Shady Cove Addendum
to the Jackson County NHMP

Photos courtesy of Oregon State Archives

Effective: February 12, 2024 through February 11, 2029

Prepared for
City of Shady Cove
P.O. Box 1210
22451 Highway 62
Shady Cove, OR 97539

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

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

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 applicable[1] 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).

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 L SHAW
Digitally signed by WENDY L SHAW
Date: 2024.05.16 06:17:28 -08'00'

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

Enclosures

cc: Stephen Richardson, Oregon Department of Emergency Management

JF:JG:ws

RESOLUTION # 24-01

A Resolution of the Mayor and City Council Adopting the City of Shady Cove Representation in the Updates to the Jackson County Multi-Jurisdictional Natural Hazards Mitigation Plan

Whereas, the City of Shady Cove 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 is required as a condition of future funding for mitigation projects under multiple FEMA pre- and post-disaster mitigation grant programs; and

Whereas, the City of Shady Cove 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 City of Shady Cove has identified natural hazard risks and prioritized a number of proposed actions and programs needed to mitigate the vulnerabilities of the City of Shady Cove 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, City of Shady Cove adopts the NHMP and directs the City Administrator to develop, approve, and implement the mitigation strategies and any administrative changes to the NHMP.

Now, therefore, be it resolved, that the City of Shady Cove adopts *the Jackson County Multi-Jurisdictional Natural Hazards Mitigation Plan* as an official plan; and

Be it further resolved, that the City of Shady Cove 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.*

Adopted this 7th day of MARCH, 2024

Jon Ball, Mayor

Thomas J. Corrigan, City Administrator

Introduction

Purpose

This is an update of the Shady Cove 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).

Updates to Shady Cove's addendum are further discussed throughout the NHMP and within Volume II, Appendix B, which provides an overview of alterations to the document that took place during the update process.

Shady Cove adopted their addendum to the Jackson County Multi-jurisdictional NHMP on March 7, 2024. FEMA Region X approved the Jackson County NHMP on February 12, 2024 and the City'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 city 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 the city will remain eligible for non-disaster and disaster mitigation project grants. Shady Cove was included as an addendum in the 2012 and 2018 Jackson County NHMP processes.

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 Shady Cove to update their NHMP. This project is funded through the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Grant Program. Members of the Shady Cove NHMP steering committee also participated in the County NHMP update process (Volume II, Appendix B).

By updating the NHMP, locally adopting it, and having it approved by FEMA, Shady Cove maintains eligibility for FEMA Hazard Mitigation grant program funds.

The Jackson County NHMP and Shady Cove addendum are the result of a collaborative effort between citizens, 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 Shady Cove City Administrator served as the designated convener of the NHMP update and the Public Works Director 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 City of Shady Cove steering committee met formally and informally, to discuss updates to their addendum (Volume II, Appendix B). The steering committee reviewed and revised the City's addendum, with particular focus on the NHMP's risk assessment and mitigation strategy (action items).

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

The Shady Cove Steering Committee was comprised of the following representatives:

- Convener, Tom Corrigan, City Administrator
- Travis Crume, Chief, Jackson County Fire District #4
- Rowan Fairfield, Planner (RVCOG)
- Ed Mayer, Emergency Management Consultant
- Spencer McMahan, Public Works
- Kathy Nuckles, Council President

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 City Council will be responsible for adopting the Shady Cove 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 City addendum is part of the County's multi-jurisdictional NHMP, the City will look for opportunities to partner with the County. The City's steering committee will convene after re-adoption of the Shady Cove NHMP addendum on an annual schedule. The County is meeting on a semi-annual basis and will provide opportunities for the cities to report on NHMP implementation and maintenance during their meetings. The City Administrator will serve as the convener and 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.

The City 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 the City's existing plans and policies. Where possible, Shady Cove 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.

Shady Cove's acknowledged comprehensive plan is the City of Shady Cove Comprehensive Plan administered by the Shady Cove Planning Commission. The City implements the plan through the Community Development Code.

Shady Cove currently has the following plans that relate to natural hazard mitigation. For a complete list visit the City's **website**:

- Comprehensive Plan (2016)
- Municipal Code (Flood Ordinance updated in 2017, Riparian Ordinance, 2016)
- Emergency Operations Plan (2012)
- Stormwater Master Plan
- Building Codes and Standards: Oregon Structural Specialty Code (Commercial) and Oregon Residential Specialty Code.

Capability Assessment

The Capability Assessment identifies and describes the ability of Shady Cove 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 codes that account for best practices in structural hardening, and codifying land use regulations and zoning designations that prescribe mitigation into development requirements. The extent to which a municipality or multi-jurisdictional effort leverages these approaches is an indicator of that community's capabilities.

Comprehensive Plan

Oregon's Statewide Planning Goal 7 requires comprehensive planning within every jurisdiction that is designed to reduce risks to people and property from natural hazards. Shady Cove addresses Statewide Planning Goal 7 Natural Hazards as part of their Comprehensive Plan.

Updated 2016, Shady Oak Comprehensive Plan Section D Natural Resources and Hazards adopts goals to protect life and property from stream flooding and wildfire, acknowledging additional hazards from stream bank erosion, high groundwater and ponding, and slope erosion, and to a lesser extent, earthquakes. The revised Comprehensive Plan element includes references to the Jackson County NHMP, the Community Wildfire Protection Plan, and the Healthy Forest Restoration Act.

Planned updates to the jurisdiction's Goal 7 element or its broader comprehensive plan will reflect the data and findings within this NHMP and integrate analyses of future climate and natural hazard impacts into the community's long-range plans.

Land Use Regulations

Existing land use policies that define zoning and address hazardous conditions provide another source of mitigation capability.

In 2008 Shady Cove adopted Resolution 08-17 affirming its intention to fully comply with National Flood Insurance Program (NFIP) requirements. The City has adopted, and revised as required, its floodplain regulations that are administered by the City Engineer or City Planner. The most recent FIRM maps for the Shady Cove area were issued January 19, 2018. Per the Shady Cove Comprehensive Plan, all development within the floodplain is subject to review by FEMA standards and award of an elevation certificate. Their flood prevention code section is based on the Oregon Model Flood Hazard Prevention code, which includes provisions addressing substantial improvement/substantial damage.

Shady Cove adopted Ordinance 279 Riparian Protection in 2016. This code establishes a Riparian Conservation corridor with the goals of protecting and restoring water quality through the

control of erosion and sedimentation, through flood management and through thermal regulation (shading).

The city maintains planning staff that can help with questions on zoning, allowed uses, setbacks, development in floodplain and riparian areas, etc., but contracts for all other planning services (planning, building and floodplain management) with the Rogue Valley Council of Governments (RVCG).

Structural Building Codes
The Oregon Legislature recently adopted updated building codes for both residential (2023 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. Shady Cove contracts with Jackson County Building Department to administer the latest versions of the Oregon Structural and Specialty Codes. As a result, both new residential and commercial structures will be required to build 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.

Public Works
The City of Shady Cove Public Works Department maintains Aunt Caroline's Park, City Streets, and a variety of other services within the City. Jackson County Public Works is contracted by the City to do heavier work such as paving of streets, ditch maintenance, and crack sealing. If flooding occurs in the city, the City will work with property owners to determine the best course of action.

City Administration
The City Council of Shady Cove has the responsibility of developing and adopting the annual city budget. Integrating hazard mitigation goals and projects into the annual budget is key to implementing the plan. The City Council tries to broadly address resilience planning needs while it determines city and 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 fund capacity.

Policies and Programs

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

City of Shady Cove Emergency Management Plan (2020)
This all-hazard plan describes how the City will organize and respond to emergencies and disasters in the community. It includes an evacuation plan and wildfire responsibility chart to assist property owners in establishing fire-defensive space around their individual properties and the community at large. This plan is maintained by the City's Emergency Management Commission.

Community Wildfire Protection Plan
The Jackson County Community Wildfire Protection Plan (CWPP) will be incorporated into this Plan as a functioning annex. The NHMP will also be integrated into the City's Capital Improvement Plan, to be adopted by March, 2024.

