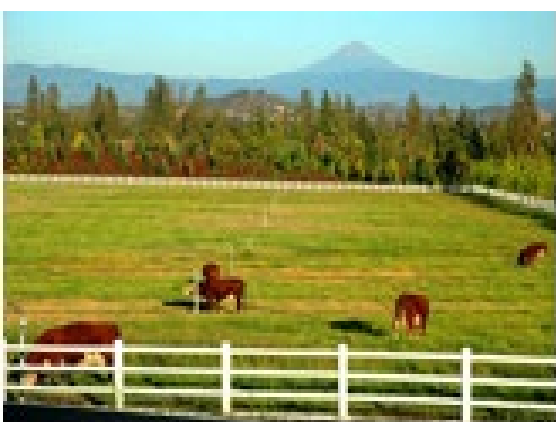


Jackson County Fire District #3 Addendum to the Jackson County NHMP



Photos courtesy of Oregon State Archives

Effective:

February 12, 2024 through February 11, 2029

Prepared for
Fire District #3
420 6th Avenue
Fire District #3, OR 97525

Prepared by
The University of Oregon
Institute for Policy Research & Engagement
School of Planning, Public Policy, and Management



Institute for Policy
Research and Engagement

Table of Contents

INTRODUCTION	1
<i>Purpose</i>	1
<i>NHMP Process, Participation and Adoption</i>	1
NHMP IMPLEMENTATION AND MAINTENANCE	2
<i>Implementation through Existing Programs</i>	3
<i>Capability Assessment</i>	3
Existing Authorities.....	3
Policies and Programs	4
Personnel	5
Capital Projects.....	6
Capital Resources	6
Findings	6
MITIGATION STRATEGY	7
<i>Mitigation Successes</i>	7
<i>Action Items</i>	7
RISK ASSESSMENT	12
<i>Hazard Analysis</i>	13
<i>Community Characteristics</i>	13
<i>Community Assets</i>	15
<i>Hazard Characteristics</i>	18
Air Quality	18
Drought	18
Earthquake (Cascadia).....	19
Earthquake (Crustal).....	21
Emerging Infectious Disease.....	23
Flood	24
Landslide	26
Severe Weather.....	28
Windstorm	29
Winter Storm (Snow/Ice).....	30
Volcanic Event	31
Wildfire.....	31
ATTACHMENT A: PUBLIC INVOLVEMENT SUMMARY	35
<i>Website Posting</i>	36
<i>Fire District #3 Steering Committee</i>	37

List of Tables

TABLE FD3-1 ACTION ITEMS	8
TABLE FD3-2 HAZARD ANALYSIS MATRIX.....	13
TABLE FD3-3 FACILITIES	17
TABLE FD3-4 RAPID VISUAL SURVEY SCORES.....	21

List of Figures

FIGURE FD3-1 UNDERSTANDING RISK	12
FIGURE FD3-2 NORMAL PRECIPITATION: ANNUAL (1991-2020)	14
FIGURE FD3-3 LAND COVER.....	15
FIGURE FD3-4 FACILITIES AND COMMUNITY LIFELINES.....	16
FIGURE FD3-5 CASCADIA SUBDUCTION ZONE PERCEIVED SHAKING	20
FIGURE FD3-6 LIQUEFACTION SUSCEPTIBILITY	22
FIGURE FD3-7 FEMA FLOOD ZONES	25
FIGURE FD3-8 LANDSLIDE SUSCEPTIBILITY EXPOSURE	28
FIGURE FD3-9 BURN PROBABILITY	32
FIGURE FD3-10 FIRE MANAGEMENT ZONES	34



FEMA

April 10, 2024

The Honorable Rick Dyer, Chair
Jackson County Board of Commissioners
10 South Oakland Ave.
Medford, Oregon 97501

Reference: Approval of the Jackson County Multi-jurisdictional Hazard Mitigation Plan

Dear Chair Dyer:

In accordance with applicable¹ laws, regulations, and policy, the United States Department of Homeland Security's Federal Emergency Management Agency (FEMA) Region 10 has approved the Jackson County multi-jurisdictional hazard mitigation plan for the following jurisdictions:

City of Butte Falls	City of Phoenix	Jackson County
City of Talent	City of Gold Hill	City of Shady Cove
City of Rogue River	City of Eagle Point	Jackson County Fire District #3
Medford Water Commission	City of Ashland	City of Jacksonville
City of Central Point		

The approval period for this plan is from February 12, 2024 through February 11, 2029.

In addition, Jackson County met the requirements for addressing all dam risks listed in the multi-jurisdictional hazard mitigation plan.

An approved hazard mitigation plan is one of the conditions for applying for and receiving FEMA mitigation grants from the following programs:

- Hazard Mitigation Grant Program (HMGP)
- Hazard Mitigation Grant Program Post-Fire (HMGP-PF)
- Building Resilient Infrastructure and Communities (BRIC)
- Flood Mitigation Assistance (FMA)
- High Hazard Potential Dams Grants Program (HHPD)

To avoid a lapsed plan, the next plan update must be approved before the end of the approval period, including adoption by the participating jurisdiction(s). Before the end of the approval period, please allow sufficient time to secure funding for the update, including the review and approval process. Please include time for any revisions, if needed, and for participating jurisdictions to formally adopt

¹ Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended; the National Flood Insurance Act of 1968, as amended; and National Dam Safety Program Act, as amended; Title 44 Code of Federal Regulations (CFR) Part 201, Mitigation Planning; and Local Mitigation Planning Policy Guide (FP-206-21-0002).

Chair Dyer
April 10, 2024
Page 2

the plan after the review, if not adopted prior to submission. This will enable each jurisdiction to remain eligible to apply for and receive funding from FEMA's mitigation grant programs with a hazard mitigation plan requirement. Local governments, including special districts, with a plan status of "Approvable Pending Adoption" are not eligible for FEMA's mitigation grant programs with a hazard mitigation plan requirement.

If you have questions regarding your plan's approval or FEMA's mitigation program, please contact Joseph Murray, Mitigation Planner with the Oregon Department of Emergency Management at (503) 378-2911 or joseph.murray@oem.oregon.gov, who coordinates these efforts for local entities.

Sincerely,

Wendy Shaw, P.E.
Risk Analysis Branch Chief
Mitigation Division

Enclosures

cc: Stephen Richardson, Oregon Department of Emergency Management

JF:JG:ws

JACKSON COUNTY FIRE DISTRICT 3



RESOLUTION NO. 24-02

IN THE MATTER OF ADOPTING THE JACKSON COUNTY FIRE DISTRICT 3 ADDENDUM TO THE JACKSON COUNTY MULTI-JURISDICTIONAL NATURAL HAZARDS MITIGATION PLAN

WHEREAS, Jackson County Fire District 3 recognizes the threat that natural hazards pose to people, property and infrastructure within our community; and

WHEREAS, undertaking hazard mitigation actions will reduce the potential for harm to people, property, and infrastructure from future hazard occurrences; and

WHEREAS, an adopted Natural Hazards Mitigation Plan (NHMP) is required as a condition of future funding for mitigation projects under multiple FEMA pre- and post-disaster mitigation grant programs; and

WHEREAS, the District has fully participated in the FEMA prescribed mitigation planning process to prepare the Jackson County, Multi-Jurisdictional Natural Hazards Mitigation Plan, which has established a comprehensive, coordinated planning process to eliminate or minimize these vulnerabilities; and

WHEREAS, the District has identified natural hazard risks and prioritized a number of proposed actions and programs needed to mitigate the vulnerabilities of the District to the impacts of future disasters within the Jackson County, Multi-Jurisdictional Natural Hazards Mitigation Plan; and

WHEREAS, these proposed projects and programs have been incorporated into the Jackson County, Multi-Jurisdictional Natural Hazards Mitigation Plan that has been prepared and promulgated for consideration and implementation by the participating cities and special districts of Jackson County; and

WHEREAS, the Oregon Office of Emergency Management and Federal Emergency Management Agency, Region X officials have reviewed the Jackson County, Multi-Jurisdictional Natural Hazards Mitigation Plan and pre-approved it (dated, January 9, 2024) contingent upon this official adoption of the participating governments and entities;

WHEREAS, the NHMP is comprised of comprised of three volumes: Volume I – Basic Plan, Volume II – Appendices, and Volume III – Jurisdictional Addenda, collectively referred to herein as the NHMP; and

WHEREAS, the NHMP is in an on-going cycle of development and revision to improve its effectiveness; and

WHEREAS, Jackson County Fire District 3 adopts the NHMP and directs the Fire Chief to develop, approve, and implement the mitigation strategies and any administrative changes to the NHMP.

NOW, THEREFORE, BE IT RESOLVED, that Jackson County Fire District 3 adopts the Jackson County Multi-Jurisdictional Natural Hazards Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED, that Jackson County Fire District 3 will submit this Adoption Resolution to the Oregon Office of Emergency Management and Federal Emergency Management Agency, Region X officials to enable final approval of the Jackson County Multi-Jurisdictional Natural Hazards Mitigation Plan.

Date adopted: February 15, 2024


BOARD OF DIRECTORS


BOARD OF DIRECTORS

Introduction

Purpose

This is the first iteration of the Fire District #3 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 #3 adopted their addendum to the Jackson County Multi-jurisdictional NHMP on February 15, 2024. FEMA Region X approved the Jackson County NHMP on February 12, 2024 and the District's addendum on May 16, 2024. With approval of this NHMP, the City is now eligible for non-disaster and disaster mitigation project grants through February 11, 2029.

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 #3 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 #3 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 #3 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 #3 will gain eligibility for FEMA Hazard Mitigation Assistance grant program funds.

The Jackson County NHMP and Fire District #3 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 Fire Chief 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 #3 steering committee met formally and informally, to discuss development of their addendum (Volume II, Appendix B). The steering committee reviewed and developed Fire District #3'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 #3 Steering Committee was comprised of the following representatives:

- Convener, Mike Hussey, Fire Chief
- John Patterson, Division Chief-Risk Reduction

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 #3 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 #3'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 #3 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 #3's existing plans and policies. Where possible, Fire District #3 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 #3 currently has the following plans and programs that relate to natural hazard mitigation. For a complete list visit Fire District #3's [website](#).

- [Strategic Plan](#) (2021-2023) *update expected in December 2023*
- [Rogue Valley Integrated Community Wildfire Protection Plan](#) (RVIFP, updated 2019)

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

Capability Assessment

The Capability Assessment identifies and describes the ability of Jackson County Fire District #3 to implement the mitigation strategy and associated action items. Capabilities can be evaluated through an examination of broad categories, including: existing authorities, policies, programs, funding, and resources.

