administration	JaCo Emergency Management, Cities, RVCOG	S	L-M
1.13	Work with regional partners to identify current capabilities and research options to establish a disaster registry and to secure an early warning system (EWS).	District Funding Resources	District Administration	JaCo Emergency Management, Cities, RVCOG	M	L
1.14	Procure watercraft and necessary tools to integrate watercraft response capabilities into District services.	District Funding Resources	District Administration	JaCo Emergency Management, Cities	M	H
1.15	Conduct ICS training and simulations for stakeholders and leadership of service area.	District Funding Resources	District Emergency Coordinator	JaCo Emergency Management, Cities, FEMA	O	L
1.16	Conduct Standards of Cover and deployment analysis for disaster response.	District Funding Resources	District Administration	JaCo Emergency Management,, Cities	O	L
1.17	Establish Local Emergency Planning Committee (LEPC).	District Funding Resources	District Emergency Coordinator	JCFD#3, JaCo Emergency Management,	O	L
<b>Air Quality</b>						
2.0	See multi-hazard actions for applicable mitigation strategies					

Action Item #	Mitigation Actions	Potential Funding Resources	Lead	Partners	Timeline	Cost
<b>Drought</b>						
3.0	Extend emergency water storage beyond irrigation season to be available during fire season and shoulder seasons.	District Funding Resources, FEMA, OWRD	District Administration	FEMA, OWRD	S	L
<b>Earthquake</b>						
4.0	See multi-hazard actions for applicable mitigation strategies					
<b>Emerging Infectious Disease</b>						
5.0	Research and obtain personal protective equipment (PPE) reserves for emerging infectious disease.	District Funding Resources, FEMA, OHA	District Administration	JaCo Emergency Management	S	M
<b>Flood</b>						
6.0	See multi-hazard actions for applicable mitigation strategies					
<b>Landslide</b>						
7.0	See multi-hazard actions for applicable mitigation strategies					
<b>Severe Weather (Extreme Heat, Windstorm, Winter Storm)</b>						
8.0	See multi-hazard actions for applicable mitigation strategies					
<b>Volcanic Event</b>						
9.0	See multi-hazard actions for applicable mitigation strategies					
<b>Wildfire</b>						
10.1	Acquire emergency water supply tanks for fire stations and other locations around the district.	District Funding Resources, FEMA HMA, CWDG, USDA	District Administration	JaCo Emergency Management, Cities	M	H
10.2	Locate high-pressure fill sites to access Talent Irrigation District water supply.	District Funding Resources, FEMA HMA, CWDG	District Administration	Talent Irrigation District	M	L-H

Source: Fire District #5 NHMP Steering Committee, 2023

Cost: L – Low (less than \$50,000), M - Medium (\$50,000-\$100,000), H - High (more than \$100,000)

Timing: O-Ongoing (continuous), S-Short (1-2 years), M-Medium (3-5 years), L-Long (5 or more years)

Priority Actions: Identified with **bold** text and **orange** highlight

# Risk Assessment

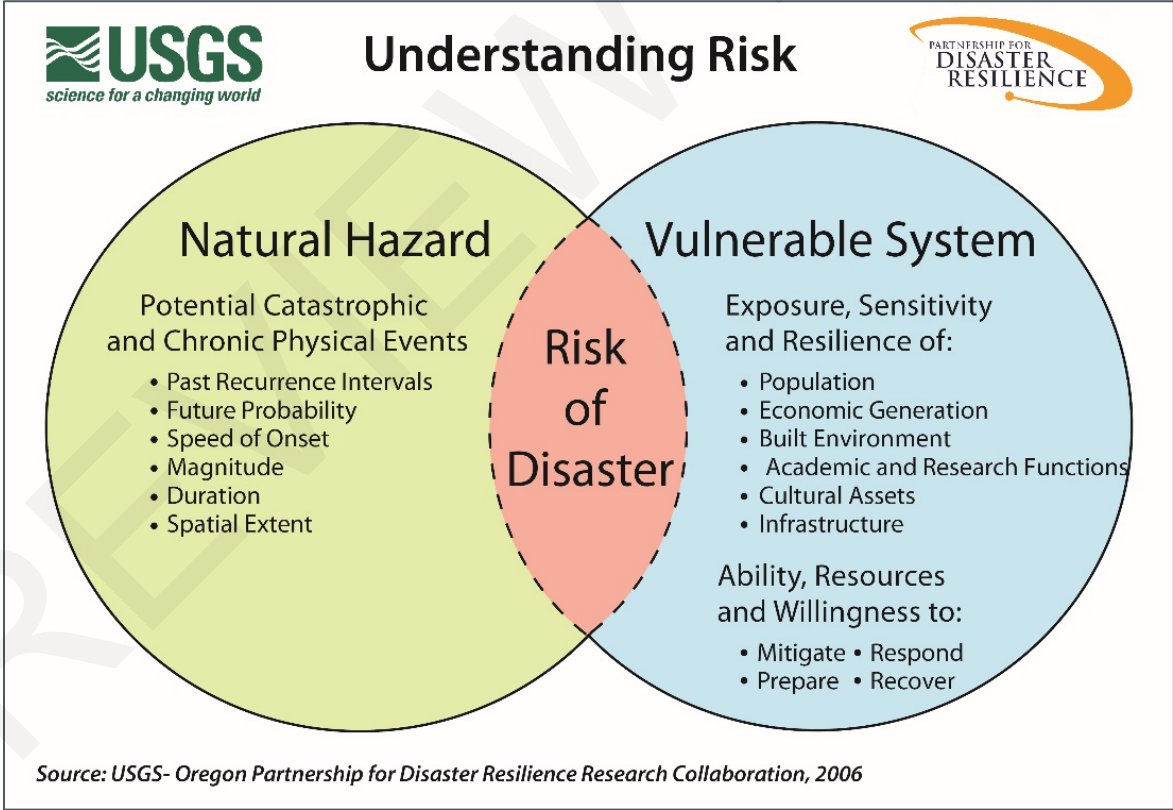
This section of the NHMP addendum addresses 44 CFR 201.6(b)(2) - Risk Assessment. In addition, this chapter can serve as the factual basis for addressing Oregon Statewide Planning Goal 7 – Areas Subject to Natural Hazards.

Assessing natural hazard risk has three phases:

- **Phase 1:** Identify hazards that can impact the jurisdiction. This includes an evaluation of potential hazard impacts – type, location, extent, etc.
- **Phase 2:** Identify important community assets and system vulnerabilities. Example vulnerabilities include people, businesses, homes, roads, historic places and drinking water sources.
- **Phase 3:** Evaluate the extent to which the identified hazards overlap with or have an impact on, the important assets identified by the community.

The local level rationale for the identified mitigation strategies (action items) is presented herein and within Volume I, Sections 2 and 3. The risk assessment process is graphically depicted in Figure FD5-1. Ultimately, the goal of hazard mitigation is to reduce the area of risk, where hazards overlap vulnerable systems.

Figure FD5-1 Understanding Risk



## Hazard Analysis

The Fire District #5 steering committee developed their hazard vulnerability assessment (HVA), using the County’s HVA (Volume II, Appendix C) as a reference. Changes from the County’s HVA were made where appropriate to reflect distinctions in vulnerability and risk from natural hazards unique to Fire District #5, which are discussed throughout this addendum.

Table FD5-2 shows the HVA matrix for Fire District #5 listing each hazard listed in order of rank from high to low. For local governments, conducting the hazard analysis is a useful step in planning for hazard mitigation, response, and recovery. The method provides the jurisdiction with a sense of hazard priorities but does not predict the occurrence of a particular hazard.

Three chronic hazards (wildfire, emerging infectious disease, and winter storm) and a catastrophic hazard (Cascadia Subduction Zone earthquake) rank as the top hazard threats to Fire District #5 (Top Tier). Windstorm, extreme heat event, air quality, and drought comprise the next highest ranked hazards (Middle Tier), while flood, landslide, crustal earthquake, and volcanic event hazards comprise the lowest ranked hazards (Bottom Tier).