National Flood Insurance Program
The City participates in the National Flood Insurance Program. The first Flood Insurance Rate Maps were developed for the City in 1980. The contract planner at the Rogue Valley Council of Governments is responsible for administering the day-to-day activities of the city's floodplain program. They are assisted by the City Engineer and by the City Administrator.

Specifically, the floodplain manager:

- maintains and administers Ashland's floodplain regulations;
- reviews and issues floodplain development permits;
- maintains elevation certificates for all new and substantially improved structures (and maintains an extensive database of historic elevation certificates);
- ensures that encroachments do not occur within the regulated floodway;
- implements measures to ensure that new and substantially improved structures are protected from flood losses;
- maintains floodplain studies and maps and makes this information available to the public;
- maintains a flood information website with digital flood insurance rate map (DFIRM) data;
- conducts site visits to assess conditions and provide technical assistance to the public;
- maintains a library of historical flood related information;
- informs the public of flood insurance requirements; and
- conducts outreach and training about flood hazards and development within the floodplain.

Jackson County Domestic and Public Well Assistance Program
This program offers up to $7500 per person or owner who faced challenges with domestic and public wells in Jackson County through the severe drought.

Shady Cove Public Forums
Shady Cove Public Forums have been held monthly since March 2019. These town-hall style meetings inform the public relative to floodplain hazards, potential dam breaches, wildfire preparedness, emergency preparedness, Neighborhood Watch programs, water conservations, etc.

Personnel

The following Shady Cove personnel have assignments related to natural hazard mitigation planning and implementation:

Emergency Management: Jackson County Emergency Management, City Administrator

Public Information Officer: City Administrator

Floodplain Manager: Rogue Valley Council of Governments

Grant writing (for Public Works or emergency management): Rogue Valley Council of Governments

Capital improvement planning: City Administrator

Capital improvement execution: City Administrator

Emergency Response: JCFD 4

Shady Cove does not have any employees solely designated to Emergency Management or Mitigation. These personnel integrate hazards 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 workloads.

Capital Projects

Shady Cove has implemented recommendations from the last NHMP into its capital improvement projects over the last 5 years, including:

- New stormwater infrastructure around school and along Cleveland Street to increase storm drainage capacity and mitigate neighborhood flooding (2020)
- Indian Creek Bank Restoration Project (with Rogue Valley Watershed Council) (2019)

Capital Resources

Shady Cove maintains several capital resources that have important roles to play in the implementation of the natural hazard mitigation plan, including critical facilities with power generators for use during emergency blackouts (City Hall), and critical facilities with fueling storage capabilities for city-owned vehicles (Public Works facility).

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
Shady Cove staff are assigned hazard mitigation responsibilities as a (small) part of their larger job responsibilities. Limited capacity reduces the breadth of the programming the community can undertake in any year. The city 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

Shady Cove operates on a limited budget with a small staff. This leaves few opportunities for using local financial resources to implement hazard mitigation work. They lean heavily upon state and federal grant funds as the primary means for securing mitigation funding. Hazard mitigation grants such as HMGP and BRIC require 10-25% local funding match, as well as extra staff capacity and expertise to navigate the application process and manage the funding.

Leveraging Partnerships with Public and Nonprofit Entities
Regional planning displayed in Community Wildfire Protection Planning process demonstrates the City'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*.

The City's mitigation strategy (action items) was first developed during the 2012 NHMP planning process. During this process, the steering committee assessed the City's risk, identified potential issues, and developed a mitigation strategy (action items).

During the 2017 and 2023 updates, the City re-evaluated and updated their mitigation strategy (action items). During these processes, action items were updated, noting what accomplishments had been made and whether the actions were still relevant, and new action items were defined.

Mitigation Successes

The community of Shady Cove 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[1].

FEMA Funded Mitigation Successes

- 2023: DR4562-42 – Shady Cove Wildfire Mitigation Project (Rogue Basin Partnership) ($1,118,000) - PENDING

Seismic Rehabilitation Grant Program Mitigation Successes

- 2018: Shady Cove Fire Station (Jackson County Fire District 4) ($166,556)

Action Items

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

[1] *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 SA-1 Action Items

Action Item #	Mitigation Actions	Potential Funding Resources	Lead	Partners	Timeline	Cost
Multi-Hazard Mitigation Strategies						
1.1	**Incorporate hazard-resilient development design and siting of infrastructure into development code, ordinances, and updated Stormwater Master Plan.**	**Local Funding Resources, DLCD Technical Assistance Grant**	**City Administration**	**City Planning, City Building**	**O**	**L**
1.2	Integrate the Mitigation Plan findings into planning and regulatory documents and programs including the Comprehensive Plan (particularly Goal 7).	Local Funding Resources, DLCD Technical Assistance Grant	City Planning	RVCOG, DLCD, FEMA	M	L
1.3	Enhance hazard resistant construction methods (wind, winter storm, landslide, etc.) where possible to reduce damage to utilities and critical facilities. In part, this may be accomplished by encouraging electric utility providers to convert existing overhead lines to underground lines.	Local Funding Resources	City Planning, Public Works	Utility Partners	O	L
Air Quality Mitigation Strategies						
2.1	Sustain public outreach and education program around air quality index.	Local Funding Resources	City Administration	Jackson County Health & Human Services, OHA, Media	O	L
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.					

Action Item #	Mitigation Actions	Potential Funding Resources	Lead	Partners	Timeline	Cost
Earthquake Mitigation Strategies						
4.1	Implement structural and non-structural retrofits to City Hall and other critical facilities.	Local Funding Resources, FEMA (HMA), SRGP	City Administration	Building Officials, Planning, Public Works	L	H
Emerging Infectious Disease Mitigation Strategies						
5.0	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.					
Flood Mitigation Strategies						
6.1	**Ensure continued compliance in the National Flood Insurance Program (NFIP) through enforcement of local floodplain management ordinances.**	**Local Funding Resources, DLCD Technical Assistance Grant**	**City Floodplain Management**	**City Planning, FEMA, DLCD**	**L**	**L**
6.2	Conduct public outreach through written and online communications for target audiences on National Flood Insurance Program, mitigation activities, and potential assistance from FEMAs Flood Mitigation Assistance and Hazard Mitigation Grant Programs. Include outreach regarding strapping to mobile homeowners.	Local Funding Resources	Floodplain Management	City Planning, City Emergency Management, Upper Rogue Watershed Council, DLCD, FEMA, OEM	O	L
6.3	Encourage private property owners to restore natural systems within the floodplain, and to manage riparian areas and wetlands for flood abatement.	Local Funding Resources, DLCD, OEM, FEMA, OPRD (Local Government Grant Program)	City Planning	Planning Commission, Floodplain Management, FEMA, County Emergency Management, Upper Rogue Watershed, DEQ, ODFW, DLCD, RVCOG, Rogue Fly Fishers, County Parks	O	L

Action Item #	Mitigation Actions	Potential Funding Resources	Lead	Partners	Timeline	Cost
6.4	Protect wastewater lift stations and parks in floodplains. Include these priorities in the updated Stormwater Master Plan.	Local Funding Resources, DLCD, FEMA, ASFPM, DEQ	City Planning	City Public Works, City Floodplain Management, Rogue Valley Sewer Services, Upper Rogue Watershed Council, RVCOG	L	M
6.5	Identify current capabilities and research options to secure an early warning system (EWS) for dam failure or flood. Continue to improve emergency communications and conduct outreach with the public.	Local Funding Resources, DLCD, FEMA, ASFPM, DEQ	City Emergency Management	County Emergency Management, OEM, DLCD, USACE, Silver Jackets	M	L
6.6	Create a dam failure evacuation plan for the City. Coordinate with Jackson County Emergency Management and the US Army Corps of Engineers to ensure that current inundation data is used during risk analysis and encourage collaboration and information sharing.	Local Funding Resources, PDM, FMA, HMGP, PA, Silver Jackets	City Emergency Management	County Emergency Management, USACE, Silver Jackets	S	L
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						
8.1	**Continue to ensure emergency power for critical facilities, including the Fire Department.**	**Local Funding Resources, FEMA (HMA)**	**City Emergency Management**	**City Hazard Mitigation Committee, Granting Organization, Upper Rogue Community Center**	**O**	**M**