Existing Authorities

Hazard mitigation can be executed at a local scale through three (3) methods: integrating hazard mitigation actions into other local planning documents (i.e., plan integration), adopting building and/or fire codes that account for best practices in structural hardening and fire resistance, and codifying land use regulations and zoning designations that prescribe mitigation into development requirements. The extent to which a municipality, district, or multi-jurisdictional effort leverages these approaches is an indicator of that community's capabilities.

2021-2023 Strategic Plan

The primary planning document for District 3 is their Strategic Plan. This plan focuses on community engagement and risk reduction, and on workforce development, enhancing technology, and utilizing data analytics to be resource smart.¹

2017 Standards of Cover

These adopted written policies and procedures determine the distribution, concentration, and reliability of fixed and mobile response forces for fire, emergency medical services, hazardous materials, and other technical responses. Key components include agency goals, services provided, community risk assessment (including hazard analysis), and performance objectives. It integrates the hazard analysis from the Jackson County Emergency Operations Plan.

Structural and Fire Codes

The Oregon Legislature recently adopted updated building codes for both residential (2021 adoption) and commercial structures (2022) since the last update of this Plan. These building codes are based on the 2021 version of the International Building Code, International Fire Code, and International Existing Building Code. Jackson County has adopted the 2021 Oregon Residential Structural Code. The Jackson County Fire District #3 Building Department administers the 2020 edition of the Oregon Fire Code.

Together, they ensure that both new residential and commercial structures are built according to the latest seismic and wind hardening standards in addition to requiring fire resistant building materials for those structures constructed in proximity or within the WUI.

Construction in the unincorporated rural areas of Jackson County is limited by lack of municipal water supplies and Jackson County zoning restrictions. The Jackson County Land Development Ordinance contains special provisions for development in identified wildfire hazard areas. All development must comply with the provisions of city and County zoning ordinances, building codes, and fire codes. The District participates in the development review and approval process with all three cities and the county.

Policies and Programs

This Plan directs Jackson County Fire District #3 and Jackson County to explore integration into other planning documents and processes. Jackson County Fire District #3 has made significant progress in integrating the NHMP into its portfolio of planning processes and programs over the last five years.

Risk Reduction Services

Risk Reduction is a key component of District 3's mission. Their Risk Reduction Division is staffed with a Fire Marshal, three Deputy Fire Marshals, and a Community Risk Reduction Captain. This Division inspects commercial occupancies, conducts plan reviews for commercial construction, investigates all fires, performs home assessments, provides public education, and provides hazardous fuels mitigations services. In recent years, they have installed smoke detectors,

¹ 2021-2023 Jackson County Fire District #3 Strategic Plan, Preface. [strategic_plan_2021-2023_final.pdf \(jcfd3.com\)](https://www.jcfd3.com/strategic_plan_2021-2023_final.pdf)

performed wildfire home inspections, cleared debris with chippers and trailers, and managed burn piles throughout the district to reduce the risk of wildfire and increase home safety.

Administration

The Jackson County Fire District #3 Board of Directors has the responsibility of developing and adopting the annual department budget. Integrating hazard mitigation goals and projects into the annual budget is key to implementing the plan. The Board tries to broadly address resilience needs while it determines departmental priorities and looks for multiple-impact projects wherever possible. They also work with staff to apply for federal and state grant funding to pursue larger projects that are outside of general funding capacity.

Community Wildfire Protection Plan

The Jackson County Community Wildfire Protection Plan (CWPP) will be incorporated into this Plan as a functioning annex.

Firewise

In the last five years, District 3 has recognized and provided support for five new Firewise communities, including:

- The Meadows mobile park 555 Freeman Rd in Central Point
- Nestled in The Hills mobile park 8495 Old Stage Rd.
- Oak Hills mobile park 410 Stevens Rd Eagle Point
- “Long Mountain” community west of Eagle Point.
- John Day Estates, Gold Hill

Personnel

Fire District 3 provides fire suppression, emergency medical and rescue services, prevention, and risk reduction as well as community care to more than 57,000 people living in the communities of Central Point, White City, Eagle Point, Gold Hill, Sams Valley, Dodge Bridge, and Agate Lake. The District’s 73 full-time employees and 18 volunteers work from four career stations, four volunteer stations, and an Administration office to provide coverage to the 171 square miles that encompass the District.

Click [here](#) for the existing organization chart. The following Jackson County Fire District #3 personnel have assignments related to natural hazard mitigation planning and implementation:

Emergency Management: Deputy Chief

Public Information Officer: Community Engagement Coordinator

Grant writing (for Public Works or emergency management): Individual Divisions

Capital improvement planning: Fire Chief

Capital improvement execution: Chief Finance Officer

These personnel integrate hazard mitigation and resilience planning into their greater work programs to the best of their abilities. However, there is limited capacity to expand upon their capabilities or work loads.

Capital Projects

Jackson County Fire District #3 has implemented recommendations from the last NHMP into its capital improvement projects over the last 5 years, including:

- New Scenic Fire Station (2020)
- Seismic rehabilitation projects on five (5) fire stations (2018), two (2) in 2017
- RCC/FD3 Fire Science Educational Center (opened 2018)

Upcoming: Capital Improvement Plan (2024-2025)

Capital Resources

Jackson County Fire District #3 maintains eight (8) stations; four are staffed full-time with career members, four are staffed with dedicated volunteers. They also have an administration facility and training center. Diesel fuel storage is located at the White City Station, Eagle Point Station, Sams Valley Station, and Scenic Station.

Findings

Several important findings from this capability assessment informed the design of the Plan's mitigation strategy and aided in prioritizing action items.

Staffing Limitations and Capacity

Jackson County Fire District #3 staff are assigned hazard mitigation responsibilities as a part of their larger job responsibilities. Limited capacity reduces the breadth of the programming the district can undertake in any year. The District relies upon its relationships with the County and other cities within its region to expand its operations.

Reliance upon outside funding streams and local match requirements

Jackson County Fire District #3 operates on a limited budget. Grants and limited annual revenue are directed to sustain the marketing of resilience programs. But there are few opportunities for using local financial resources to implement more extensive hazard mitigation work. They lean heavily upon state and federal grant funds as the primary means for securing mitigation funding.

Leveraging Partnerships with Public and Nonprofit Entities

Regional planning displayed in Community Wildfire Protection Planning process demonstrates the District's ability to effectively share information and identified priority needs.

Mitigation Strategy

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

Fire District #3's mitigation strategy (action items) was developed during the 2024 NHMP planning process. The steering committee assessed risk, identified potential issues, and developed a mitigation strategy (action items). Fire District #3 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 #3 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](#)².

FEMA Funded Mitigation Successes

- None to date

Seismic Rehabilitation Grant Program Mitigation Successes

- 2017: Agate Lake Fire Station Seismic Rehab, Jackson County Fire District #3 (\$54,263)
- 2017: Central Point Fire Station Seismic Rehab, Jackson County Fire District #3 (\$235,657)
- 2017: Dodge Bridge Fire Station Seismic Rehab, Jackson County Fire District #3 (\$103,591)
- 2017: Eagle Point Fire Station Seismic Rehab, Jackson County Fire District #3 (\$39,790)
- 2017: Sams Valley Fire Station Seismic Rehab, Jackson County Fire District #3 (\$109,876)

Other Mitigation Successes

- 2009: Seismic upgrades to the White City Fire Station

Action Items

Table FD3-1 documents the title of each action along with, the lead organization, partners, timeline, cost, and potential funding resources.

² 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 FD3-1 Action Items

Action Item #	Mitigation Actions	Potential Funding Resources	Lead	Partners	Timeline	Cost
Multi-Hazard Mitigation Strategies						
1.1	Deploy ruggedized and reliable communication tools, including portable radios and tablets, to emergency responders.	District Funding Resources, FEMA HMA	District Administration	Jackson County (JaCo) Emergency Management, Partner Cities, OEM	M	H
1.2	Support development of redundancy in 911 and civilian communication networks.	District Funding Resources, FEMA HMA	District Administration	JaCo Emergency Management, Partner Cities	O	L
1.3	Develop sustainability of emergency response service provision in rural service areas by hardening critical roadways against hazards.	District Funding Resources, FEMA HMA, ODOT	District Administration	JaCo Emergency Management, Roads; Partner Cities, ODOT	O	H
1.4	Continue to contribute to County hazard preparedness activities.	District Funding Resources, FEMA HMA	District Administration	JaCo Emergency Management, Partner Cities	O	L
1.5	Revise Continuity of Operations Plan (COOP) in support of District and partner agencies.	District Funding Resources, FEMA HMA	District Administration	JaCo Emergency Management, Partner Cities, OEM, FEMA	S	M
1.6	Collaborate with City and County efforts in addressing NHMP priorities.	District Funding Resources, FEMA HMA	District Administration	JaCo Emergency Management, Partner Cities	O	L
1.7	Develop a centralized location for integration of video and incident analytics in support of incident management.	District Funding Resources, FEMA HMA	District Administration	JaCo Emergency Management, Partner Cities, RVCOG	S	L
1.8	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, FEMA HMA	District Administration	JaCo Emergency Management, Partner Cities, RVCOG	M	L

Action Item #	Mitigation Actions	Potential Funding Resources	Lead	Partners	Timeline	Cost
1.9	Procure watercraft and necessary tools to integrate watercraft response capabilities into District services.	District Funding Resources	District Administration	JaCo Emergency Management, Partner Cities	M	H
1.10	Conduct an analysis to determine inequitable barriers and/or effective incentives to advance resiliency of all hazard classes upon vulnerable populations.	District Funding Resources	District Administration	JaCo Emergency Management, Partner Cities	S	L-H
1.11	Conduct ICS training and simulations for stakeholders and leadership of service area.	District Funding Resources	District Administration	JaCo Emergency Management, Partner Cities, FEMA	O	L
1.12	Conduct Standards of Cover and deployment analysis for disaster response.	District Funding Resources	District Administration	JaCo Emergency Management, Partner Cities	O	L
1.13	Support Local Emergency Planning Committee (LEPC) by continuing to serve the committee in an advisory capacity.	District Funding Resources, Jackson County	District Administration	JaCo Emergency Management, LEPC	O	L
Air Quality Mitigation Strategies						
2.0	The steering committee, using available local resources, will study this hazard further during the implementation and maintenance phase of this NHMP, seeking to identify cost effective actions that might be implemented to reduce community vulnerability.					
Drought Mitigation Strategies						
3.0	The steering committee, using available local resources, will study this hazard further during the implementation and maintenance phase of this NHMP, seeking to identify cost effective actions that might be implemented to reduce community vulnerability.					
Earthquake Mitigation Strategies						
4.0	The steering committee, using available local resources, will study this hazard further during the implementation and maintenance phase of this NHMP, seeking to identify cost effective actions that might be implemented to reduce community vulnerability.					
Emerging Infectious Disease Mitigation Strategies						
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