**Table FD5-2 Hazard Analysis Matrix**

Hazard	History	Vulnerability	Maximum Threat	Probability	Total Threat Score	Hazard Rank	Hazard Tiers
Wildfire	16	25	100	70	211	#1	Top Tier
Emerging Infectious Disease	16	40	100	49	205	#2	
Earthquake - Cascadia	2	50	100	49	201	#3	
Winter Storm	20	50	60	70	200	#4	
Windstorm	20	50	50	70	190	#5	Middle Tier
Extreme Heat Event	20	25	70	70	185	#6	
Air Quality	18	40	60	63	181	#7	
Drought	20	25	50	63	158	#8	
Flood	16	25	50	63	154	#9	Bottom Tier
Landslide	4	20	40	70	134	#10	
Earthquake - Crustal	2	25	50	21	98	#11	
Volcanic Event	2	5	50	7	64	#12	

Source: Fire District #5 NHMP Steering Committee, 2023.

## Community Characteristics

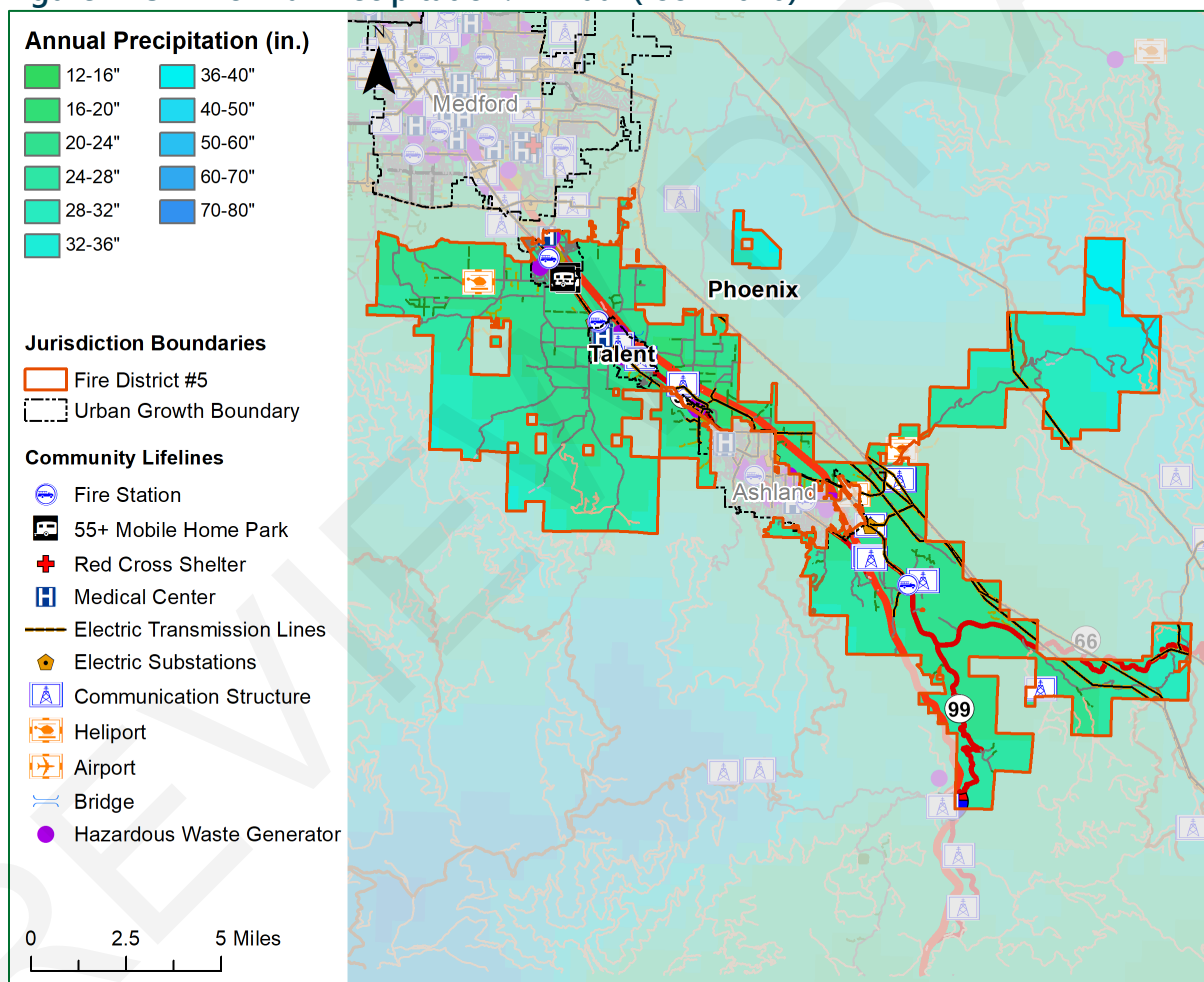
Fire District #5 directly services more than 23,000 people within their 120+ square mile district, most living within Phoenix and Talent (Figure FD5-4). Between 2016 and 2021 the region’s population reduced in size due to the Almeda Fire, which destroyed more than 2,600 homes between Ashland, Talent, Phoenix, and Medford on Labor Day weekend, 2020.<sup>2</sup> Many of the homes destroyed in Phoenix and Talent were manufactured homes along the

<sup>2</sup> Firebrand Resiliency Collective. (2023). *Almeda Fire Loss and Recovery Dashboard*. Accessed August 18, 2023. <https://experience.arcgis.com/experience/888491b7ccc949a7a98554a14aa8bf82>

Bear Creek corridor. The loss of this affordable housing has posed challenges for the community, who continues to work to rebuild needed housing. This is reflected in an extremely low vacancy rate for housing. Residential development within the cities is increasing with development in rural and forested parts of the district occurring at a slower pace.

Fire District #5's territory experiences a relatively mild climate with four distinct seasons that comes from its position on the west coast of North America and within the Cascade Range mountains. The average daily high temperature in the area is between 45- and 55-degrees Fahrenheit (F) in the winter and between 80- and 95-degrees Fahrenheit (F) in the summer. The Rogue Valley has the lowest precipitation among Oregon's western interior valleys and the fire district ranges from about 20 to 37 inches (Figure FD5-2). June through September are the driest months.