Action Item #	Mitigation Actions	Potential Funding Resources	Lead	Partners	Timeline	Cost
8.2	Develop and sustain tree-trimming and removal programs to keeps trees from threatening lives, property, and public infrastructure during severe weather events.	Local Funding Resources, Utility Partners, HMA	City Emergency Management	City Public Works, Utility Partners, Local Arborists and Tree Services	S	L
8.3	Continue to support Community Center cooling centers during extreme heat events and publicize information to the public.	Local Funding Resources	City Administration	Local Organizations, Media	O	L
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	**Conduct public outreach for individual property owners living in the Wildland/Urban Interface (WUI), after mapping project.**	**Local Funding Resources, Fire and Rescue Districts, ODF, Firewise**	**City Emergency Management**	**City Hazard Mitigation Committee, JCFD#4, Firewise Project Coordinator, Media, FEMA, OEM, DLCD, OSFM, ODF, BLM, USFS, Insurance and Real Estate Companies, Jackson County Sheriff's Department**	**O**	**L**
10.2	**Partner with Jackson County (and Rogue Reimagined) on implementation of the Rogue Valley Integrated Community Wildfire Protection Plan and outreach projects.**	**Fire and Rescue Districts, OEM, ODF**	**City Planning**	**Public Works, Administration, Jackson County, JCFD#4, BLM - Medford District, ODF, OSFM**	**O**	**M**

Action Item #	Mitigation Actions	Potential Funding Resources	Lead	Partners	Timeline	Cost
10.3	Reduce wildfire fuels and continue to source equipment for fuel reduction. Continue to promote and enhance "Firewise Community" Program.	Local Funding Resources, ODF, Firewise, OSFM Grant	City Emergency Management	City Hazard Mitigation Committee, JCFD#4, Firewise, ODF, BLM, USFS, OSFM	O	H
10.4	Distribute public outreach materials and in-person signage informing residents about wildfire hazards and mitigation actions they can take to protect their property.	Local Funding Resources, ODF, Firewise	City Emergency Management	City Hazard Mitigation Committee, JCFD #4, Firewise, OSFM, ODF, BLM, USFS	S	L
10.5	Increase communication and coordination with Jackson County Fire District #4 to better prepare for hazard events. Establish regular meetings or coordination intervals and share concerns and experiences to provide better response to local needs.	Local Funding Resources	City Administration	Jackson County Fire District #4	S	L

Source: Shady Cove NHMP Steering Committee, updated 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

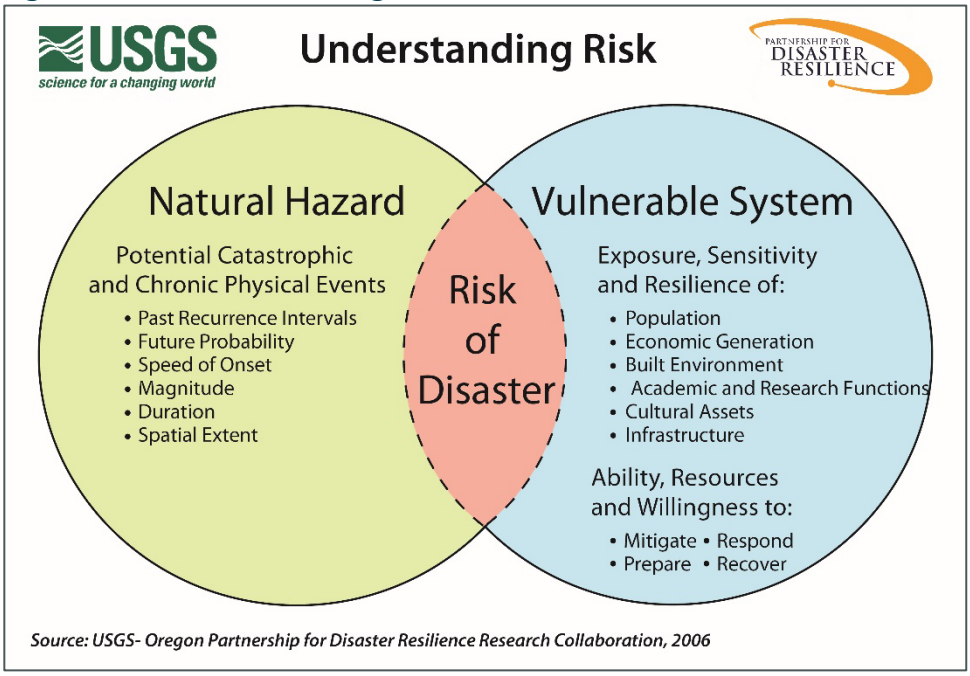
This section of the NHMP addendum addresses 44 CFR 201.6(b)(2) - Risk Assessment. In addition, this chapter can serve as the factual basis for addressing Oregon Statewide Planning Goal 7 – Areas Subject to Natural Hazards.

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

Figure SA-1 Understanding Risk



Source: USGS- Oregon Partnership for Disaster Resilience Research Collaboration, 2006

Hazard Analysis

The Shady Cove steering committee developed their hazard vulnerability assessment (HVA), using their previous HVA and 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 Shady Cove, which are discussed throughout this addendum.

Table *SA-2* shows the HVA matrix for Shady Cove listing each hazard 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.

One catastrophic hazards (Cascadia Subduction Zone earthquake) and four chronic hazards (wildfire, emerging infectious disease, flood, and winter storm) rank as the top hazard threats to the City (Top Tier). Extreme heat, air quality, windstorm, and landslide comprise the next highest ranked hazards (Middle Tier), while drought, crustal earthquake, and volcanic events comprise the lowest ranked hazards (Bottom Tier).

Table SA-2 Hazard Analysis Matrix

Hazard	History	Vulnerability	Maximum Threat	Probability	Total Threat Score	Hazard Rank	Hazard Tiers
Wildfire	20	50	100	56	226	#1	*Top Tier*
Emerging Infectious Disease	16	40	100	49	205	#2	
Earthquake - Cascadia	2	50	100	49	201	#3	
Flood	20	40	70	70	200	#4	
Winter Storm	20	50	60	70	200	#4	
Extreme Heat	20	25	70	70	185	#6	*Middle Tier*
Air Quality	18	40	60	63	181	#7	
Windstorm	20	20	50	70	160	#8	
Landslide	2	40	60	56	158	#9	
Drought	16	20	50	63	149	#10	*Bottom Tier*
Earthquake - Crustal	2	25	50	21	98	#11	
Volcanic Event	2	5	50	7	64	#12	

Source: Shady Cove NHMP Steering Committee, 2023.

Community Characteristics

Table SA-3 and the following section provides information on City specific demographics and characteristics. For additional information on the characteristics of Shady Cove, in terms of geography, environment, population, demographics, employment and economics, as well as housing and transportation see Volume IIII, Appendix C. Many of these community characteristics can affect how natural hazards impact communities and how communities choose to plan for natural hazard mitigation. Considering the City specific assets during the planning process can assist in identifying appropriate measures for natural hazard mitigation.

Shady Cove is in Jackson County in southwestern Oregon. It is in the northern region of the county. Oregon Route 62 is the main road through the community, leading north 2 miles to

Trail and south 21 miles to the City of Medford, the Jackson County seat. The western boundary of Crater Lake National Park is 43 miles to the northeast via Route 62. The City and most of Jackson County are within the Rogue watershed.

Shady Cove experiences a relatively mild climate with four distinct seasons that comes from its position on the west coast of North America and within the mountains of the region. As a result of its location, Shady Cove has a climate somewhat intermediate to central California and northern Oregon. The city averages about 31 inches of rain.[2] Most of the rain (28.6 inches) falls between October and May.