Action Item #	Mitigation Actions	Potential Funding Resources	Lead	Partners	Timeline	Cost
Flood Mitigation Strategies						
6.0	The steering committee, using available local resources, will study this hazard further during the implementation and maintenance phase of this NHMP, seeking to identify cost effective actions that might be implemented to reduce community vulnerability.					
Landslide Mitigation Strategies						
7.0	The steering committee, using available local resources, will study this hazard further during the implementation and maintenance phase of this NHMP, seeking to identify cost effective actions that might be implemented to reduce community vulnerability.					
Severe Weather (Extreme Heat, Windstorm, Winter Storm) Mitigation Strategies						
8.0	The steering committee, using available local resources, will study this hazard further during the implementation and maintenance phase of this NHMP, seeking to identify cost effective actions that might be implemented to reduce community vulnerability.					
Volcanic Event Mitigation Strategies						
9.0	The steering committee, using available local resources, will study this hazard further during the implementation and maintenance phase of this NHMP, seeking to identify cost effective actions that might be implemented to reduce community vulnerability.					
Wildfire Mitigation Strategies						
10.1	Sustain and expand the district's Fire Adapted Communities program to coordinate public education.	District Funding Resources, FEMA HMA, CWDG	District Administration	JaCo Emergency Management, Media	S	L
10.2	Investigate incentives for property owners to adhere to Fire Adapted Communities practices.	District Funding Resources, CWDG	District Administration	JaCo Emergency Management, Partner Cities, RVCOG	S	L
10.3	Sustain and expand a fuel reduction program to address fuel loads at Agate Lake, Dodge Bridge, Eagle Point, and Old Stage Road and work with partner organizations (e.g., the Oregon Department of Forestry, the Bureau of Land Management, and Jackson County Parks) to reduce wildfire fuels.	District Funding Resources, FEMA HMA, CWDG, USFS	District Administration	JaCo Emergency Management, Parks; ODF, BLM	O	H
10.4	Reduce hazards along key evacuation routes and coordinate Zone Haven evacuation route planning to ensure evacuation routes are complimentary.	District Funding Resources, FEMA HMA, CWDG, ODOT	District Administration	JaCo Emergency Management, ODOT	O	M-H

Action Item #	Mitigation Actions	Potential Funding Resources	Lead	Partners	Timeline	Cost
10.5	Implement the Rogue Valley Integrated Community Wildfire Protection Plan.	District Funding Resources, FEMA HMA, CWDG, ODF	District Administration	JaCo Emergency Management, Partner Cities	L	L-H
10.6	Develop alternatives to non-prescription open burning of hazardous vegetation.	District Funding Resources, FEMA HMA, CWDG, ODF	District Administration	JaCo Emergency Management, USFS, BLM, ODF	S	L
10.7	Develop Temporary Refuge Areas in identified wildfire-prone areas where evacuation routes are limited.	District Funding Resources, FEMA HMA, CWDG, ODF	District Administration	JaCo Emergency Management, Roads; USFS, BLM, ODF, ODOT	M	H

Source: Fire District #3 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

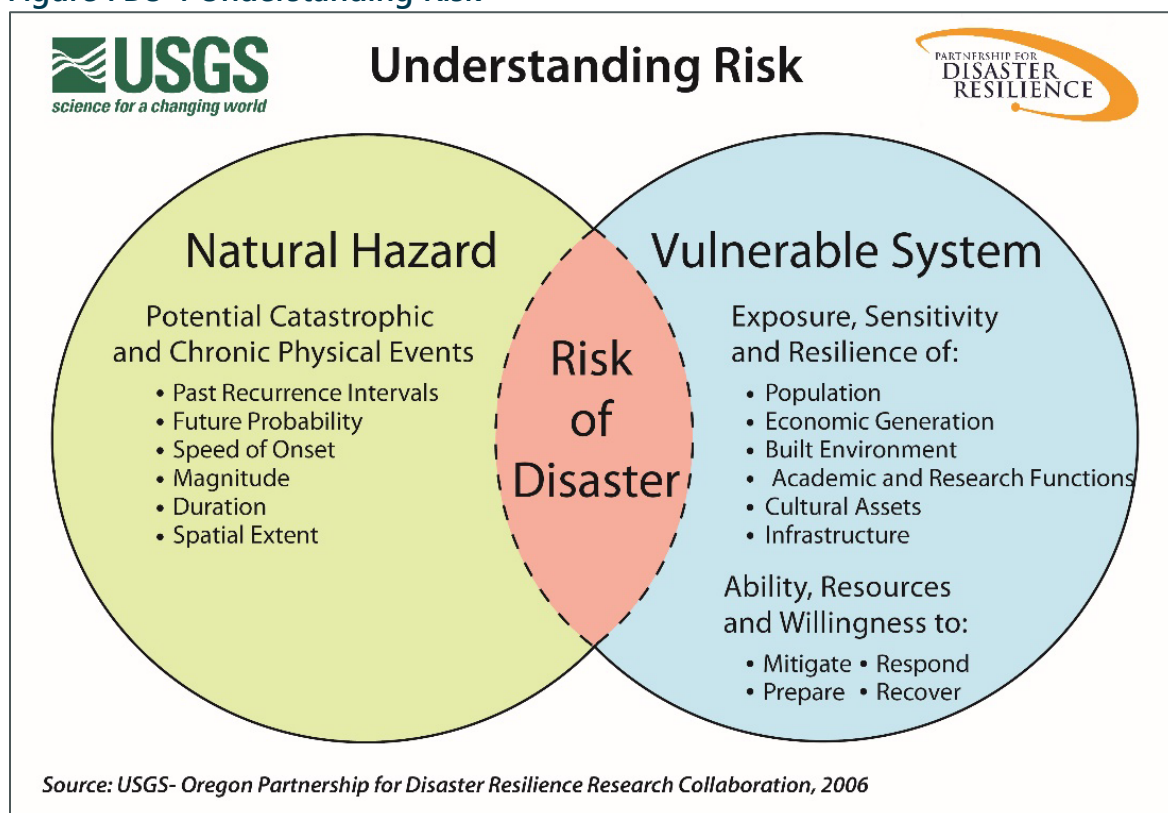
This section of the NHMP addendum addresses 44 CFR 201.6(b)(2) - Risk Assessment. In addition, this chapter can serve as the factual basis for addressing Oregon Statewide Planning Goal 7 – Areas Subject to Natural Hazards.

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 FD3-1. Ultimately, the goal of hazard mitigation is to reduce the area of risk, where hazards overlap vulnerable systems.

Figure FD3-1 Understanding Risk



Hazard Analysis

The Fire District #3 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 #3, which are discussed throughout this addendum.

Table FD3-2 shows the HVA matrix for Fire District #3 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 #3 (Top Tier). Extreme heat event, air quality, flood, and windstorm comprise the next highest ranked hazards (Middle Tier), while drought, landslide, crustal earthquake, and volcanic event hazards comprise the lowest ranked hazards (Bottom Tier).

Table FD3-2 Hazard Analysis Matrix

Hazard	History	Vulnerability	Maximum Threat	Probability	Total Threat Score	Hazard Rank	Hazard Tiers
Wildfire	20	40	100	56	216	#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	
Extreme Heat Event	20	25	70	70	185	#5	Middle Tier
Air Quality	18	40	60	63	181	#6	
Flood	20	30	50	70	170	#7	
Windstorm	20	20	50	70	160	#8	
Drought	16	20	50	63	149	#9	Bottom Tier
Landslide	4	20	30	49	103	#10	
Earthquake - Crustal	2	25	50	21	98	#11	
Volcanic Event	2	5	50	7	64	#12	

Source: Fire District #3 NHMP Steering Committee, 2023.

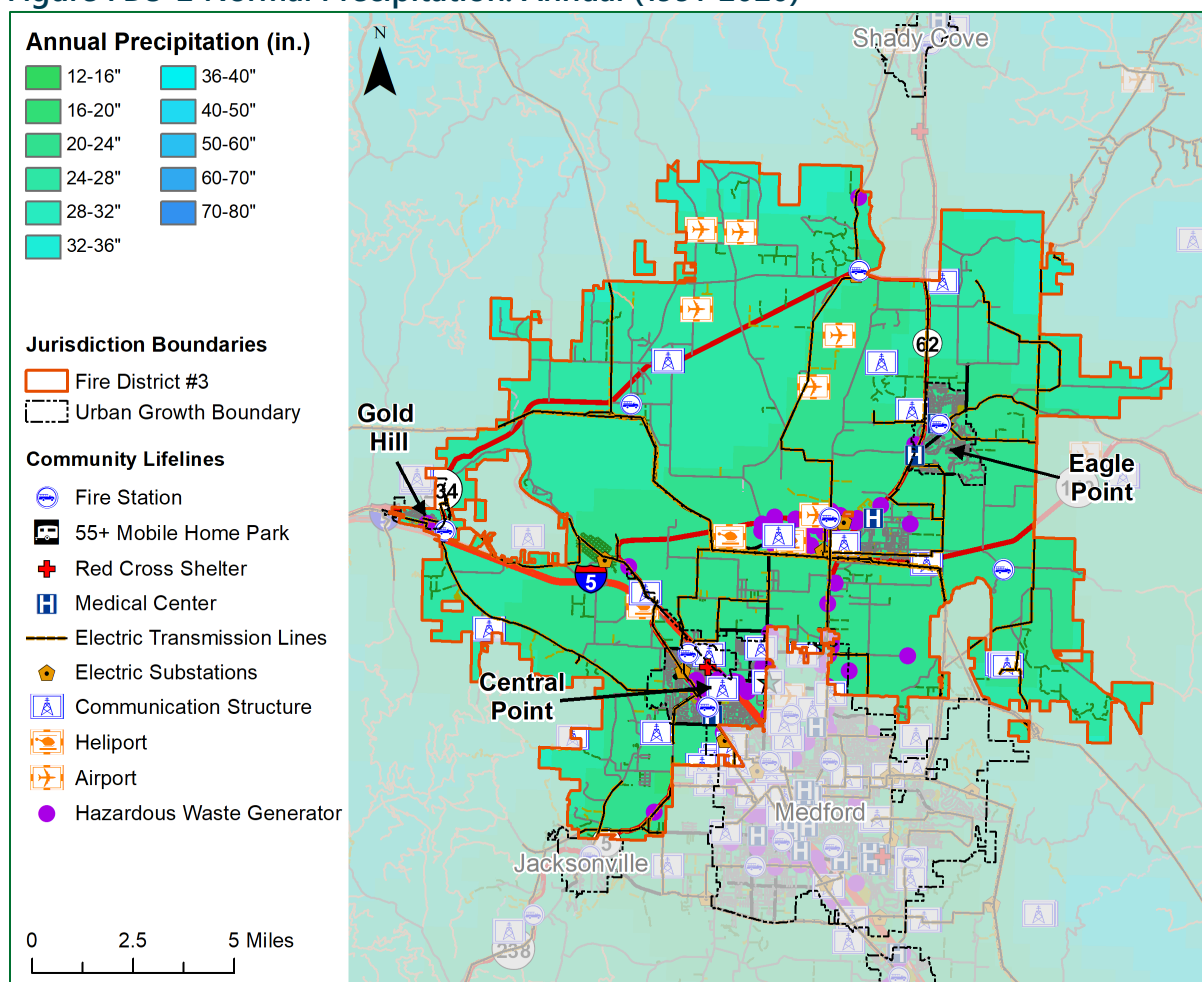
Community Characteristics

Fire District #3 directly services more than 57,000 people within their district, most living within Central Point, Eagle Point, Gold Hill, and unincorporated White City (Figure FD3-4). Residential development within cities is increasing with development in rural and forested parts of the district occurring at a slower pace.