**Figure FD5-2 Normal Precipitation: Annual (1991-2020)**

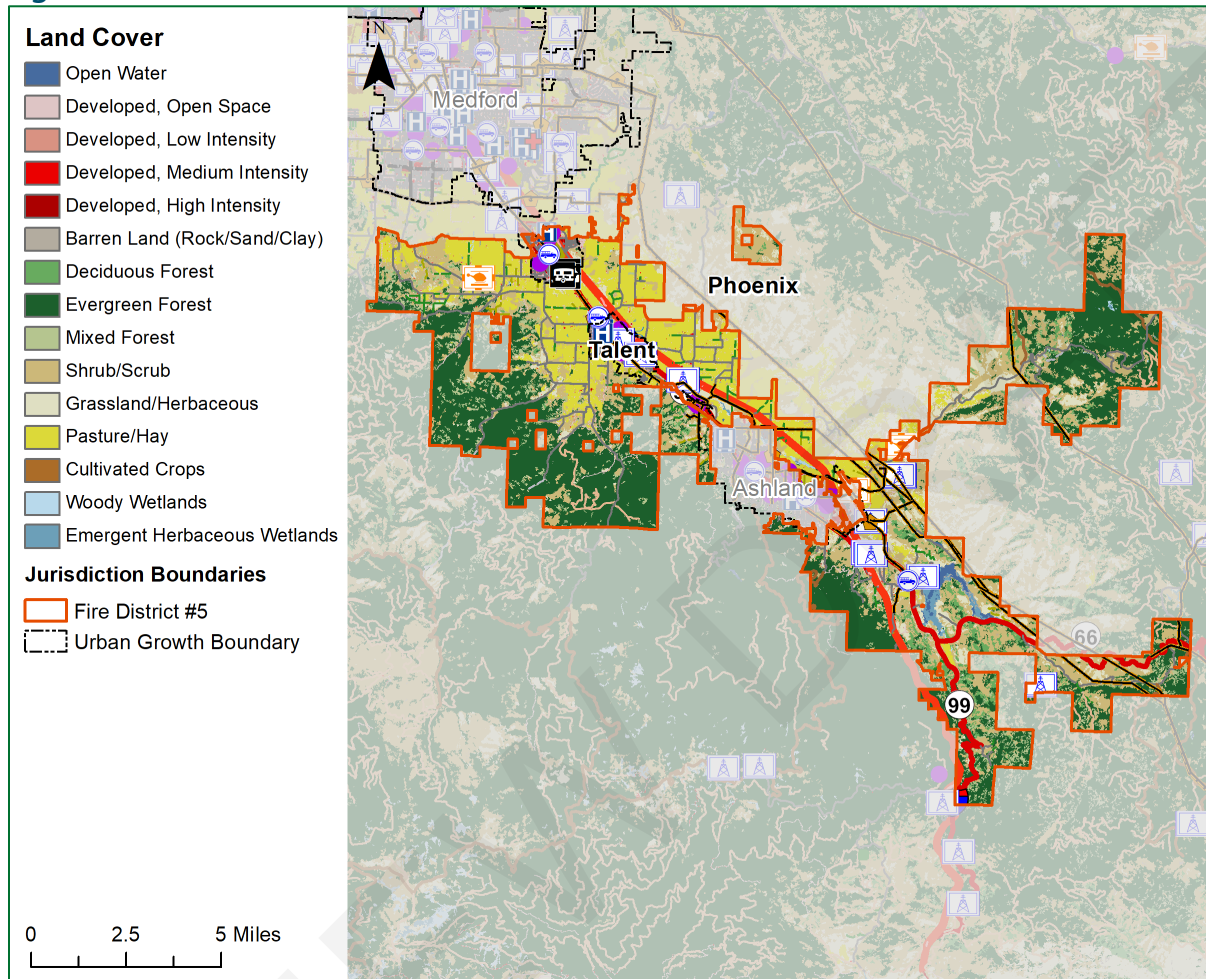


Source: OPDR, data [PRISM Climate Group](#)

The district is dominated by agricultural land including pasture/hay and cultivated crops with forest land on the edges of the district and at higher elevations (Figure FD5-3). There are two

incorporated cites in the district (Phoenix and Talent) and the unincorporated areas outside of Ashland.

**Figure FD5-3 Land Cover**



Source: OPDR, data from [National Land Cover Database](#) (2021)

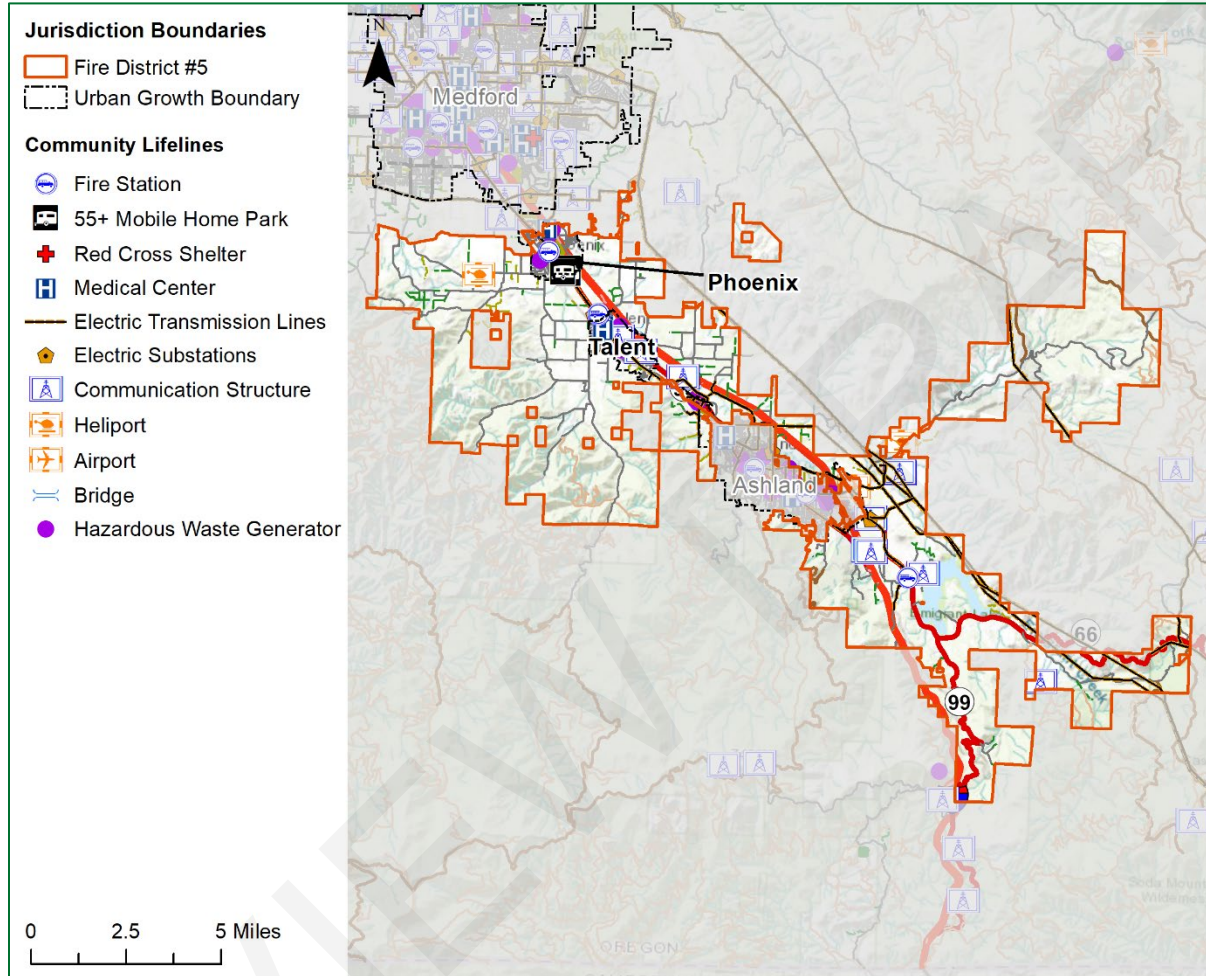
For more information on the characteristics of each partner jurisdiction (Jackson County, Phoenix, and Talent) please review Volume II, Appendix C and the applicable city addenda in Volume III.

## Community Assets

This section outlines the resources, facilities (including fire stations), and infrastructure that, if damaged, could significantly impact the public safety, economic conditions, and environmental integrity of the district. Fire District #5 facilities and community lifelines are shown in Figure FD5-4 and Table FD5-3. In addition, the fire district has several underground and above ground water storage tanks. There are numerous bridge crossings within the district that are necessary to maintain access during hazard events. Some of the smaller bridges in the district have load limits that prevent usage by fire apparatus.

Community Lifelines are fundamental services that enable all other aspects of society to function. FEMA developed the Community Lifelines construct for objective-based response to prioritize the rapid stabilization of these facilities after a disaster. Mitigating these facilities will increase the community's resilience.

**Figure FD5-4 Facilities and Community Lifelines**



Source: Oregon Partnership for Disaster Resilience. Oregon Department of Geology and Mineral Industries.

Note: To view detail click this [link](#) to access Oregon HazVu

**Table FD5-3 Facilities**

Facility Name	Jurisdiction	Community Lifeline Category	Lifeline Type	Earthquake-Liquefaction Hazard	Flood Hazard	Landslide Hazard	Wildfire Hazard
Station 3 (ca. 2023)	Phoenix	safety and security	fire station	low	minimal	low	low
Station 4 (ca. 1976)	County (Talent)	safety and security	fire station	low	minimal	low	moderate
Station 5 (ca. 2004)	County (Ashland)	safety and security	fire station	low	minimal	low	moderate

Source: Oregon Department of Geology and Mineral Industries, Fire District #5 NHMP Steering Committee



## Hazard Characteristics

The following sections briefly describe relevant information for each profiled hazard. For more information on the vulnerabilities of each partner jurisdiction (Jackson County, Phoenix, and Talent) please review Volume I, Section 2 and the applicable city addenda in Volume III. More information on Jackson County Hazards can be found in Volume 1 Section 2 *Risk Assessment* and in the [Risk Assessment for Region 4, Southwest Oregon, Oregon SNHMP \(2020\)](#).