Population and Income

The City was incorporated in 1973 and has an area today of 2.01 square miles (5.21 km^2), of which 1.91 square miles (4.95 km^2) is land and 0.10 square miles (0.26 km^2) is water. Between 2016 and 2021 the City grew by 55 people (2%), from 3,040 to 3,095. During this same period, median household incomes in the area increased by 60%.

According to the State's official coordinated population forecast, between 2021 and 2040 the City's population is forecast to increase by 10% to 3,398. Most of the population is White/Caucasian (93%) and about 6% of the population is Hispanic or Latino. The poverty rate is 11% (8% for Seniors), only 2% do not have health insurance, and 56% of renters pay more than 30% of their household income on rent (11% for owners). The city has an educated population with 92% of residents 25 years, and older holding a high school degree, 19% have a bachelor's degree or higher. Approximately 25% of the population lives with a disability, and 17% are either below 18 (25%) or over 65 (31%) years of age. About 19% of the population are 65 or older and living alone and 6% are single parents.

Transportation, Housing, and Infrastructure

In the City of Shady Cove, transportation has played a major role in shaping the community. Shady Cove's commercial areas developed along primary routes and residential development followed nearby. Today, mobility plays an important role in Shady Cove and the daily experience of its residents and businesses as they move from point A to point B. The City is primarily serviced by State Route 62, and is divided by the Rogue River into two halves.

By far, motor vehicles represent the dominant mode of travel through and within Shady Cove. Sixty percent (60%) of renters and 79% of owners have two or more vehicles, although 26% of renters do not have access to a car.

Development in the City includes 1.91 square miles of land. The City of Shady Cove includes a diversity of land uses but is zoned primarily residential. The city's Comprehensive Plan identifies land use needs within the city and its urban growth boundary (see Zoning Map). Since the previous NHMP (2018) the city has not annexed any land or had major development occur in the city. New development has complied with the standards of the Oregon Building Code and the city's development code including their floodplain ordinance.

[2] *NOAA. National Centers for Environmental Information. Summary of Monthly Normals (1991-2010). Station: SHADY COVE 0.2 S, OR US US1ORJC0018. https://www.ncei.noaa.gov/access/services/data/v1?dataset=normals-monthly-1991-2020&startDate=0001-01-01&endDate=9996-12-31&stations=US1ORJC0018&format=pdf*

Sixty-seven percent (67%) of housing units are single-family and 21% are mobile homes. Less than one quarter of homes (19%) were built before 1970. Most (65%) were built after 1990. Newer homes are more likely to be built to current seismic, flood, wildfire, and other hazard standards. Sixty-three percent (63%) of housing units are owner occupied and 26% are renter occupied, while 5% are seasonal homes, and 6% are vacant.

The City of Shady Cove Public Works Department maintains Aunt Caroline's Park, City Streets, and a variety of other services within the City. Jackson County Public Works is contracted by the City to do heavier work such as paving of streets, ditch maintenance, and crack sealing. Not all streets are City streets. There are a variety of "shared, private drives" in Shady Cove.

Economy

A diverse range of businesses have chosen to locate in Shady Cove. Shady Cove's location on the Rogue River and its proximity to Crater Lake National Park give it market access that is more favorable than usual for a rural town.

About 42% of the resident population 16 and over is in the labor force (1,277 people) and are employed in a variety of occupations including construction, extraction, and maintenance (20%), sales and related (17%), transportation and material moving (17%), professional and related (16%), and management, business, and financial (9%) occupations. Most workers drive alone to work (64%), however, 20% work at home while 10% carpooled and 4% either walk or use a bicycle.

Most workers residing in the city (93%, 757 people) travel outside of the city for work primarily to Medford and surrounding areas.[3] A significant population of people travel to the city for work, (84% of the workforce, 308 people) primarily from Medford, Eagle Point, and surrounding areas.[4]

[3] *U.S. Census Bureau. LEHD Origin-Destination Employment Statistics (2002-2020). Longitudinal-Employer Household Dynamics Program, accessed on August 17, 2023 at https://onthemap.ces.census.gov.*

[4] *Ibid.*

Table SA-3 Community Characteristics

Population Characteristics		
2016 Population Estimate	3,040	
2021 Population Estimate	3,095	
2040 Population Forecast*	3,398	
Race		
American Indian and Alaska Native		1%
Asian		0%
Black/ African American		< 1%
Native Hawaiian and Other Pacific Islander		0%
White		93%
Some Other Race		< 1%
Two or More Races		5%
Hispanic or Latino/a (of any race)		6%
Limited or No English Spoken	0	0%
Vulnerable Age Groups		
Less than 5 Years	113	4%
Less than 18 Years	385	13%
65 Years and Older	926	30%
85 Years and Older	31	1%
Age Dependency Ratio		74.4
Disability Status (Percent age cohort)		
Total Disabled Population	754	25%
Children (Under 18)	171	44%
Working Age (18 to 64)	239	14%
Seniors (65 and older)	344	37%

Household Characteristics		
Housing Units		
Single-Family (includes duplexes)	993	67%
Multi-Family	173	12%
Mobile Homes (includes RV, Van, etc.)	316	21%
Household Type		
Family Household	936	71%
Married couple (w/ children)	142	11%
Single (w/ children)	73	6%
Living Alone 65+	256	19%
Year Structure Built		
Pre-1970	278	19%
1970-1989	237	16%
1990-2009	795	65%
2010 or later	172	12%
Housing Tenure and Vacancy		
Owner-occupied	936	63%
Renter-occupied	381	26%
Seasonal	81	5%
Vacant	84	6%
Vehicles Available (Occupied Units)		
No Vehicle (owner occupied)	29	3%
Two+ vehicles (owner occupied)	741	79%
No Vehicle (renter occupied)	98	26%
Two+ vehicles (renter occupied)	227	60%

Income Characteristics		
Households by Income Category		
Less than $15,000	106	8%
$15,000-$29,999	201	15%
$30,000-$44,999	247	19%
$45,000-$59,999	130	10%
$60,000-$74,999	151	11%
$75,000-$99,999	65	5%
$100,000-$199,999	370	28%
$200,000 or more	47	4%
Median Household Income		$56,114
Gini Index of Income Inequality		0.43
Poverty Rates (Percent age cohort)		
Total Population	333	11%
Children (Under 18)	144	37%
Working Age (18 to 64)	111	6%
Seniors (65 and older)	78	8%
Housing Cost Burden (Cost > 30% of household income)		
Owners with a Mortgage	84	9%
Owners without a Mortgage	15	2%
Renters	213	56%