About 98% of the building inventory is residential and related outbuildings (65% are within the Central Point and White City Fire Management Zones).³ The district has adopted NFPA 1730 definitions for building classifications and frequency schedule as their model and goal. All high hazard/risk occupancies are inspected annually (about 226), moderate hazard/risk occupancies are inspected every two years (about 300), and low hazard risk every three years.

Fire District #3'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 21 to 29 inches (Figure FD3-2). June through September are the driest months.

Figure FD3-2 Normal Precipitation: Annual (1991-2020)

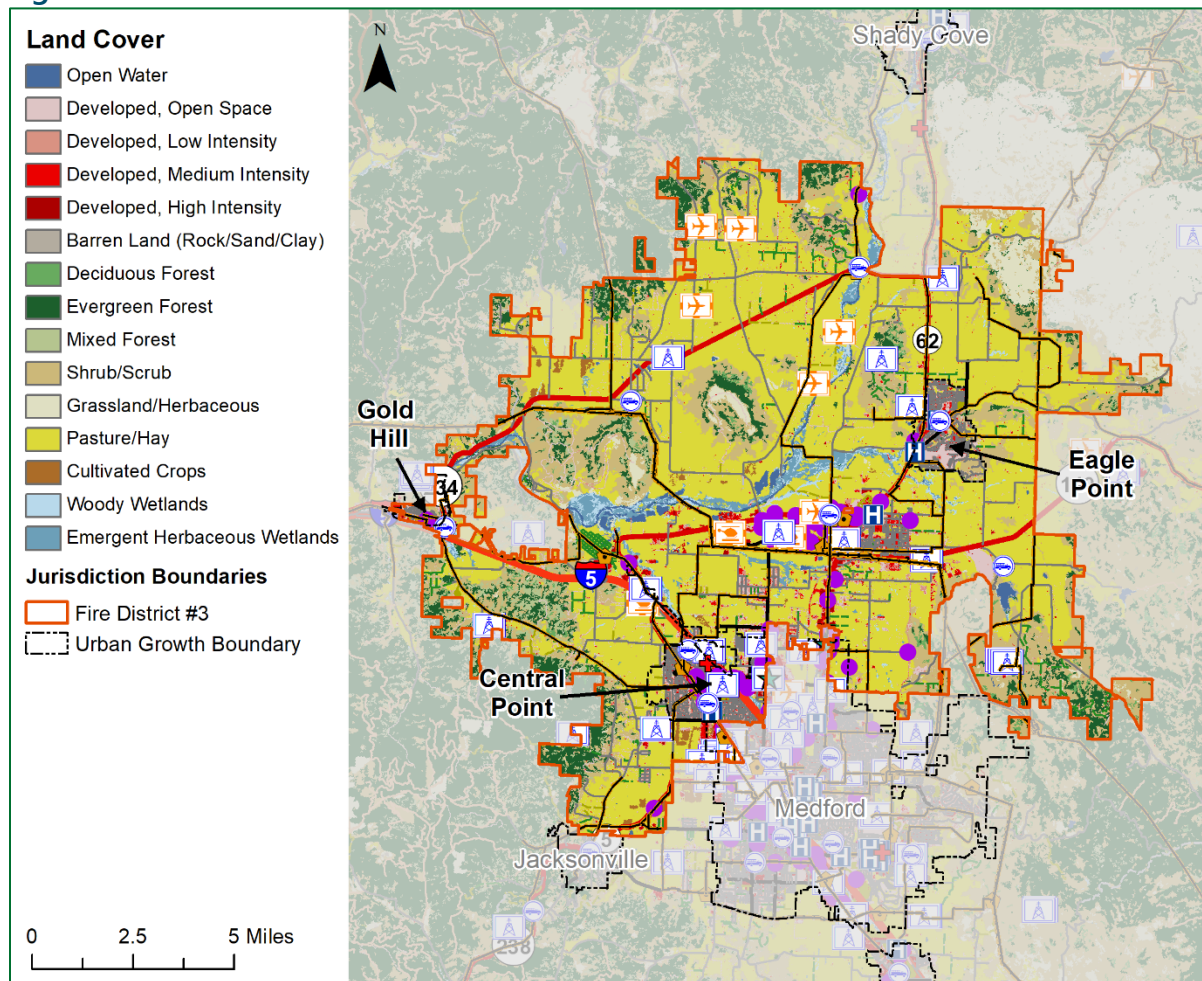


Source: OPDR, data [PRISM Climate Group](#)

³ Jackson County Fire District #3. [Standards of Cover](#) (2017).

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 FD3-3). There are three incorporated cities in the district (Central Point, Eagle Point, and Gold Hill) and the unincorporated community of White City.

Figure FD3-3 Land Cover



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

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

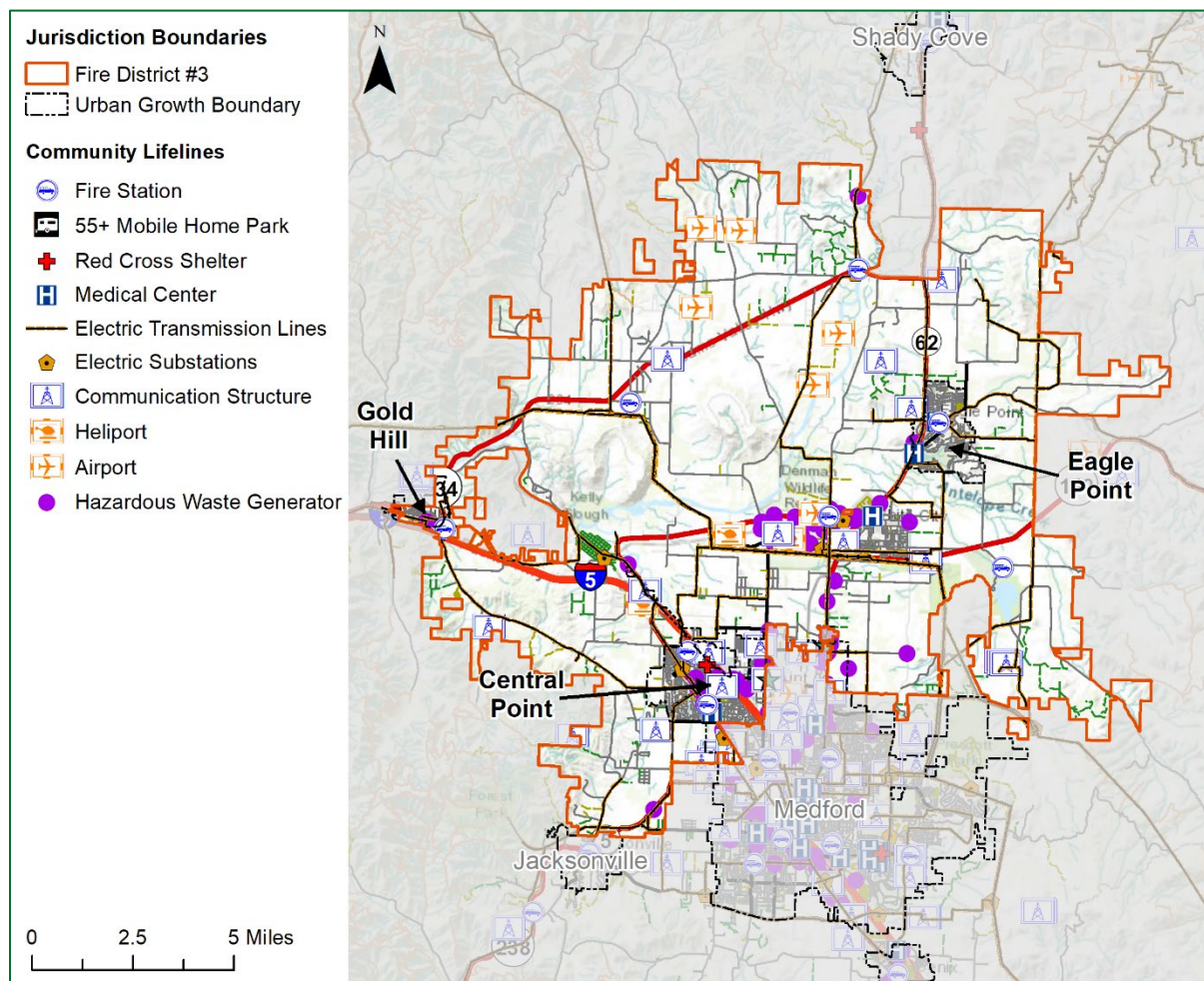
Community Assets

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 #3 facilities and community lifelines are shown in Figure FD3-4 and Table FD3-3. In addition, the fire district has several underground and above ground water storage tanks. There are numerous bridge crossings within the district including Dodge Bridge, Two Bell Bridge, and Access Bridge (2nd Avenue) that half of

the population in the district rely upon. Some of the smaller bridges in the district have load limits that prevent usage by fire apparatus (see [Standards of Cover](#) (2017) for more information on these bridges).