### Air Quality

The steering committee determined that the district's probability for poor air quality is **high** (which is the same as the County's Rating) and that their vulnerability to poor air quality is also **high** (which is the same as the County's Rating).

Volume I, Section 2 describes the characteristics of air quality hazards, their history, and how they relate to future climate projections, as well as the location, extent, and probability of a potential event. Increases in wildfire conditions have shown an increasing potential for air quality hazards.

Additional information on air quality can be found in Volume I, Section 2.

### Drought

The steering committee determined that Fire District #5's probability for drought is **high** (which is the same as the County's rating) and that their vulnerability to drought is **moderate** (which is the same as the County's rating).

Volume I, Section 2 describes the characteristics of drought hazards, their history, and how they relate to future climate projections, as well as the location, extent, and probability of a potential event. Due to the climate of Jackson County, past and present weather conditions have shown an increasing potential for drought.

The District utilizes hydrants that are supplied with municipal water systems in Phoenix and Talent. The fire district maintains, and inspects, below ground and above ground water storage tanks throughout the district. Two of three fire stations have water availability issues and need storage tanks to refill fire apparatus. The Fire District is actively working with community groups to locate additional water storage tanks at strategic locations throughout the district.

Additionally, the Fire District is partnering with the Talent Irrigation District (TID) to locate high pressure fill sites and locate hydrants to access TID water.

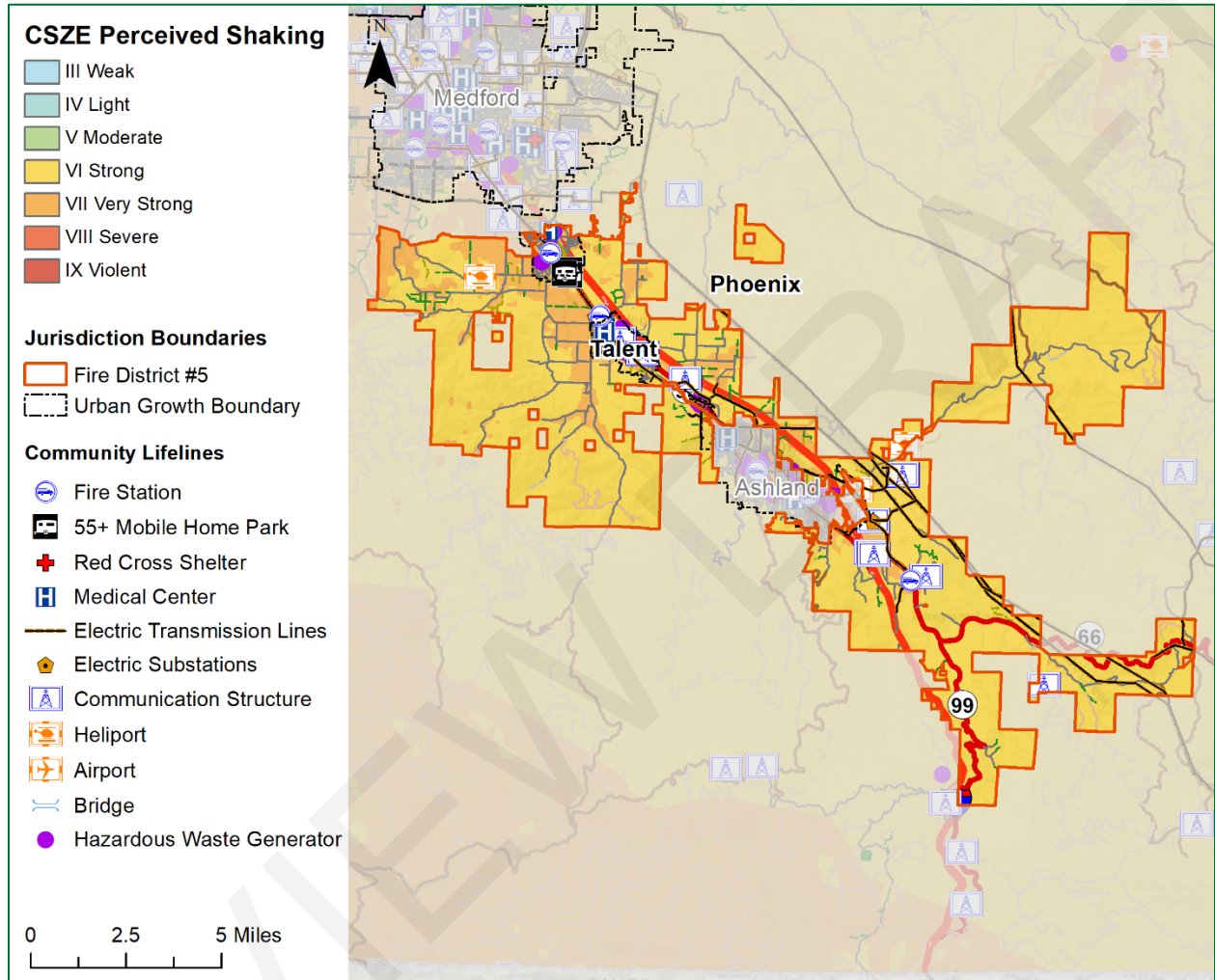
Please review Volume I, Section 2 for additional information on this hazard.

### Earthquake (Cascadia)

The steering committee determined that Fire District #5's probability for a Cascadia Subduction Zone (CSZ) earthquake is **moderate** (which is the same as the County's rating) and that their vulnerability to a CSZ earthquake is **high** (which is the same as the County's rating).

Figure FD5-5 displays perceived shaking hazards from a Cascadia Subduction Zone earthquake event. As shown in the figure below, the areas of greatest concern within Fire District #5 are near populated areas (darker areas).

**Figure FD5-5 Cascadia Subduction Zone Perceived Shaking**



Source: Oregon Partnership for Disaster Resilience. Oregon Department of Geology and Mineral Industries.

Note: To view detail click this [link](#) to access Oregon HazVu.

Volume I, Section 2 describes the characteristics of earthquake hazards and their history, as well as the location, extent, and probability of a potential event. Generally, an event that affects the County is likely to affect Fire District #5 as well. The causes and characteristics of an earthquake event are appropriately described within Volume I, Section 2, as well as the location and extent of potential hazards. Previous occurrences are well documented within Volume I, Section 2 and the community impacts described by the County would generally be the same for Fire District #5 as well.

The local faults, the County's proximity to the Cascadia Subduction Zone, potential slope instability, and the prevalence of certain soils subject to liquefaction and amplification combine

to give the County a high-risk profile. Due to the expected pattern of damage resulting from a CSZ event, the Oregon Resilience Plan divides the State into four distinct zones and places Jackson County predominately within the “Valley Zone” (Valley Zone, from the summit of the Coast Range to the summit of the Cascades). Within the Southwest Oregon region, damage and shaking is expected to be strong and widespread - an event will be disruptive to daily life and commerce and the main priority is expected to be restoring services to business and residents.

Information on the estimated seismic resistance of two fire district stations, determined by DOGAMI in 2007, is shown in Table FD5-4; each “X” represents one building within that ranking category. Station 3 was destroyed by the Almeda Drive Fire and is being rebuilt as part of the Public Safety Center (2024). One of the two other fire stations was evaluated by DOGAMI using a Rapid Visual Survey (RVS), and it does not have high (>10% chance) or very high (100% chance) collapse potential. Note that Station 2 received funding from the Seismic Rehabilitation Grant Program (SRGP) in 2021 for mitigation (seismic retrofits).

**Table FD5-4 Rapid Visual Survey Scores**

Facility	Site ID*	Level of Collapse Potential			
		Low (< 1%)	Moderate (>1%)	High (>10%)	Very High (100%)
<b>Public Safety</b>					
Jackson County Fire District #5 - Station 3 (116 W 2nd St, Phoenix) - <b>See Mitigation Successes</b>	Jack_fir03	<i>Destroyed by the Almeda Drive Fire</i>			
Jackson County Fire District #5 - Station 2 (716 S Pacific Hwy, Talent) - <b>See Mitigation Successes</b>	Jack_fir15	X			

Source: DOGAMI 2007. Open File Report O-07-02. Statewide Seismic Needs Assessment Using Rapid Visual Assessment. “\*” – Site ID is referenced on the [RVS Jackson County Map](#)

In addition to building damages, utility (electric power, water, wastewater, natural gas) and transportation systems (bridges, pipelines) are also likely to experience significant damage.