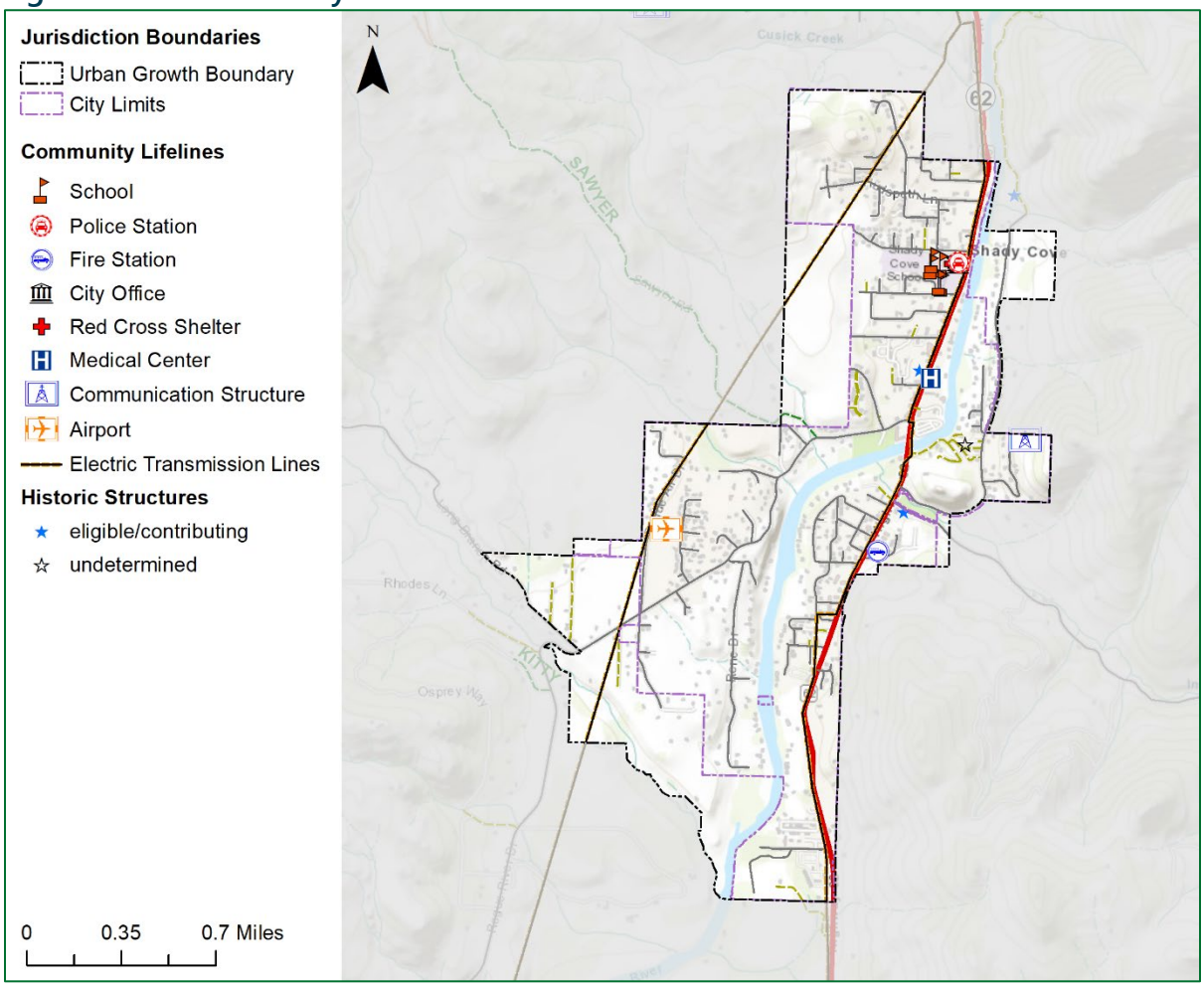
Employment Characteristics		
Labor Force (Population 16+)		
In labor Force (% Total Population)	1,277	42%
Unemployed (% Labor Force)	68	5%
Occupation (Top 5) (Employed 16+)		
Construction, Extraction, & Maint.	236	20%
Sales & Related	207	17%
Transportation and Material Moving	200	17%
Professional & Related	192	16%
Management, Business, & Financial	113	9%
Health Insurance		
No Health Insurance	55	2%
Public Health Insurance	1,870	61%
Private Health Insurance	1,986	65%
Transportation to Work (Workers 16+)		
Drove Alone	708	64%
Carpooled	113	10%
Public Transit	18	2%
Motorcycle	0	0%
Bicycle/Walk	47	4%
Work at Home	219	20%

Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates; Portland State University, Population Research Center, "Annual Population Estimates, Table 4", 2016 and 2021; and"Population Forecasts, Summary Tab", 2022.
Note 1: * = Population forecast within UGB
Note 2: ACS 5-year estimates represent average characteristics from 2017-2021. Sampling error may result in low reliability of data. This information or data is provided with the understanding that conclusions drawn from such information are the responsibility of the user. Refer to the original source documentation to better understand the data sources, results, methodologies and limitations of each dataset presented.

Community Assets

This section outlines the resources, facilities, and infrastructure that, if damaged, could significantly impact the public safety, economic conditions, and environmental integrity of Shady Cove. Community lifelines and historic structures in Shady Cove are shown in Figure SA-2. Table SA-4 provides exposure information for some community lifelines.

Figure SA-2 Community Lifelines and Historic Structures



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

Table SA-4 Community Lifelines

Facility Name	Community Lifeline Category	Lifeline Type	Earthquake-Liquefaction Hazard	Flood Hazard	Landslide Hazard	Wildfire Hazard
Upper Rogue Community Center	food, water, and shelter	red cross shelter	very high	minimal	low	low
Crater Lake Medical South	health and medical	medical facility	very high	500-Year	low	low
Shady Cove City Hall	safety and security	city hall	very high	minimal	moderate	low
Shady Cove Library	safety and security	library	very high	minimal	moderate	low
Jackson County Fire District 4 - Shady Cove	safety and security	fire station	very high	500-Year	low	low
Shady Cove Police Department	safety and security	police station	very high	500-Year	low	low
Shady Cove Public Works	safety and security	public works	very high	minimal	moderate	low
Sewer Treatment Plant	safety and security	public works	very high	minimal	moderate	moderate
Shady Cove School	safety and security	school	very high	minimal	moderate	low
Shady Cove Airpark	transportation	airport	low	minimal	low	moderate
Communication Structure	communications	communication structure	none	minimal	high	moderate

Source: Oregon Department of Geology and Mineral Industries, Shady Cove NHMP Steering Committee

Infrastructure:

Infrastructure that provides services for the City includes:

Transportation Networks:

- Highway 62
- Rogue River Dr
- Old Ferry Rd
- Indian Creek Rd
- Shady Cove Airfield (Rogue Air Dr)

Water Facilities:

- 5 Wastewater Lift Stations, and about 1,000 private wells
- Wastewater Facility

Private Utilities:

- Pacific Power
- Communication Towers
- Community Water Companies (about 15% of population served by private water)
    - Hiland Water
    - Anglers Cove/Shady Cove Heights Water Co

Critical Facilities

Facilities that are critical to government response and recovery activities (i.e., life, safety, property, and environmental protection). These facilities include: 911 Centers, Emergency Operations Centers, Police and Fire Stations, Public Works facilities, sewer and water facilities, hospitals, bridges, roads, shelters, and more. Facilities that, if damaged, could cause serious secondary impacts may also be considered "critical." A hazardous material facility is one example of this type of critical facility.

Fire Stations:

- Jackson County Fire District #4

Law Enforcement:

- Jackson County Sheriff substation

City Buildings:

- City Hall (EOC)
- Public Works shop

Private:

- Shady Cove Market
- Shady Cove Hardware
- Dollar Store
- Shady Cove Pharmacy

Essential Facilities

Facilities that are essential to the continued delivery of key government services and/or that may significantly impact the public's ability to recover from the emergency. These facilities may include City buildings such as the Public Services Building, the City Hall, and other public facilities such as schools.

Hospitals/Immediate Medical Care Facilities:

- Shady Cove Clinic

Public Schools:

- Shady Cove Elementary/ Middle School

City/County/Other Buildings:

- Shady Cove Library (County)

Potential Shelter Sites:

- All schools
- Assembly of God
- Our Lady of Fatima Parish
- Shady Cove Church of Christ
- St. Martin's Episcopal Church
- Dependence Church
- Trail Christian (in County)
- Jehovah's Witness Hall
- Upper Rogue Community Center

Hazard Profiles

The following sections briefly describe relevant information for each profiled hazard. 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 City'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). *This hazard was not assessed in the previous version of this NHMP.*

Volume I, Section 2 describes the characteristics of air quality hazards, history, 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,"[5] 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 hazards can be found in Volume I, Section 2.

Drought

The steering committee determined that the City'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). *The probability rating stayed the same and the vulnerability rating decreased since the previous version of this NHMP.*

Volume I, Section 2 describes the characteristics of drought hazards, history, and how they relate to future climate projections (see OCCRI report), as well as the location, extent, and

[5] *Oregon Climate Change Research Institute, Future Climate Projections, Jackson County, Oregon. February 2023.*

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 City receives its main water supply directly from the Rogue River and a series of local wells (there are about 1,000 private wells and about 15% of the population receive water from private water companies). For more information on the future of Shady Cove's water supply visit their website.