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 FD3-4 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 FD3-3 Facilities

Facility Name	Jurisdiction	Community Lifeline Category	Lifeline Type	Earthquake-Liquefaction Hazard	Flood Hazard	Landslide Hazard	Wildfire Hazard
Admin Building (ca. 2008)	County	safety and security	fire station	low	minimal	low	low
Agate Lake Station (ca. 1995)	County	safety and security	fire station	low	minimal	low	Moderate
Central Point Station (ca. 1983)	Central Point	safety and security	fire station	low	minimal	low	low
Dodge Bridge Station (ca. 1979)	County	safety and security	fire station	low	minimal	low	low
Eagle Point Station (ca. 2002)	Eagle Point	safety and security	fire station	moderate	minimal	low	low
Gold Hill Station (ca. 1999)	County	safety and security	fire station	moderate	500-Year	low	low
Sams Valley Station (ca. 1985)	County	safety and security	fire station	none	minimal	moderate	low
Scenic Avenue Station (ca. 2020)	Central Point	safety and security	fire station	low	minimal	low	low
White City Station (ca. 1977)	County	safety and security	fire station	low	minimal	low	low
Training Center (ca. 2003)	County	safety and security	fire station	low	minimal	low	low

Source: Oregon Department of Geology and Mineral Industries, Fire District #3 NHMP Steering Committee

Hazard Profiles

The following sections briefly describe relevant information for each profiled hazard. For more information on the vulnerabilities of each partner jurisdiction (Jackson County, Central Point, Eagle Point, and Gold Hill) 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 (see [OCCRI report](#)), 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.

Future Projections

According to the Oregon Climate Change Research Institute "Future Climate Projections, Jackson County,"⁴ climate change is expected to reduce outdoor air quality. Warmer temperatures may increase ground-level ozone concentrations, while increases in the number and size of wildfires may increase concentrations of smoke and fine particulate matter. Moreover, increases in pollen abundance and the duration of the pollen season may increase aeroallergens. Such poor air quality is expected to exacerbate allergy and asthma conditions and increase the incidence of respiratory and cardiovascular illnesses and death. In Jackson County, the number of smoke wave days is projected to decrease by 20%, but the intensity of smoke on those days is projected to increase by 81%.

Increasingly poor outdoor air quality will have exponentially high impacts upon those living in older homes, manufactured housing, RVs, and campgrounds, or the unhoused. The need to install new or upgraded air conditioning systems or HVAC filtration systems will impact the cost of housing.

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

Drought

The steering committee determined that Fire District #3'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).

⁴ Oregon Climate Change Research Institute, *Future Climate Projections, Jackson County, Oregon*. February 2023.

Volume I, Section 2 describes the characteristics of drought hazards, their history, and how they relate to future climate projections (see [OCCRI report](#)), 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 Central Point, Eagle Point, and Gold Hill. Other developed areas and the industrial park of White City also have hydrants.⁵ The fire district maintains, and inspects, around 50 below ground and above ground water storage tanks throughout the district. Local water supplies fed by aquifers are significantly reduced during periods of drought. During these period stored water available to the fire district is less reliable.

Future Projections

According to the Oregon Climate Change Research Institute “Future Climate Projections, Jackson County,”⁶ drought, as represented by low summer soil moisture, low spring snowpack, low summer runoff, and low summer precipitation, is projected to become more frequent in Jackson County by the 2050s.

Increasingly frequent droughts will have economic and social impacts upon those who depend upon predictable growing periods (ranches, farms, vineyards, gardeners) as well as upon the price and availability of fresh vegetables. It may also stress local jurisdiction’s ability to provide water for irrigation or commercial and household use.

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

Earthquake (Cascadia)

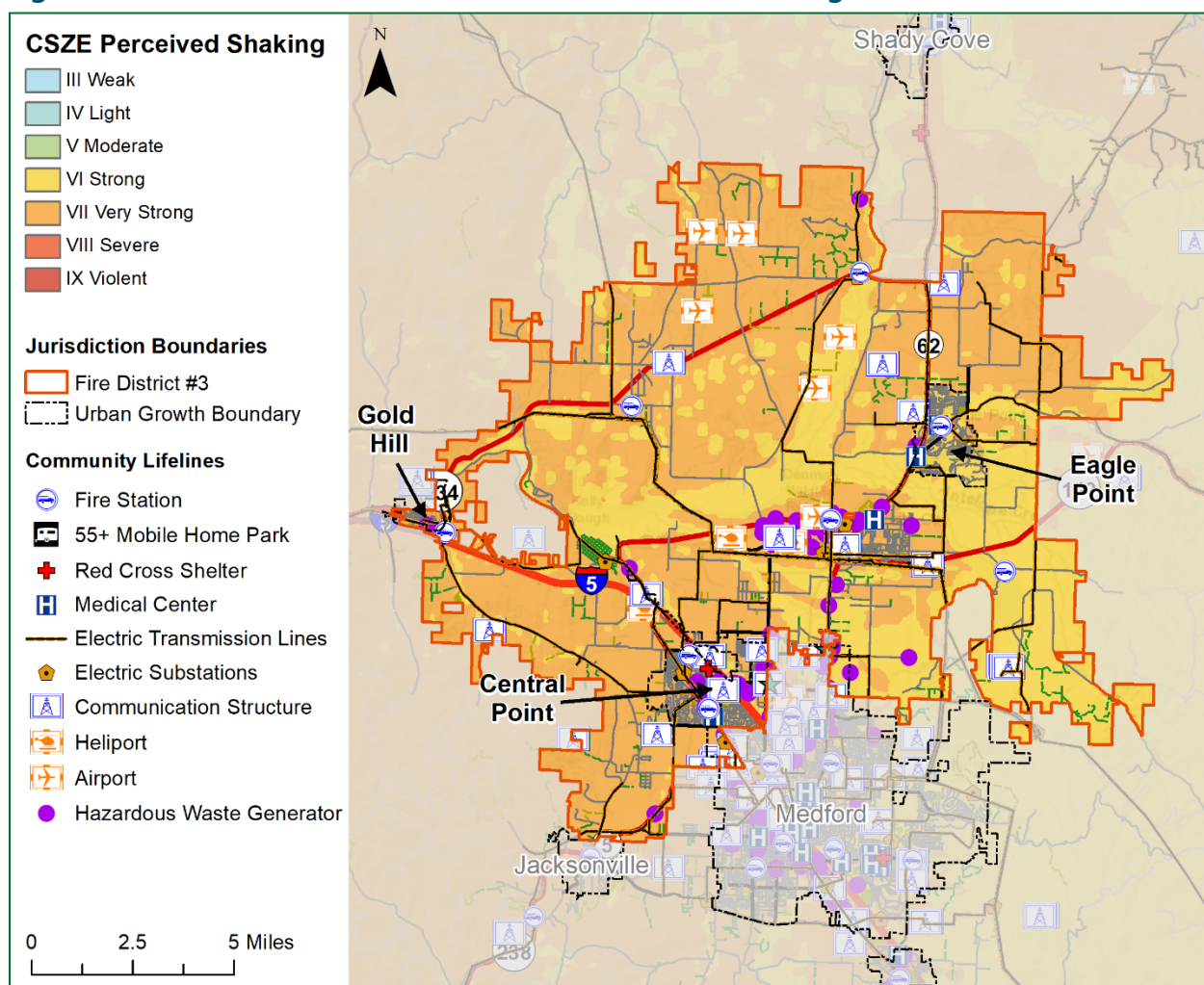
The steering committee determined that Fire District #3’s probability for a Cascadia Subduction Zone (CSZ) earthquake is **moderate** (which is the same as the County’s rating) and that their vulnerability to a CSZ earthquake is **high** (which is the same as the County’s rating).

Figure FD3-5 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 #3 are near populated areas (darker areas).

⁵ Jackson County Fire District #3. [Standards of Cover](#) (2017).

⁶ Oregon Climate Change Research Institute, *Future Climate Projections, Jackson County, Oregon*. February 2023.

Figure FD3-5 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 #3 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 #3 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 FD3-4; each “X” represents one building within that ranking category. Of the facilities evaluated by DOGAMI using a Rapid Visual Survey (RVS), two (2) have a high (>10% chance) collapse potential. Note that funding for seismic retrofits to the Central Point Station was received from the Seismic Rehabilitation Grant Program (SRGP) in 2017. Additional stations, including the White City Station, have also benefitted from seismic retrofits (see Mitigation Successes).

Table FD3-4 Rapid Visual Survey Scores

Facility	Site ID*	Level of Collapse Potential			
		Low (1%)	Moderate (1%)	High (10%)	Very High (100%)
Public Safety					
Jackson County Fire District #3 - White City Station (8333 Agate Rd) - see Mitigation Successes	Jack_fir02			X	
Jackson County Fire District #3 - Central Point Station (600 S Front St) - see Mitigation Successes	Jack_fir09			X	

Source: DOGAMI 2007. Open File Report 0-07-02. 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.