Utility systems will be significantly damaged, including damaged buildings and damage to utility infrastructure, including water and wastewater treatment plants and equipment at high voltage substations (especially 230 kV or higher which are more vulnerable than lower voltage substations). Buried pipe systems will suffer extensive damage with approximately one break per mile in soft soil areas. There would be a much lower rate of pipe breaks in other areas. Restoration of utility services will require substantial mutual aid from utilities outside of the affected area.

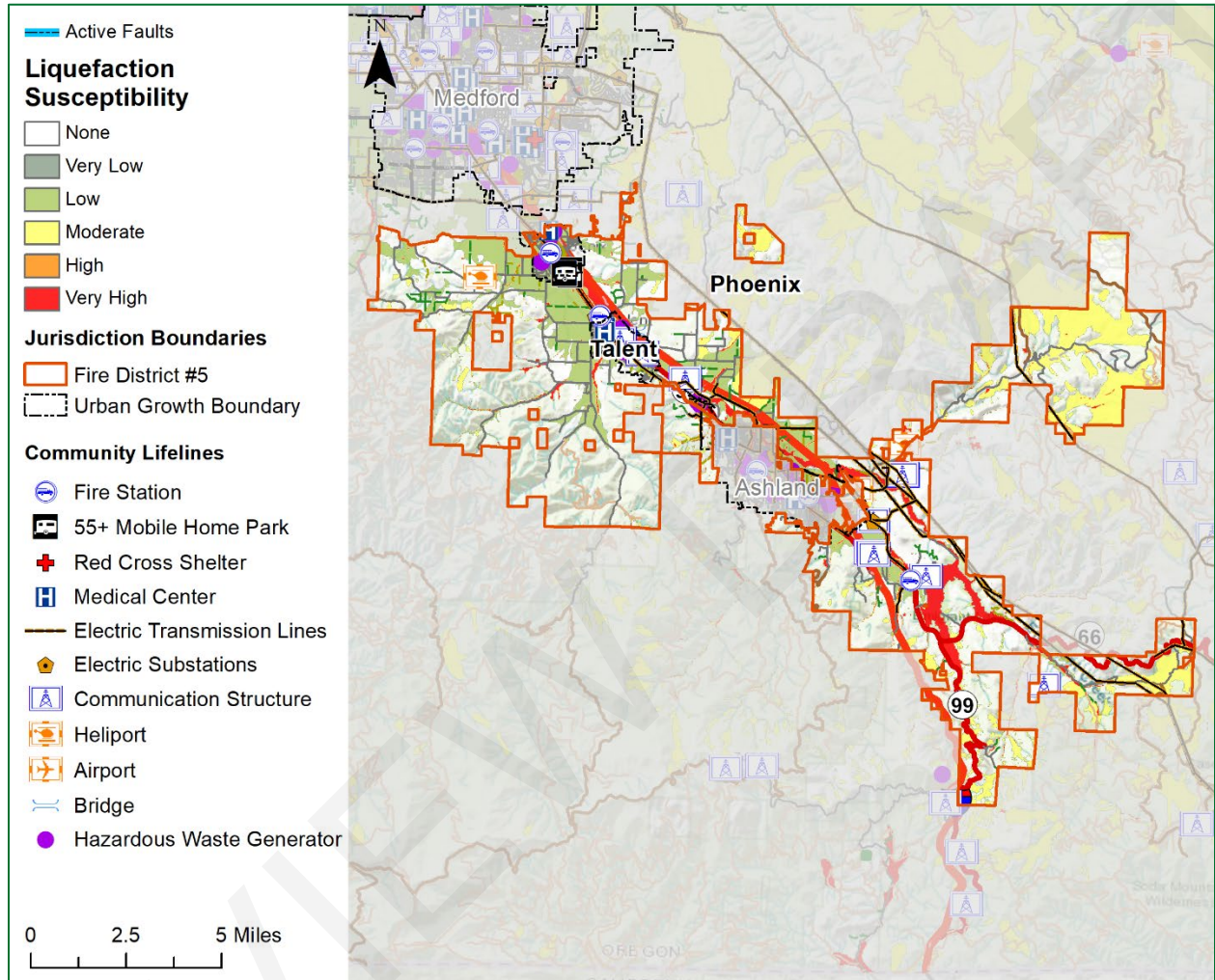
Please review Volume 1, Section 2 for additional information on this hazard.

### Earthquake (Crustal)

The steering committee determined that Fire District #5’s probability for a crustal earthquake is **low** (which is the same as the County’s rating) and that their vulnerability to crustal earthquake is **moderate** (which is higher than County’s rating).

Figure FD5-6 shows the liquefaction risk to the community lifelines that are identified in more detail in Table FD5-3. As shown in the figure, the area of greatest concern near Fire District #5 (liquefaction hazard orange to red areas) are near populated areas.

**Figure FD5-6 Liquefaction Susceptibility**



Source: Oregon Partnership for Disaster Resilience. Oregon Department of Geology and Mineral Industries.

Note: To view detail click this [link](#) to access Oregon HazVu.

Volume I, Section 2 describes the characteristics of earthquake hazards, history, as well as the location, extent, and probability of a potential event. Generally, an event that affects the County is likely to affect Fire District #5 as well. The causes and characteristics of an earthquake event are appropriately described within Volume I, Section 2, as well as the location and extent of potential hazards. Previous occurrences are well-documented within Volume I, Section 2 and the community impacts described by the County would generally be the same for Fire District #5 as well.

Earthquake-induced damages are difficult to predict and depend on the size, type, and location of the earthquake, as well as site-specific building and soil characteristics. Presently, it is not possible to accurately forecast the location or size of earthquakes, but it is possible to predict the

behavior of soil at any site. In many major earthquakes, damages have primarily been caused by the behavior of the soil.

### **Vulnerability Assessment**

Due to insufficient data and resources, Fire District #5 is currently unable to perform a quantitative risk assessment for this hazard, however an exposure assessment was conducted. Identified Community Lifelines that are exposed to this hazard are shown in Table FD5-3. Note that even if a facility has exposure, *it does not mean there is a high risk (vulnerability)*. In addition, water storage tanks are potentially vulnerable to earthquakes.

Please review Volume I, Section 2 for additional information on this hazard.

### **Emerging Infectious Disease**

The steering committee determined that Fire District #5's probability for emerging infectious disease is **moderate** (which is the same as the County's rating) and that their vulnerability is **high** (which is the same as the County's rating).

Emerging infectious diseases are those that have recently appeared in a population or those whose incidence or geographic range is rapidly increasing or threatens to increase. Emerging infections may be caused by biological pathogens (e.g., virus, parasite, fungus, or bacterium) and may be: previously unknown or undetected biological pathogens; biological pathogens that have spread to new geographic areas or populations; previously known biological pathogens whose role in specific diseases was previously undetected; and biological pathogens whose incidence of disease was previously declining but whose incidence of disease has reappeared (re-emerging infectious disease).<sup>3</sup>

Volume I, Section 2 describes the characteristics of emerging infectious disease and their history, as well as the location, extent, and probability of a potential event within the region. Generally, an event that affects the County is likely to affect the Fire District as well.

Please review Volume I, Section 2 for additional information on this hazard.

### **Flood**

The steering committee determined that Fire District #5's probability for flood is **high** (which is the same as the County's rating) and that their vulnerability to flood is **moderate** (which is the same as the County's rating).

Volume I, Section 2 describes the characteristics of flood hazards, their history, and how they relate to future climate projections, as well as the location, extent, and probability of a potential event. Portions of Fire District #5 have mapped FEMA flood zones (Figure FD5-7). Other portions

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<sup>3</sup> Baylor College of Medicine, *Emerging Infectious Disease*, URL: <https://www.bcm.edu/departments/molecular-virology-and-microbiology/emerging-infections-and-biodefense/emerging-infectious-diseases>, accessed September 17, 2017.

of Fire District #5 could be subject to flooding from local storm water drainage; however, areas of known flood hazard do not impact development or infrastructure.