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 3 for additional information on this hazard.

Earthquake (Cascadia)

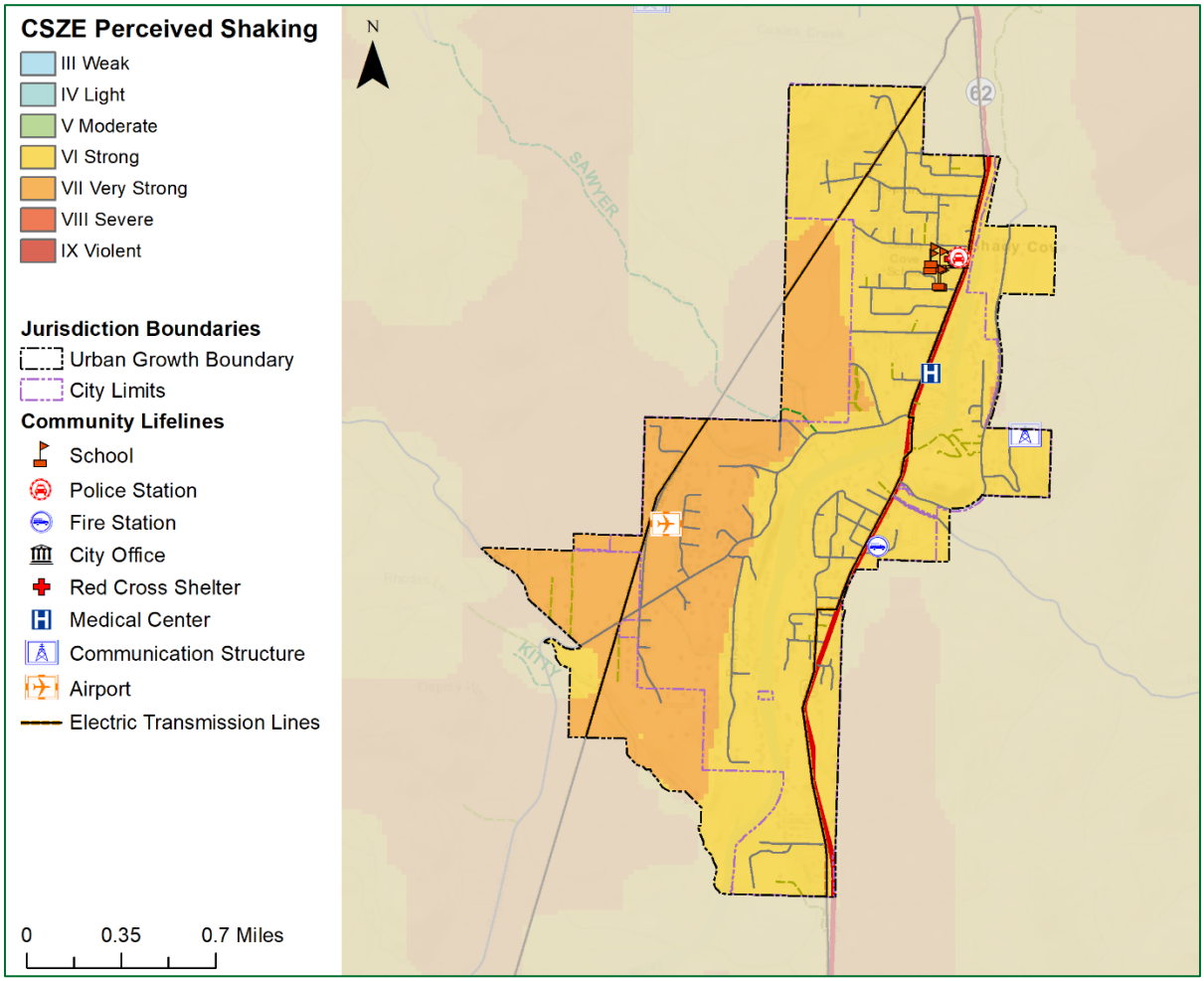
The steering committee determined that the City's probability for a Cascadia Subduction Zone (CSZ) earthquake is **moderate** (which is the same as the County's rating) and that their vulnerability to a CSZ earthquake is **high** (which is the same as the County's rating). *The probability rating decreased and the vulnerability rating stayed the same since the previous version of this NHMP.*

Volume I, Section 3 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 Shady Cove as well. The causes and characteristics of an earthquake event are appropriately described within Volume I, Section 3, as well as the location and extent of potential hazards. Previous occurrences are well documented within Volume I, Section 3 and the community impacts described by the County would generally be the same for Shady Cove as well.

Figure SA-3 displays perceived shaking hazards from a Cascadia Subduction Zone earthquake event. As shown in the figure below, the area of greatest concern within the City of Shady Cove (darker areas) is along the river and mountainous areas.

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

Figure SA-3 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.

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.[7]

As noted in the community profile, approximately 35% the housing in Shady Cove was built after 1990, which decreases the City's vulnerability to the earthquake hazard. Information on specific public buildings' (schools and public safety) estimated seismic resistance, determined by DOGAMI in 2007, is shown in Table SA-5; each "X" represents one building within that

[7] *Ibid.*

ranking category. Of the facilities evaluated by DOGAMI using a Rapid Visual Survey (RVS), two (2) have a high (greater than 10% chance) collapse potential and zero (0) have a very high (100% chance) collapse potential.

In addition to building damages, utility (electric power, water, wastewater, natural gas), and transportation systems (bridges, pipelines) are also likely to experience significant damage. There is a low probability that a major earthquake will result in failure of upstream dams like Lost Creek Dam.

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.

Table SA-5 Rapid Visual Survey Scores

Facility	Site ID*	Level of Collapse Potential			
		Low (< 1%)	Moderate (>1%)	High (>10%)	Very High (100%)
Schools					
Shady Cove School (Eagle Point SD 9) (37 Schoolhouse Ln)	Jack_sch45	X		X	
Public Safety					
Jackson County Fire District #4 (21200 Crater Lake Hwy) - **See Mitigation Successes**	Jack_fir01			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