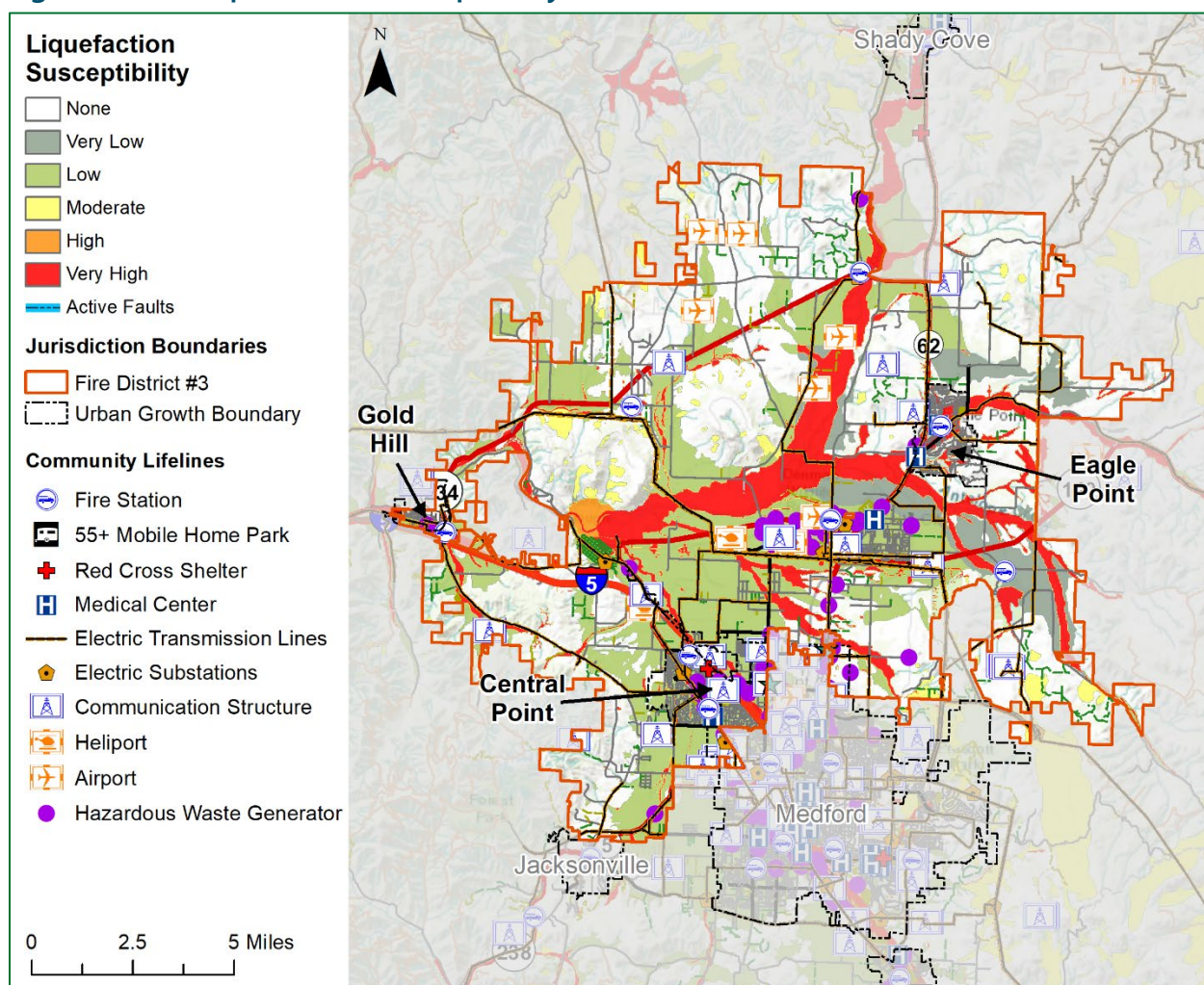
Please review Volume 1, Section 2 for additional information on this hazard.

Earthquake (Crustal)

The steering committee determined that Fire District #3’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 FD3-6 shows the liquefaction risk to the community lifelines that are identified in more detail in Table FD3-3. As shown in the figure, the area of greatest concern near Fire District #3 (liquefaction hazard orange to red areas) are near populated areas.

Figure FD3-6 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 #3 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 #3 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 #3 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 FD3-3. 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.

Future Projections

Future development (residential, commercial, or industrial) within Jackson County will be at risk to earthquake impacts, although this risk can be mitigated by the adoption and enforcement of high development and building standards. Reducing risks to vulnerable populations should be considered during the redevelopment of existing properties.

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

Emerging Infectious Disease

The steering committee determined that Fire District #3'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).⁷

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.

Future Projections

Vulnerable populations within Jackson County, including children, elderly, those living with disabilities, and unhoused individuals, will be a greater risk to emerging infectious diseases in the future.

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

⁷ 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.

Flood

The steering committee determined that Fire District #3'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).

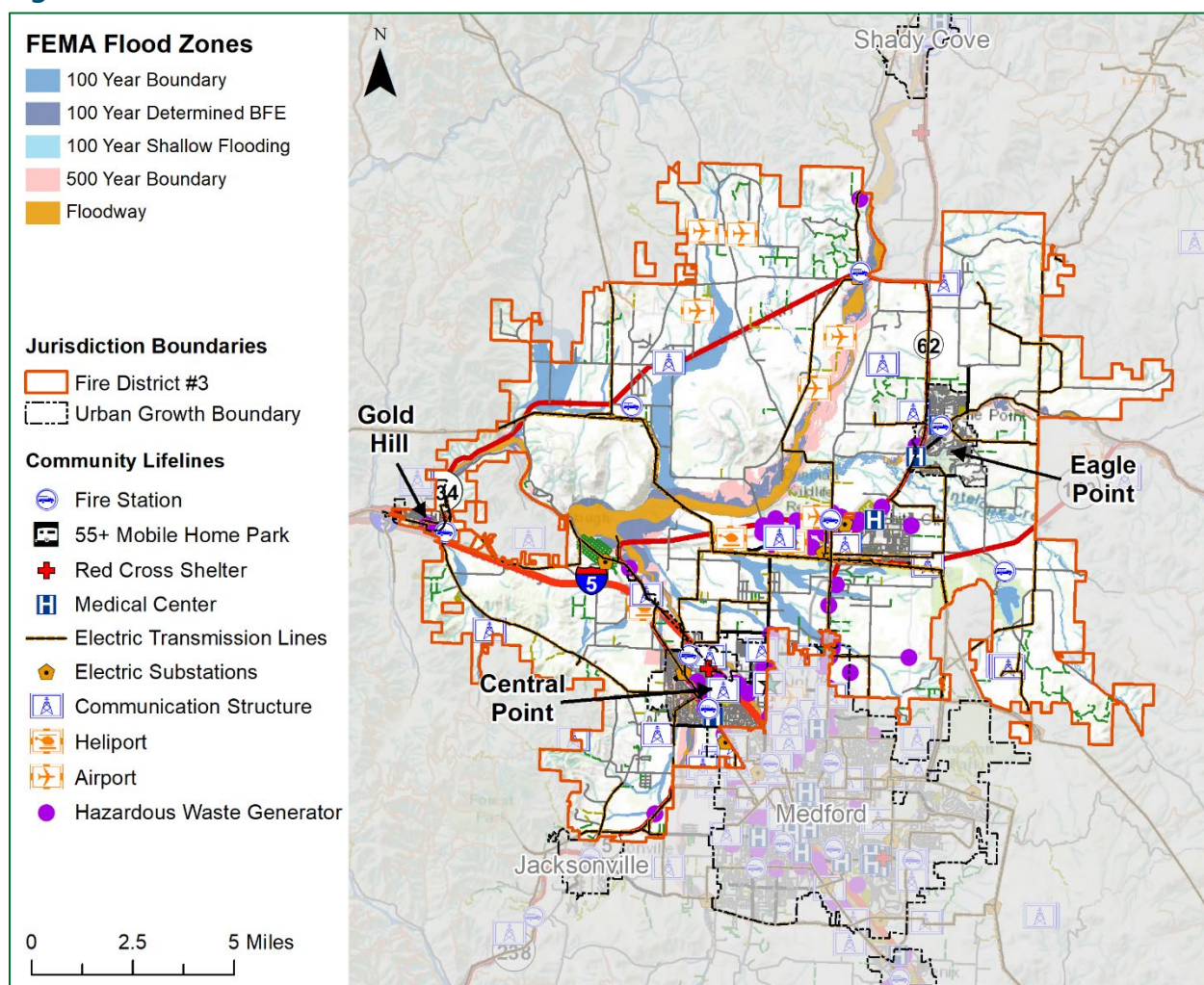
Volume I, Section 2 describes the characteristics of flood hazards, their history, and how they relate to future climate projections (see [OCCRI report](#)), as well as the location, extent, and probability of a potential event. Portions of Fire District #3 have mapped FEMA flood zones (Figure FD3-7). Other portions of Fire District #3 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 #3 are Rogue River, Bear Creek, Antelope Creek, Daisy, Griffin, and Mingus Creeks in Central Point and Little Butte Creek in Eagle Point. The impact of flooding in Gold Hill and unincorporated parts of the County (including White City) minimally impact the district. The Gold Hill Fire Station is within the 500-year chance flood zone (Table FD3-3 and Figure FD3-7). Significant flooding may occur from heavy rain on snow events or by dam failure of the Lost Creek, Fish Lake, Agate Lake, and/or Emigrant Lake dams.⁸ Both the Dodge Bridge and Gold Hill stations are within the inundation zone of Lake Creek dam and Eagle Point is within the inundation zone of Fish Lake dam.

Fire District #3 generally has low to 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.

⁸ Jackson County Fire District #3. [Standards of Cover](#) (2017).

Figure FD3-7 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 #3 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 FD3-3. 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 #3 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). The Conrad Control Station is within the 500-year chance flood zone while other Fire District #3 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.

Future Projections

According to the Oregon Climate Change Research Institute ([OCCRI report](#)) “Future Climate Projections, Jackson County,”⁹ winter flood risk at mid-elevations in Jackson County, where temperatures are near freezing during winter and precipitation is a mix of rain and snow, is projected to increase as winter temperatures increase. The temperature increase will lead to an increase in the percentage of precipitation falling as rain rather than snow. The projected increases in total precipitation, and in rain relative to snow, likely will increase flood magnitudes in the region. Vulnerable populations adjacent to floodways (including the unhoused, manufactured home communities, and campground occupants) will be more at risk as the winter flood risk increases.

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 #3 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 #3’s probability for landslide is **moderate** (which is lower than 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 (see [OCCRI report](#)), as well as the location, extent, and probability of a potential event within the region.

Landslide susceptibility exposure for Fire District #3 is shown in Figure FD3-8. Most of Fire District #3 demonstrates a low susceptibility to landslide exposure, with corridors of moderate

⁹ Oregon Climate Change Research Institute, *Future Climate Projections, Jackson County, Oregon*. February 2023.

and high susceptibility concentrated around higher elevations of the district. The chief concern for landslide is along rural transportation corridors and waterways.