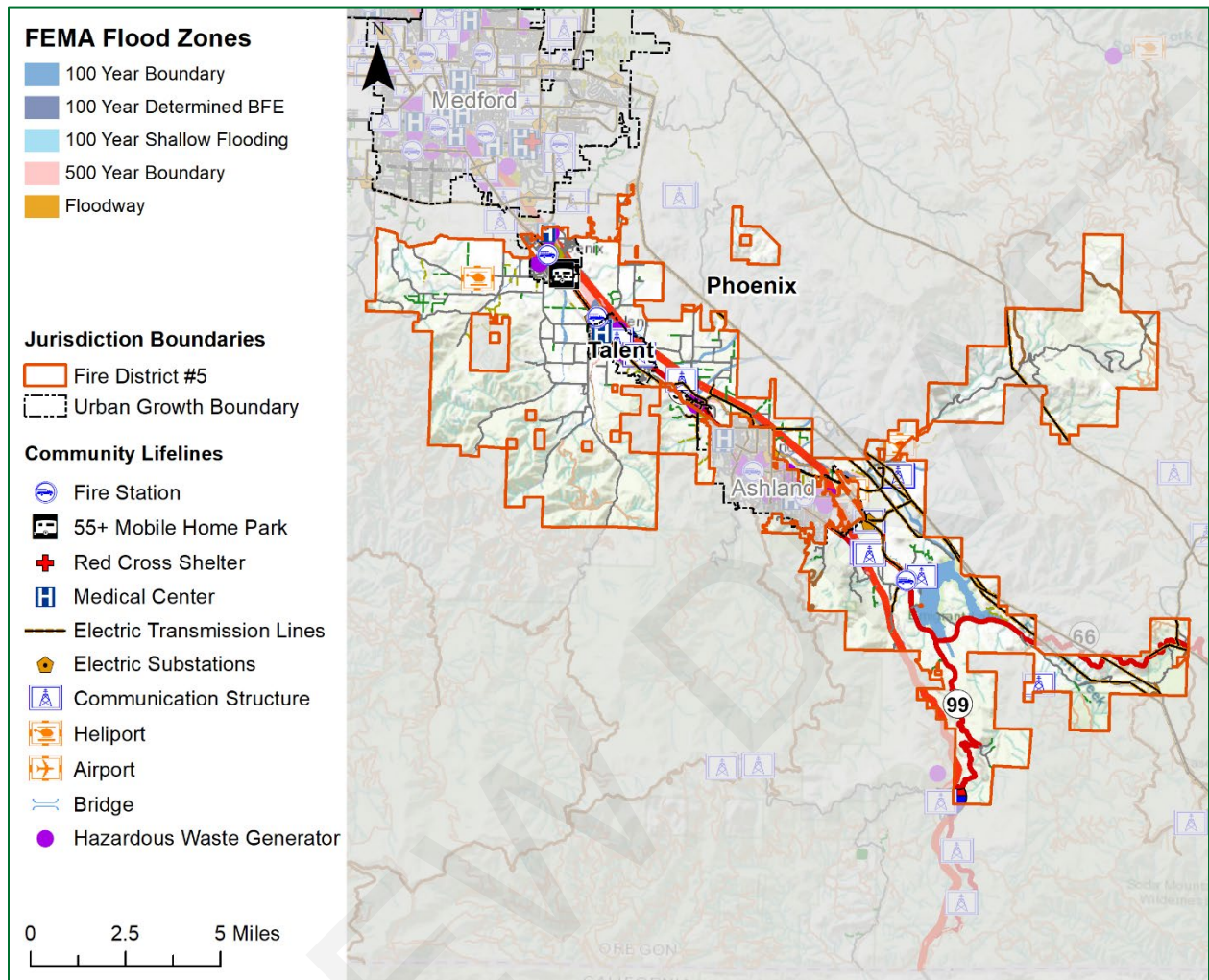
The main flood sources described in the [Jackson County Flood Insurance Study \(2018\)](#) for Fire District #5 Ashland Creek, Bear Creek, Wagner Creek, and Emigrant Lake. The impact of flooding in the cities and unincorporated parts of the County (including White City) minimally impact the district (Table FD5-3 and Figure FD5-7). Significant flooding may occur from heavy rain on snow events or by dam failure of the Emigrant Lake dam.<sup>4</sup>

Fire District #5 generally has minimal risk from two types of flooding: riverine and urban. Riverine flooding occurs when streams overflow their banks and inundate low-lying areas. This is a natural process that adds sediment and nutrients to fertile floodplain areas. It usually results from prolonged periods of precipitation over a wide geographic area. Most areas are generally flooded by low velocity sheets of water. Urban flooding occurs as land is converted to impervious surfaces and hydrologic systems are changed. Precipitation is collected and transmitted to streams at a much faster rate, causing floodwaters that rise rapidly and peak with violent force. During urban flooding, storm drains can back up and cause localized flooding of streets and basements. For more information on flood vulnerability see applicable city addenda in Volume III.

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<sup>4</sup> Jackson County Fire District #5. [Standards of Cover](#) (2017).

**Figure FD5-7 FEMA Flood Zones**



Source: Oregon Partnership for Disaster Resilience. Oregon Department of Geology and Mineral Industries.  
 Note: To view detail click this [link](#) to access Oregon HazVu.

### Vulnerability Assessment

Due to insufficient data and resources, Fire District #5 is currently unable to perform a quantitative risk assessment for this hazard, however an exposure assessment was conducted. Identified community lifelines that are exposed to this hazard are shown in Table FD5-3. Note that even if a facility has exposure, *it does not mean there is a high risk (vulnerability)*.

Floods can have a devastating impact on almost every aspect of the community, including private property damage, public infrastructure damage, and economic loss from business interruption. It is important for Fire District #5 to be aware of flooding impacts and assess its level of risk.

The economic losses due to business closures often total more than the initial property losses that result from flood events. Business owners and their employees are significantly impacted by

flood events. Direct damages from flooding are the most common impacts, but indirect damages, such as diminished clientele, can be just as debilitating to a business.

The [Jackson County Flood Insurance Study](#) (January 19, 2018) has a brief history of flooding in Jackson County (Volume I, Section 2). Fire District #5 facilities are at minimal flood risk.

Floodwaters can affect building foundations, seep into basements or cause damage to the interior, exterior, and contents of buildings, dependent upon the velocity and depth of the water and by the presence of floating debris.

### **National Flood Insurance Program (NFIP)**

FEMA updated the Flood Insurance Study (FIS) and Flood Insurance Rate Maps (FIRMs) in 2018 (effective January 19, 2018). Fire District #5 is not a community which has authority to adopt and enforce floodplain management regulations for the areas within its jurisdiction. All partner jurisdictions (Jackson County and cities) participate in the National Flood Insurance Program (NFIP). For more information on the NFIP see applicable county (Volume I, Section 2) and city addenda (Volume III).

Please review Volume I, Section 2 for additional information on this hazard.

## **Landslide**

The steering committee determined that Fire District #5's probability for landslide is **high** (which is the same as the County's rating) and that their vulnerability to landslide is **moderate** (which is higher than the County's rating).

Volume I, Section 2 describes the characteristics of landslide hazards, history, how they relate to future climate projections, as well as the location, extent, and probability of a potential event within the region.