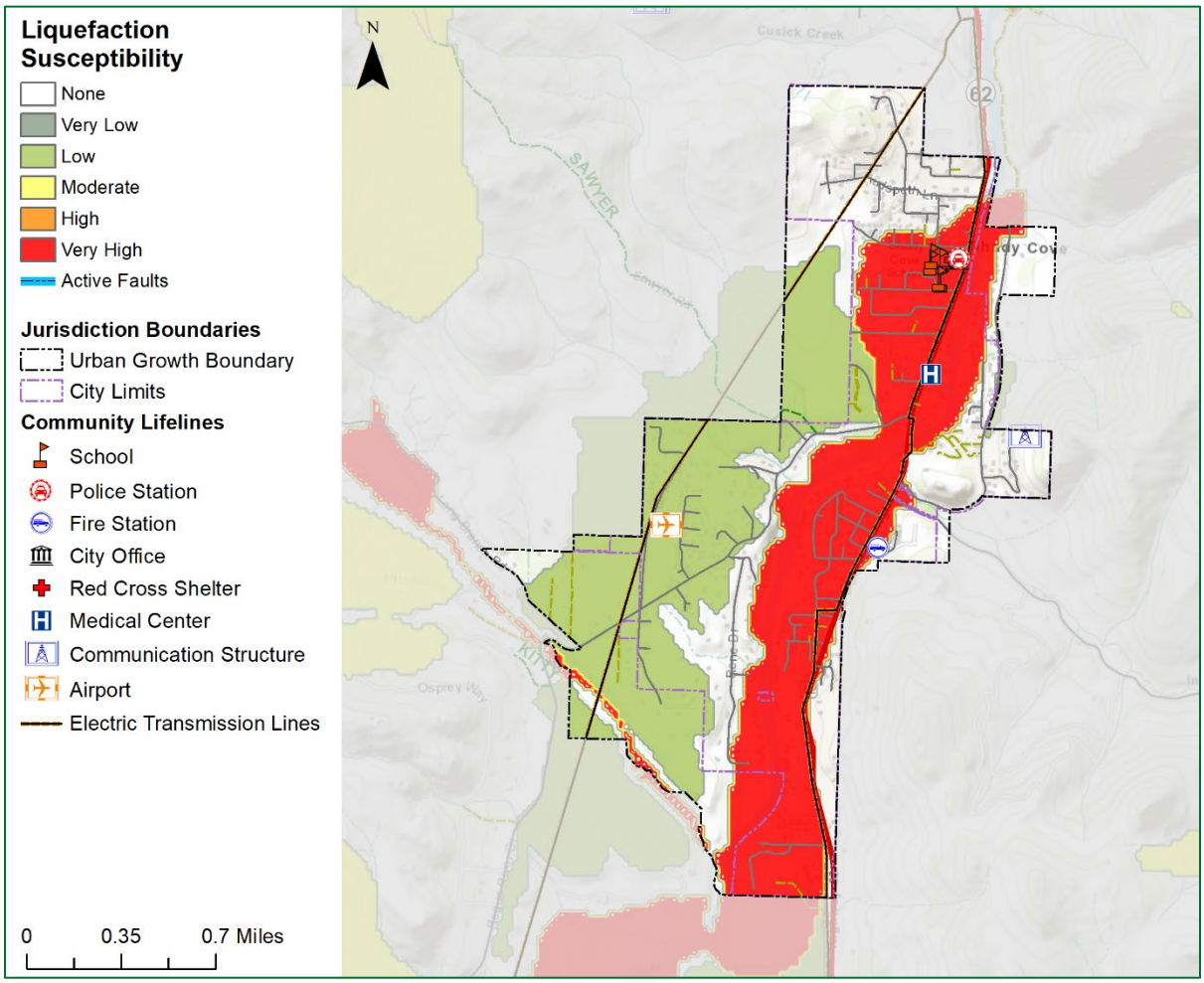
Earthquake (Crustal)

The steering committee determined that the City'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 the County's rating). *These ratings have not changed since the previous version of this NHMP.*

Volume I, Section 3 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 Shady Cove as well. The causes and characteristics of an earthquake event are appropriately described within Volume I, Section 3, as well as the location and extent of potential hazards. Previous occurrences are well-documented within Volume I, Section 3 and the community impacts described by the County would generally be the same for Shady Cove as well.

Figure SA-4 shows the liquefaction risk to the community lifelines and historic structures that were identified in Table SA-4 as well as the state historic building inventory.

Figure SA-4 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.

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, Shady Cove is currently unable to perform a quantitative risk assessment, or exposure analysis, for earthquake (Cascadia subduction zone and crustal) hazards. Identified community lifelines that are exposed to this hazard are shown in Table SA-4. Note that even if a facility has exposure*, it does not mean there is a high risk (vulnerability).* No development changes affected the jurisdiction's overall vulnerability to this hazard.

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 the City'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 than the County's rating). *These ratings have not changed since the previous version of this NHMP.*

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).[8]

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 City as well.

[8] *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.*

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.

Flood

The steering committee determined that the City's probability for flood is **high** (which the same as the County's rating) and that their vulnerability to flood is **high** (which is higher than the County's rating). *These ratings have not changed since the previous version of this NHMP.*

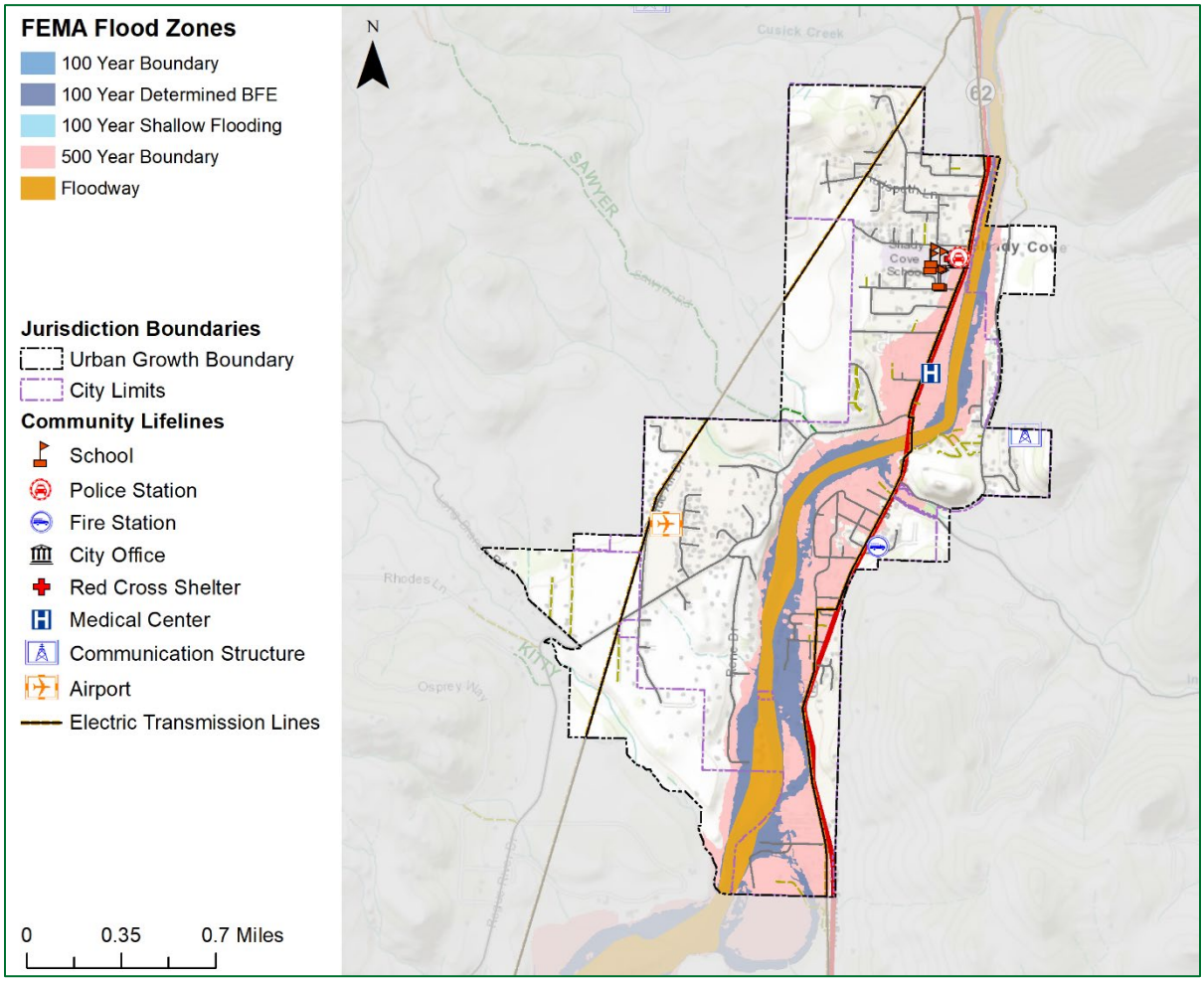
Volume I, Section 2 describes the characteristics of flood hazards, history, and how they relate to future climate projections (see OCCRI report), as well as the location, extent, and probability of a potential event. Portions of Shady Cove have areas of floodplains (special flood hazard areas, SFHA) closely concentrated around the Rogue River (Figure SA-5). According to the Jackson County Flood Insurance Study (2018) the Rogue River is the chief source of flooding. Indian Creek may flood during exceptionally high water along the Rogue River. The Highway 62 bridge, which provides an essential connection between the natural resources to the north and east and the industries of the Rogue Valley to the south, was impacted by the 1964 floods. Furthermore, other portions of Shady Cove, outside of the mapped floodplains, are also subject to flooding from local storm water drainage.

The City is at 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.