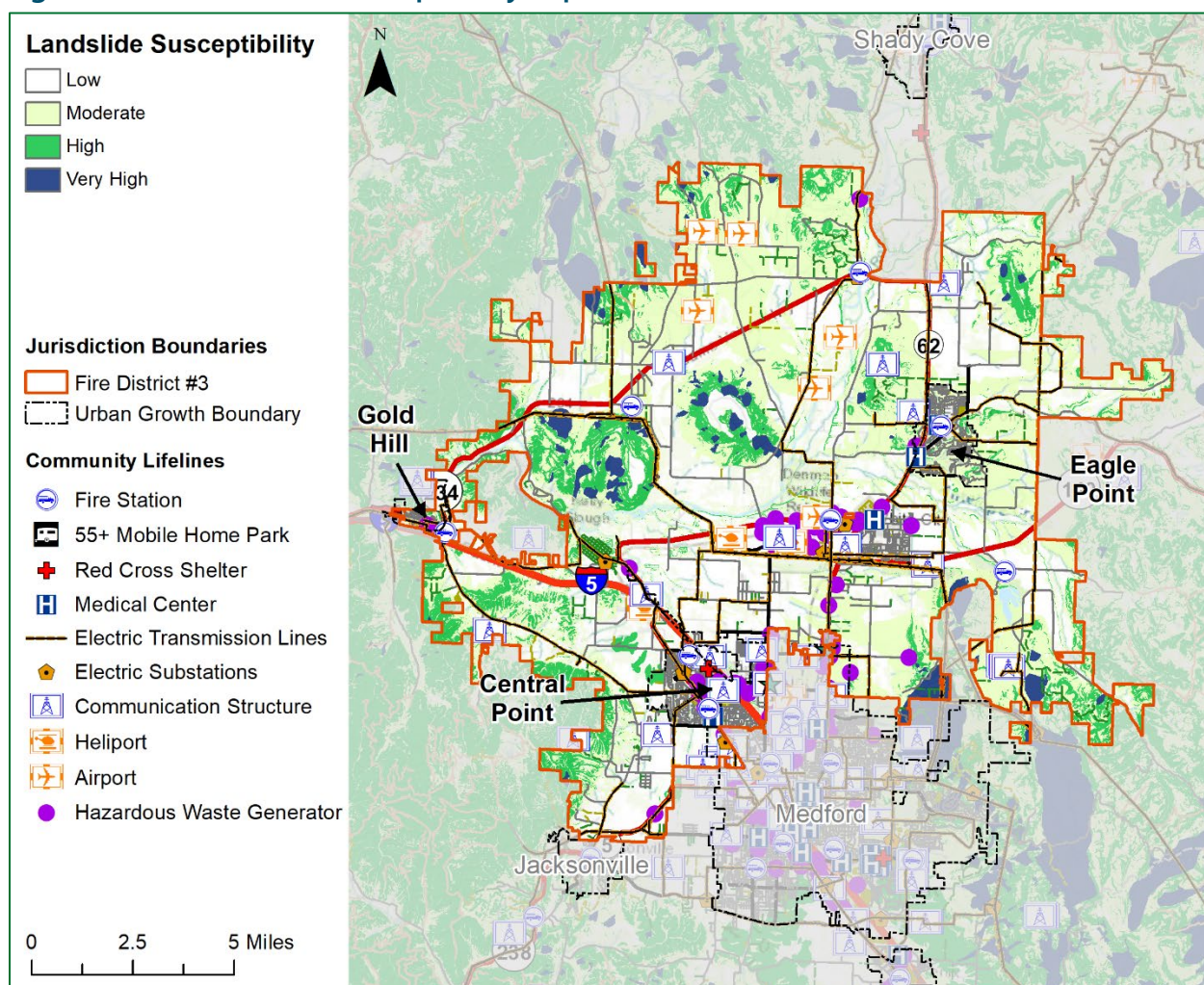
Vulnerability Assessment

Due to insufficient data and resources, Fire District #3 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 FD3-3. *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.*

Future Projections

Landslides are often triggered by rainfall when the soil becomes saturated. As a surrogate measure of landslide risk, the Oregon Climate Change Research Institute ([OCCRI report](#)) report presents a threshold based on recent precipitation (cumulative precipitation over the previous 3 days) and antecedent precipitation (cumulative precipitation on the 15 days prior to the previous 3 days). By the 2050s under the higher emissions scenario, the average number of days per year in Jackson County on which the landslide risk threshold is exceeded is projected to remain about the same, with an increase of 0.2 days. However, landslide risk depends on multiple factors, and this metric, which is based on precipitation, does not reflect all aspects of the hazard. Additional triggers, such as earthquakes, wildfires, or development, can increase risks of landslides. Future development along slopes or adjacent to riverbanks will be a greater risk of impact from this hazard.

Figure FD3-8 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 #3'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 (see [OCCRI report](#)), 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 #3 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.¹⁰

Extreme heat events can and have occurred in Fire District #3, 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.

Future Projections

According to the Oregon Climate Change Research Institute ([OCCRI report](#)) “Future Climate Projections, Jackson County,”¹¹ average temperature is expected to continue increasing during the twenty-first century if global emissions of greenhouse gases continue. The number, duration, and intensity of extreme heat events will increase as temperatures continue to warm. In Jackson County, the number of extremely hot days (days on which the temperature is 90°F or higher) and the temperature on the hottest day of the year are projected to increase by the 2020s and 2050s. The number of days per year with temperatures 90°F or higher is projected to increase by an average of 28 days (range 12–38 days) by the 2050s, relative to the 1971–2000 historical baselines. The temperature on the hottest day of the year is projected to increase by an average of about 7°F (range 3–8°F) by the 2050s. Higher temperatures and longer/more extreme heat events will have negative impacts upon vulnerable populations such as those over 65+, children, those living in older or temporary housing, and field workers.

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

Windstorm

The steering committee determined that Fire District #3’s probability for windstorm is **high** (which is the same as the County’s rating) and that their vulnerability to windstorm is **moderate** (which is the same as the County’s rating).

Volume I, Section 2 describes the characteristics of windstorm hazards, their history, and how they relate to future climate projections (see [OCCRI report](#)), 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 #3.

Volume I, Section 2 describes the impacts caused by windstorms, including power outages, downed trees, heavy precipitation, building damages, and storm-related debris. Additionally,

¹⁰ DLCD. *Oregon State Natural Hazard Mitigation Plan*. 2020.

¹¹ Oregon Climate Change Research Institute, *Future Climate Projections, Jackson County, Oregon*. February 2023.

transportation and economic disruptions result as well. Fire District #3 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 #3. Electrical power can be out anywhere from a few hours to several days. Outdoor signs have also suffered damage.

Future Projections

Limited research suggests little if any change in the frequency and intensity of windstorms in the Northwest as a result of climate change. Those impacted by windstorms at present, including older residential or commercial developments with above-ground utilities, poor insulation or older construction, heavy tree canopies, or poor storm drainage, will continue to be impacted by windstorms in the future.

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

Winter Storm (Snow/Ice)

The steering committee determined that Fire District #3'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 (see [OCCRI report](#)), as well as the location, extent, and probability of a 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 #3 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 #3 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.

Future Projections

According to the Oregon Climate Change Research Institute ([OCCRI report](#)) "Future Climate Projections, Jackson County,"¹² cold extremes will become less frequent and intense as the climate warms. In Jackson County, the number of cold days (maximum temperature 32°F or lower) per year is projected to decrease by an average of 3 days (range -2– -5 days) by the 2050s, relative to the 1971–2000 historical baselines, under the higher emissions scenario. The temperature on the coldest night of the year is projected to increase by an average of 6°F (range 3–9°F) by the 2050s. The intensity of extreme precipitation is expected to increase as the

¹² Oregon Climate Change Research Institute, *Future Climate Projections, Jackson County, Oregon*. February 2023.

atmosphere warms and holds more water vapor. In Jackson County, the number of days per year with at least 0.75 inches of precipitation is not projected to change substantially. However, by the 2050s, the amount of precipitation on the wettest day and wettest consecutive five days per year is projected to increase by an average of 15% (range -3–32%) and 11% (range -3–34%), respectively. If these precipitation events occur in the winter, heavier winter storms with larger impacts upon transportation routes, vulnerable populations, and economic activity can be expected.

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

Volcanic Event

The steering committee determined that Fire District #3'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 #3 as well. Fire District #3 is very unlikely to experience anything more than volcanic ash during a volcanic event.

Future Projections

Although the science of volcano predictions is improving, it remains challenging to predict a potential volcanic event. Ash fall, which will be the greatest impact, will impact the entire County. Impacts will be felt hardest by property managers (ranches, farmers, etc.) and by those relying upon clean surface water (for drinking water production and irrigation).

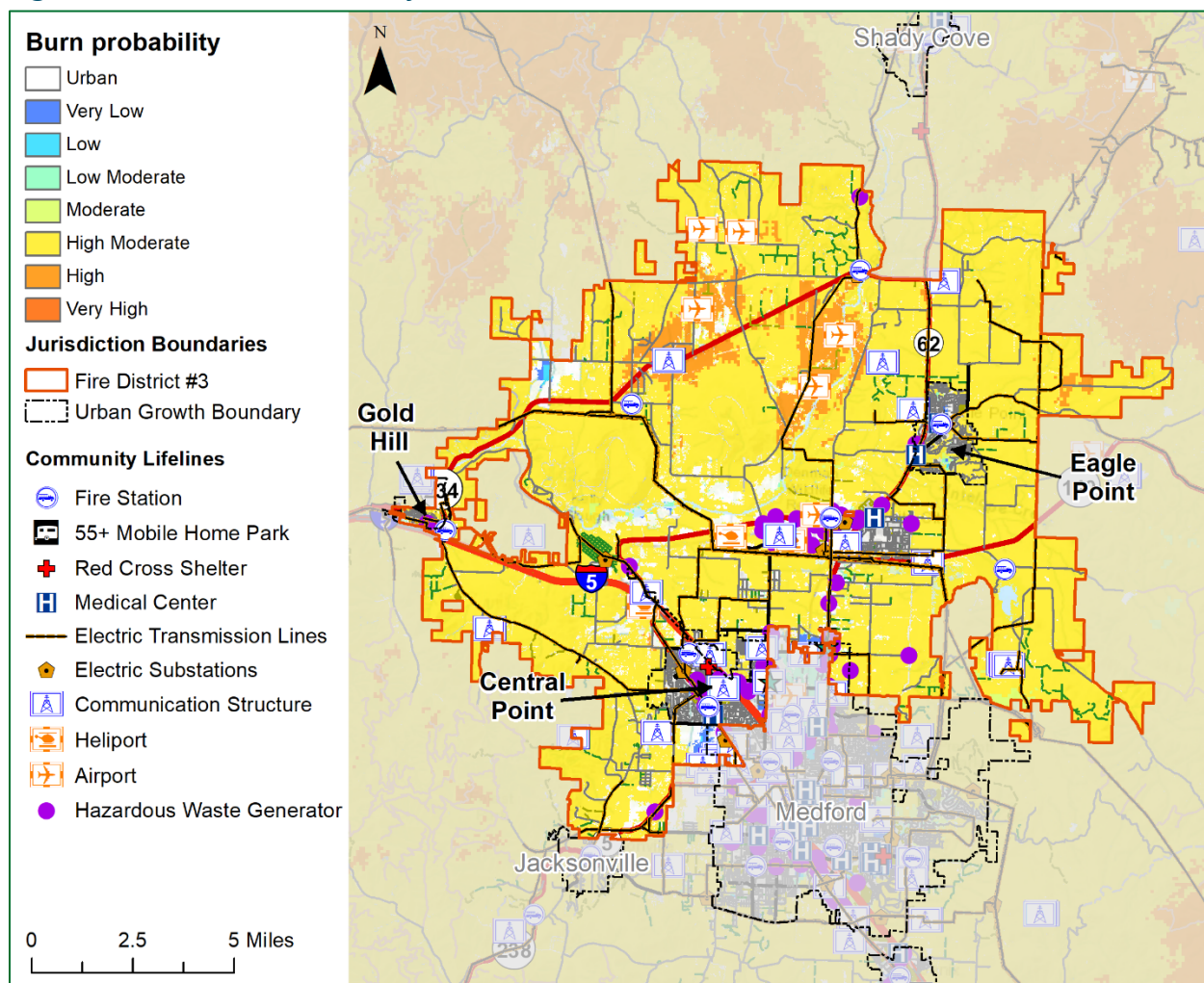
Please review Volume I, Section 2 for additional information on this hazard.