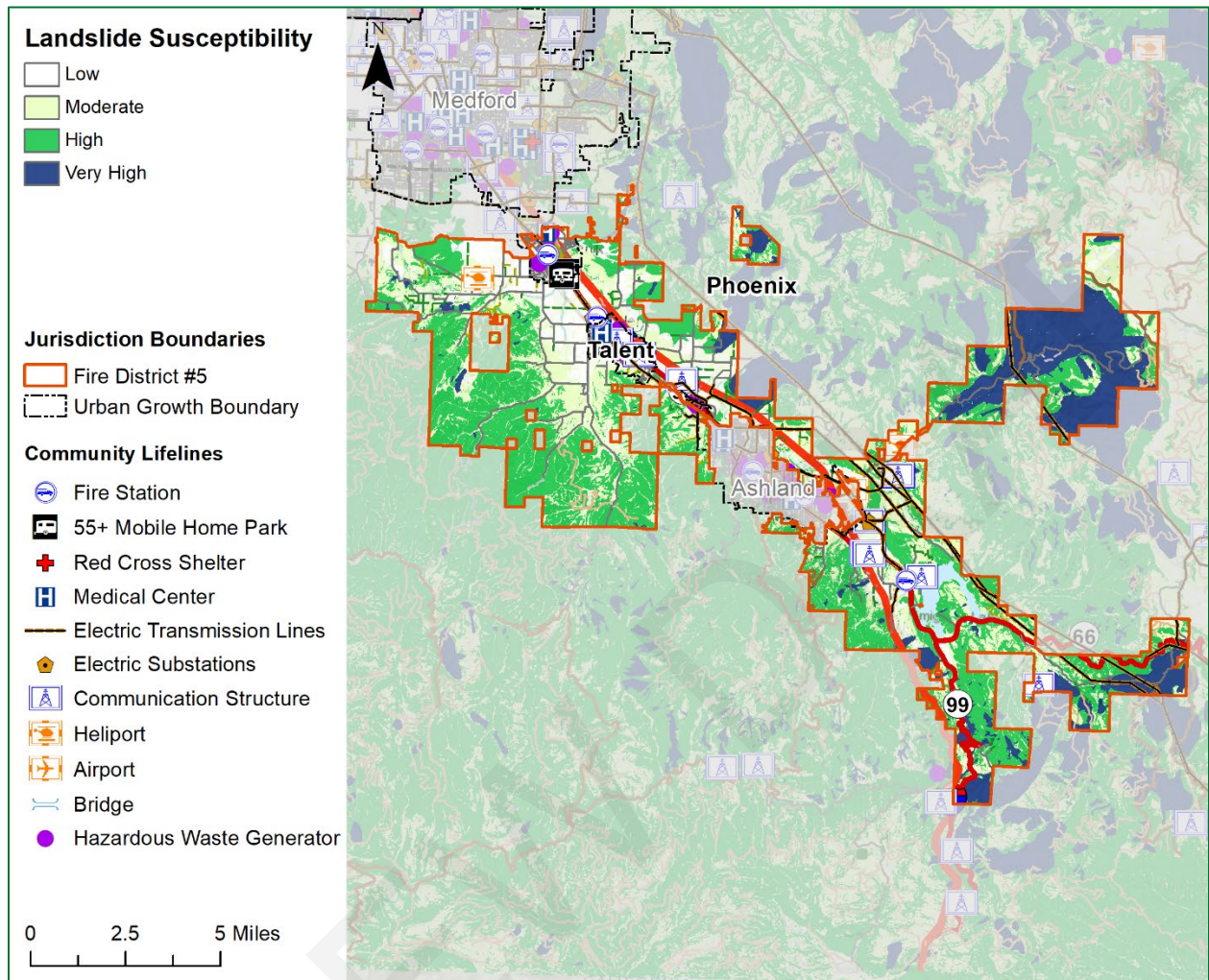
Landslide susceptibility exposure for Fire District #5 is shown in Figure FD5-8. Most of Fire District #5 demonstrates a low susceptibility to landslide exposure, with corridors of moderate and high susceptibility concentrated around higher elevations of the district. The chief concern for landslide is along rural transportation corridors and waterways.

### **Vulnerability Assessment**

Due to insufficient data and resources, Fire District #5 is currently unable to perform a quantitative risk assessment for this hazard, however an exposure assessment was conducted. Identified community lifelines that are exposed to this hazard are shown in Table FD5-3. *Note that even if an area has a high percentage of land in a high or very high landslide exposure susceptibility zone, that does not mean there is a high risk (vulnerability), because risk is the intersection of a hazard and assets.*



**Figure FD5-8 Landslide Susceptibility Exposure**



Source: Oregon Partnership for Disaster Resilience. Oregon Department of Geology and Mineral Industries.  
 Note: To view detail click this [link](#) to access Oregon HazVu.

## Severe Weather

Severe weather can account for a variety of intense and potentially damaging weather events. These events include windstorms and winter storms. The following section describes the unique probability and vulnerability of each identified weather hazard. Other more abrupt or irregular events such as hail are also described in this section.

### Extreme Heat Event

The steering committee determined that Fire District #5’s probability for extreme heat event is **high** (which is the same as the County’s Rating) and that their vulnerability to an extreme heat event is **moderate** (which is the same as the County’s Rating).

Jackson County’s NHMP Volume I, Section 2, adequately describes the causes and characteristics of extreme heat, as well as the history, location, extent, and probability of a potential event and how it relates to future climate projections. Generally, an event that affects the County is likely

to affect Fire District #5 as well. A severe heat episode or “heat wave” occurs about every two to three years, and typically lasting two to three days but can last as many as five days. A severe heat episode can be defined as consecutive days of temperatures in the high 90s and above 100. Severe heat hazard in Southern Oregon can be described as the average number of days with temperatures greater than or equal to 90-degrees Fahrenheit.<sup>5</sup>

Extreme heat events can and have occurred in Fire District #5, and while they typically do not cause loss of life, they are becoming more frequent and have the potential to impact economic activity as well as quality of life and have caused threat to life in some cases.

See the Risk Assessment (Volume I, Section 2) for additional information on this hazard.

## Windstorm

The steering committee determined that Fire District #5’s probability for windstorm is **high** (which is the same as the County’s rating) and that their vulnerability to windstorm is **high** (which is higher than the County’s rating).

Volume I, Section 2 describes the characteristics of windstorm hazards, their history, and how they relate to future climate projections, as well as the location, extent, and probability of a potential event within the region. Because windstorms typically occur during winter months, they are sometimes accompanied by ice, freezing rain, flooding, and snow. Other severe weather events that may accompany windstorms, including thunderstorms, hail, and lightning strikes are standard for Fire District #5.

Volume I, Section 2 describes the impacts caused by windstorms, including power outages, downed trees, heavy precipitation, building damages, and storm-related debris. Additionally, transportation and economic disruptions result as well. Fire District #5 regularly experiences high winds. Pacific Power has mitigated the risk of power loss by trimming trees near their above ground infrastructure.

Damage from high winds generally has resulted in downed utility lines and trees but has minimal impact upon Fire District #5. Electrical power can be out anywhere from a few hours to several days. Outdoor signs have also suffered damage.

Please review Volume I, Section 2 for additional information on this hazard.

## Winter Storm (Snow/Ice)

The steering committee determined that Fire District #5’s probability for winter storm is **high** (which is the same as the County’s rating) and that their vulnerability to winter storm is **high** (which is higher than the County’s rating).

Volume I, Section 2 describes the characteristics of winter storm hazards, their history, and how they relate to future climate projections, as well as the location, extent, and probability of a

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<sup>5</sup> DLCD. *Oregon State Natural Hazard Mitigation Plan*. 2020.

potential event within the region. Severe winter storms can consist of rain, freezing rain, ice, snow, cold temperatures, and wind. They originate from troughs of low pressure offshore that ride along the jet stream during fall, winter, and early spring months. Severe winter storms affecting Fire District #5 typically originate in the Gulf of Alaska or in the central Pacific Ocean. These storms are most common from November through March.

Major winter storms can and have occurred in the Fire District #5 area and while they typically do not cause significant damage, they are frequent and have the potential to impact economic activity. Road closures due to winter weather are an uncommon occurrence but can interrupt commuter and commercial traffic.

Please review Volume I, Section 2 for additional information on this hazard.

## Volcanic Event

The steering committee determined that Fire District #5's probability for a volcanic event is **low** (which is the same as the County's rating) and that their vulnerability to a volcanic event is **low** (which is the same as the County's rating).

Volume I, Section 2 describes the characteristics of volcanic hazards and their history, as well as the location, extent, and probability of a potential event within the region. Generally, an event that affects the County is likely to affect Fire District #5 as well. Fire District #5 is very unlikely to experience anything more than volcanic ash during a volcanic event.

Please review Volume I, Section 2 for additional information on this hazard.

## Wildfire

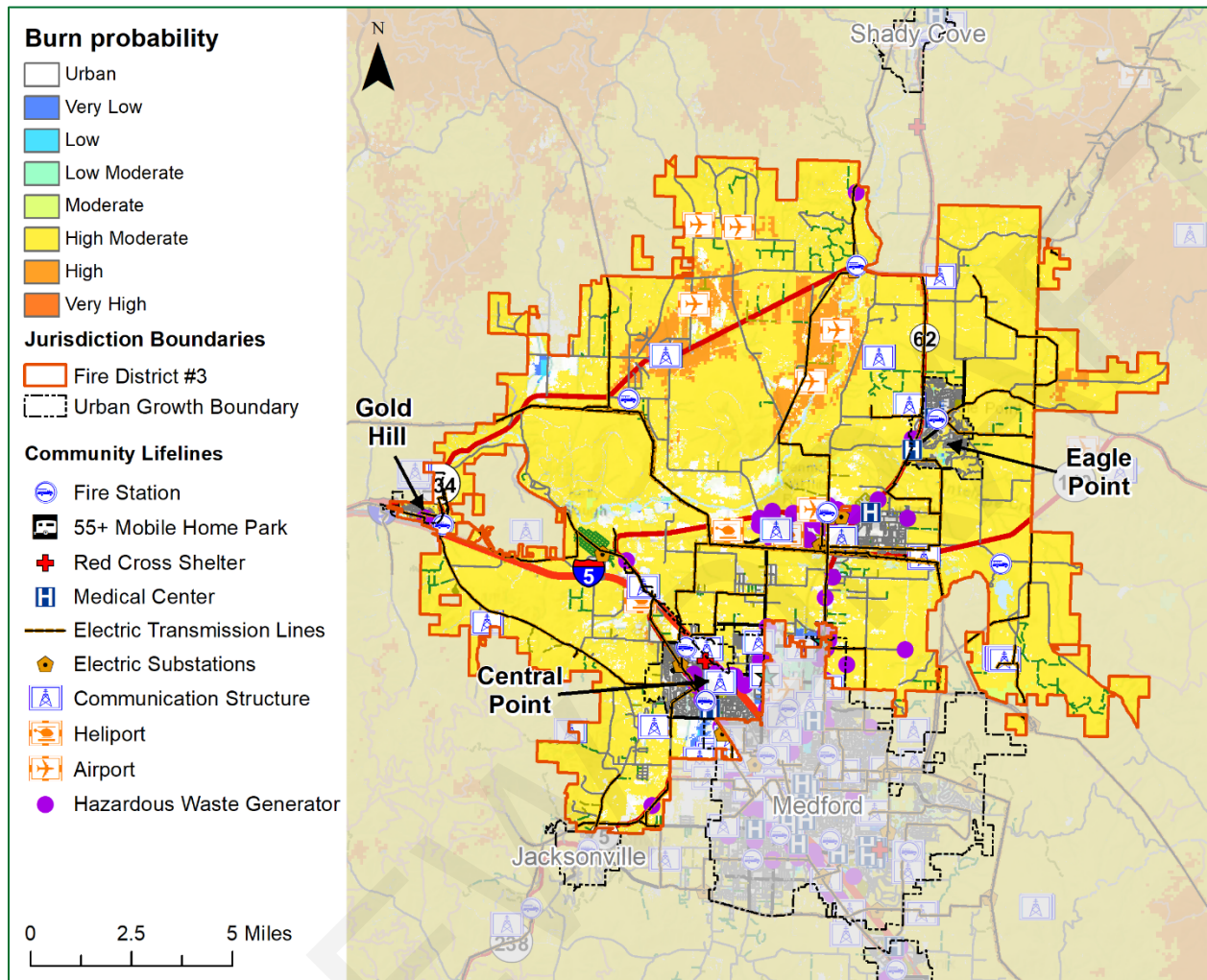
The steering committee determined that Fire District #5's probability for wildfire is **high** (which is the same as the County's rating) and that their vulnerability to wildfire is **high** (which is the same as the County's rating).

Volume I, Section 2 describes the characteristics of wildfire hazards, their history, and how they relate to future climate projections, as well as the location, extent, and probability of a potential event within the region. The location and extent of a wildfire vary depending on fuel, topography, and weather conditions. Weather and urbanization conditions are primarily at cause for the hazard level. Ashland, Talent, Phoenix, and unincorporated areas of Jackson County were severely affected by the Almeda Drive Fire in September 2020 which destroyed more than 2,600 homes between Ashland, Talent, Phoenix, and Medford on Labor Day weekend, 2020.<sup>6</sup> Other fires near the district include the Siskiyou (2009), and East Antelope (2002).

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<sup>6</sup> Firebrand Resiliency Collective. (2023). *Almeda Fire Loss and Recovery Dashboard*. Accessed August 18, 2023. <https://experience.arcgis.com/experience/888491b7ccc949a7a98554a14aa8bf82>

**Figure FD5-9 Burn Probability**



Source: Oregon Partnership for Disaster Resilience. USFS Pacific Northwest Region Wildfire Risk Assessment (PNRA)  
 Note: To view detail click this [link](#) to access Oregon Explorer’s CWPP Planning Tool.

The potential community impacts and vulnerabilities described in Volume I, Section 2 are generally accurate for Fire District #5 as well. The [Rogue Valley Integrated Community Wildfire Protection Plan](#) (RVIFP, updated 2019) assesses wildfire risk, maps wildland urban interface areas, and includes actions to mitigate wildfire risk. Fire District #5 is included in the RVIFP and will update Fire District #5’s wildfire risk assessment if the RVIFP presents better data during future updates (an action item is included within Volume I, Section 4 to participate in updates to the integrated fire plan and to continue to maintain and update their RVIFP). The district is actively reducing fuels in and around the district. Fire District #5 hereby incorporates the RVIFP into this addendum by reference to provide greater detail to sensitivity and exposure to the wildfire hazard.

Property can be damaged or destroyed with one fire as structures, vegetation, and other flammables easily merge to become unpredictable and hard to manage. Other factors that affect ability to effectively respond to a wildfire include access to the location and to water, response

time from the fire station, availability of personnel and equipment, and weather (e.g., heat, low humidity, high winds, and drought).

### **Vulnerability Assessment**

Due to insufficient data and resources, Fire District #5 is currently unable to perform a quantitative risk assessment for this hazard, however an exposure assessment was conducted. Identified community lifelines that are exposed to this hazard are shown in Table FD5-3. Note that even if a facility has exposure, *it does not mean there is a high risk (vulnerability)*.

Please review Volume I, Section 2 for additional information on this hazard.

REVIEW DRAFT

# Attachment A: Public Involvement Summary

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Members of the steering committee provided content and edits to the NHMP prior to the public review period as reflected in the final document. In addition, a survey was distributed that included responses from residents within Fire District #5 boundaries (Volume III, Appendix F).

To provide the public information regarding the draft NHMP addendum, and provide an opportunity for comment, an announcement (see below) was provided from **Month Day through Month Day** on Fire District #5's website. There were **XX [to be updated following public comment period]** comments provided. Additional opportunities for stakeholders and the public to be involved in the planning process are addressed in Volume III, Appendix B.

## Website Posting

**Posting to be inserted**

## Fire District #5 Steering Committee

Steering committee members possessed familiarity with the communities within Fire District #5 and how it is affected by natural hazard events. The steering committee guided the development process through several steps including goal confirmation and prioritization, action item development, and information sharing, to make the NHMP as comprehensive as possible. The steering committee met formally on the following date:

### **Meeting #1: Fire District #5 steering committee, February 14, 2023 (via Zoom)**

During this meeting, the steering committee was provided information on hazard mitigation planning, the NHMP process, and project timeline. The steering committee:

- Reviewed history of hazard events in Fire District #5.
- Reviewed and confirmed the NHMP's mission and goals.
- Discussed the NHMP public outreach strategy.
- Discussed development activity and community lifelines.
- Reviewed and provided feedback on the draft risk assessment including community vulnerabilities and hazard information.
- Developed mitigation strategy (actions).
- Reviewed their implementation and maintenance program.

### **Meeting Attendees:**

- Convener, Charles Hanley, Fire Chief
- Aaron Buster, Assistant Chief
- Jennifer Snook, Chief of Police, Talent
- Joe Slaughter, Community and Economic Development Director, Phoenix
- Mike Winter