Wildfire

The steering committee determined that Fire District #3'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 (see [OCCRI report](#)), 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. Wildfires near Fire District #3 in recent times have included Table Rock Road (2023), Atlantic Avenue (2018), East Evans (1994), Blackwell (2010), and Upper Table Rock (1980). Figure FD3-9 shows burn probability in Fire District #3.

Figure FD3-9 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 #3 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 #3 is included in the RVIFP and will update Fire District #3'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 #3 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 #3 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 FD3-3. Note that even if a facility has exposure, *it does not mean there is a high risk (vulnerability)*. Seven fire stations are assigned a geographical Fire Management Zone (FMZ), which defines its initial response area (Figure FD3-10). The Table Rock station does not have an independent FMZ. The following provides a summary of major characteristics of each FMZ, see the [Standards of Cover \(2017\)](#) for more information:

Agate Lake FMZ: Primarily a rural residential district that includes a golf course and sanitary landfill. Mostly mountainous terrain. Predominate risks include single family residential fires, medical incidents, and wildfire. The Agate Lake fire station is staffed by volunteer personnel only.

Central Point FMZ: Includes the City of Central Point and surrounding rural area. This FMZ is the most developed in the district with the most population and developed property. It includes the largest number of maximum/worst, special, and infrastructure risk occupancies. The FMZ is served by two fire stations, Central Point and Scenic Drive, that each have full-time paid career engine companies.

Dodge Bridge FMZ: Primarily a rural residential district. There are six high-risk occupancies and one infrastructure occupancy in the FMZ. The Dodge Bridge fire station is staffed by volunteer personnel only.

Eagle Point FMZ: Includes the City of Eagle Point and surrounding rural area. The FMZ contains 24 maximum or high-risk occupancies and 18 special or infrastructure related occupancies. Wildfire risk is increased in areas of steep terrain with limited access. The Eagle Point fire station is staffed with a full-time paid engine company.

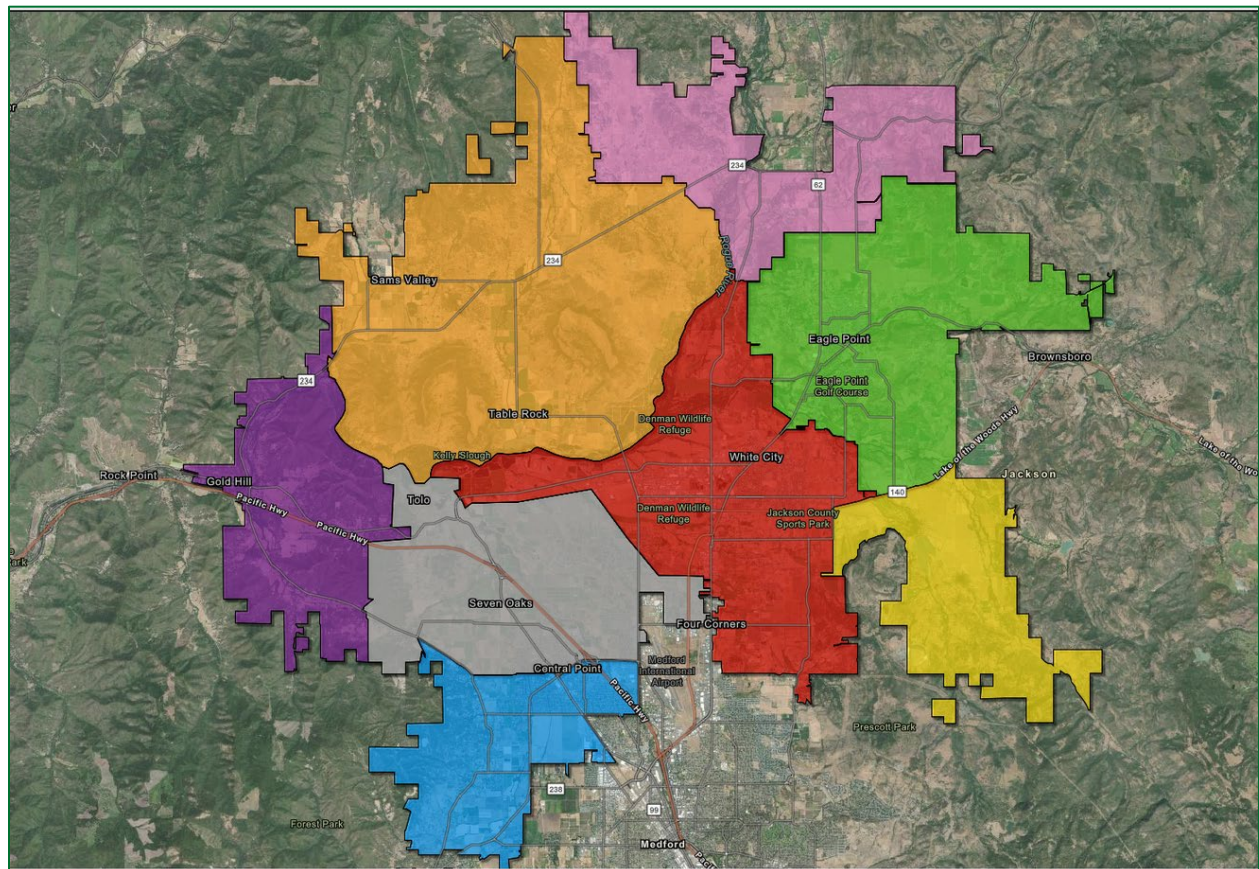
Gold Hill FMZ: Includes the City of Gold Hill and surrounding rural area. The FMZ contains 21 maximum or high-risk occupancies and ten occupancies identified as special or infrastructure risks. Much of this FMZ has high wildfire risk. The Gold Hill fire station is staffed by volunteer personnel only.

Sams Valley FMZ: This is the geographically largest FMZ and contains rural residential, agricultural, and forest land. The FMZ includes the Upper and Lower Table Rocks. It contains three high hazard occupancies, and four occupancies designated as special or infrastructure risks. About one-third of the FMZ has high wildfire risk. The Sams Valley fire station is staffed by volunteer personnel only.

White City FMZ: Includes the residential and industrial of unincorporated White City and surrounding rural areas. This FMZ has the highest number of high hazard industrial occupancies including the White City industrial park (155 high or maximum risk occupancies and 28 occupancies identified as special or infrastructure risks). The White City fire station is staffed

with a full-time paid engine company. For more information see:
<https://storymaps.arcgis.com/stories/134694e7ce124437b29e742ff0d76fa8>.

Figure FD3-10 Fire Management Zones



Source: Jackson County Fire District #3

Future Projections

According to the Oregon Climate Change Research Institute “Future Climate Projections, Jackson County,”¹³ wildfire frequency, intensity, and area burned are projected to continue increasing in the Northwest. Wildfire risk, expressed as the average number of days per year on which fire danger is very high, is projected to increase in Jackson County by 13 days (range -6– 29) by the 2050s, relative to the historical baseline (1971–2000), under the higher emissions scenario. Similarly, the average number of days per year on which vapor pressure deficit is extreme is projected to increase by 29 days (range 12–42) by the 2050s. Communities at risk to wildfire include those within the urban wildfire interface or along river or creek corridors, like Bear Creek, where fire can travel quickly. Communities will need to address growing wildfire risks if populations are not restricted from expanding further into higher risk areas.

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

¹³ Oregon Climate Change Research Institute, *Future Climate Projections, Jackson County, Oregon*. February 2023.

Attachment A:


Public Involvement Summary

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 #3 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 **October 18, 2023** and continued into the FEMA review process. The plan was also posted and announced on the County's website. There were no public comments provided. Additional opportunities for stakeholders and the public to be involved in the planning process are addressed in Volume II, Appendix B.

A diverse array of agencies and organizations were provided an opportunity to provide input to inform the plan's content through a variety of mechanisms including the opportunity for comment on the draft plan. The agencies and organizations represent local and regional agencies involved in hazard mitigation activities, those that have the authority to regulate development, neighboring communities, representatives of businesses, academia, and other private organizations, and representatives of nonprofit organizations, including community-based organizations, that work directly with and/or provide support to underserved communities and socially vulnerable populations. For more information on the engagement strategy see Volume II, Appendix B.

Website Posting



FIRE DISTRICT 3

Jackson County, OR

ORGANIZATION SERVICES & RESOURCES DOCUMENT CENTER JOIN OUR TEAM

[Home](#)

Public Comment Notice currently OPEN for 2023 Natural Hazard Mitigation Plan Update


POSTED ON: OCTOBER 18, 2023 - 7:50AM

--- PRESS RELEASE ---

Fire District 3 seeks additional public input on update to Natural Hazard Mitigation Plan

Fire District #3 is in the process of developing a Natural Hazard Mitigation Plan (NHMP). This work is being performed in cooperation with the University of Oregon's Institute for Policy Research and Engagement - Oregon Partnership for Disaster Resilience and the Oregon Department of Emergency Management utilizing funds obtained from the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Grant Program. With adoption of the plan, Fire District #3 will gain eligibility to apply for federal funding towards natural hazard mitigation projects. This local planning process includes a wide range of representatives from local governments, emergency management personnel, and outreach to members of the public in the form of an electronic survey.

Jackson County
Fire District #3 Addendum
to the Jackson County NHMP



- ▶ [READ THE FULL PRESS RELEASE HERE](#)
- ▶ [READ THE JACKSON COUNTY FIRE DISTRICT 3 ADDENDUM TO THE JACKSON COUNTY NHMP](#)
- ▶ [LINK TO JACKSON COUNTY NEWS POST](#)

Fire District #3 Steering Committee

Steering committee members possessed familiarity with the communities within Fire District #3 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 #3 steering committee, February 21, 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 #3.
- 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, Mike Hussey. Fire Chief
- John Patterson, Division Chief-Risk Reduction