The Rogue River is the chief source of flooding events in Shady Cove. Shady Cove is also at risk from flooding from failure of the Lost Creek Dam (also known as the William L. Jess Dam). The dam is owned and operated since 1977 by the US Army Corps of Engineers (USACE) and is classified as a high hazard potential dam. A worst-case scenario failure has the potential to have flows nearly 100 feet above normal river level within one hour of failure.[9] These flooding events and subsequent damages are commonly caused by the Indian Creek and Long Branch Creek.

[9] *Wright, Stacy, Identification of Areas of Mitigation Interest (AoMI) and Development of Mitigation Strategies for Shady Cove and Eagle Point, OR. 2016.*

Figure SA-5 Flood Hazard 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, Shady Cove is currently unable to perform a quantitative risk assessment, or exposure analysis, for this hazard. Identified community lifelines that are exposed to this hazard are shown in Table SA-4. Note that even if a facility has exposure*, it does not mean there is a high risk (vulnerability).* No development changes affected the jurisdiction's overall vulnerability to this hazard.

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 the City 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.

Following the January 1997, flood businesses in Shady Cove suffered direct damage from high water.

The Jackson County Flood Insurance Study (January 19, 2018) has a brief history of flooding in Jackson County and Shady Cove (Volume I, Section 3). No critical or essential facilities are in the floodplain. There is a central bridge located inside the floodplain (Highway 62 bridge, lost during the 1964 flood; however, the Lost Creek Dam was built after the 1964 flood, and now mitigates risk to this bridge).

Highway 62 is a major transportation route between Medford and smaller cities to the north of Jackson County. If major flooding affected all the bridges in Shady Cove, traffic flow in and out of the City would be significantly affected, but would not cut off all routes. The amount of property in the flood plain is not a large area (a portion of approximately 273 tax lots) but damage could be significant as it would affect residential, commercial, and public property. 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. The City sewer system can overflow during flood events and cause further property damage.

For mitigation planning purposes, it is important to recognize that flood risk for a community is not limited only to areas of mapped floodplains. Other portions of Shady Cove outside of the mapped floodplains may also be at relatively high risk from over bank flooding from streams too small to be mapped by FEMA or from local storm water drainage.

Future Projections

According to the Oregon Climate Change Research Institute (OCCRI report) "Future Climate Projections, Jackson County,"[10] 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 last updated the Flood Insurance Study (FIS) and Flood Insurance Rate Maps (FIRMs) in 2018 (effective January 19, 2018). The City does not participate in the Community Rating System (CRS). The City complies with the NFIP through enforcement of their flood damage prevention ordinance and their floodplain management program. Their flood prevention code section is based on the Oregon Model Flood Hazard Prevention code, which includes provisions addressing substantial improvement/substantial damage.

[10] *Oregon Climate Change Research Institute, Future Climate Projections, Jackson County, Oregon. February 2023.*

The Community Repetitive Loss record for Shady Cove identifies one (1) Repetitive Loss Property[11] (a single-family residence) and zero (0) Severe Repetitive Loss Properties.[12] Table SA-6 gives details for these properties. Figure SA-5 gives the general location of these properties.

Table SA-6 Repetitive Loss Properties

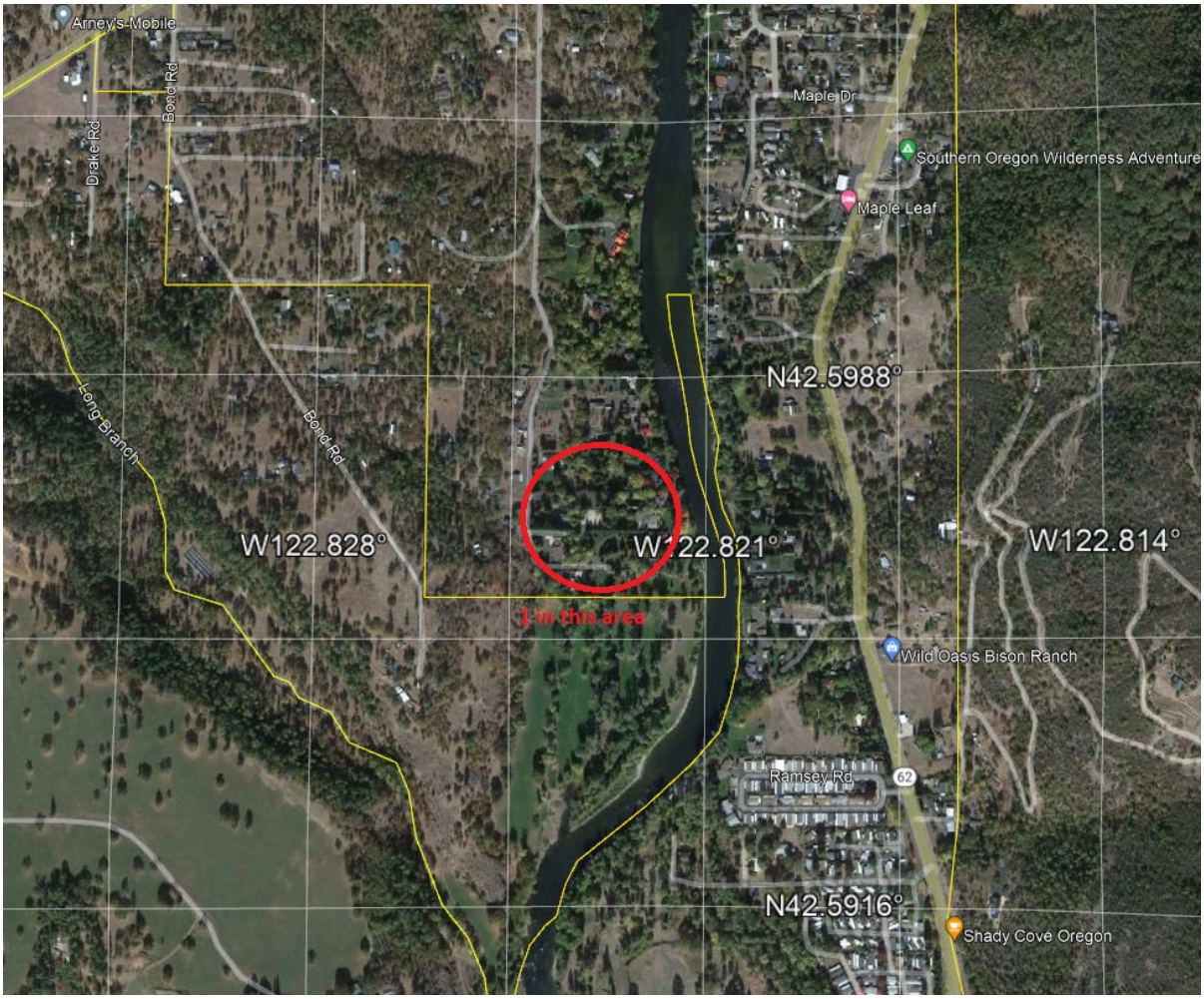
RL or SRL Property	Jurisdiction Name	Insured?	Flood Zone	Occupancy	Total Paid Claims	Total Paid Amount
RL	Shady Cove	YES	C	Single-Family	3	$40,737.55
Total					3	$40,737.55

Source: FEMA Region X, Regional Flood Insurance Liaison, email February 13, 2023.

[11] A Repetitive Loss (RL) property is any insurable building for which two or more claims of more than $1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978. A RL property may or may not be currently insured by the NFIP.

[12] A Severe Repetitive Loss (SRL) property is a single family property (consisting of 1 to 4 residences) that is covered under flood insurance by the NFIP and has incurred flood-related damage for which 4 or more separate claims payments have been paid under flood insurance coverage, with the amount of each claim payment exceeding $5,000 and with cumulative amount of such claims payments exceeding $20,000; or for which at least 2 separate claims payments have been made with the cumulative amount of such claims exceeding the reported value of the property.

Figure SA-6 Repetitive Loss Properties



Source: FEMA Region X, Regional Flood Insurance Liaison, email February 13, 2023.

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

Landslide

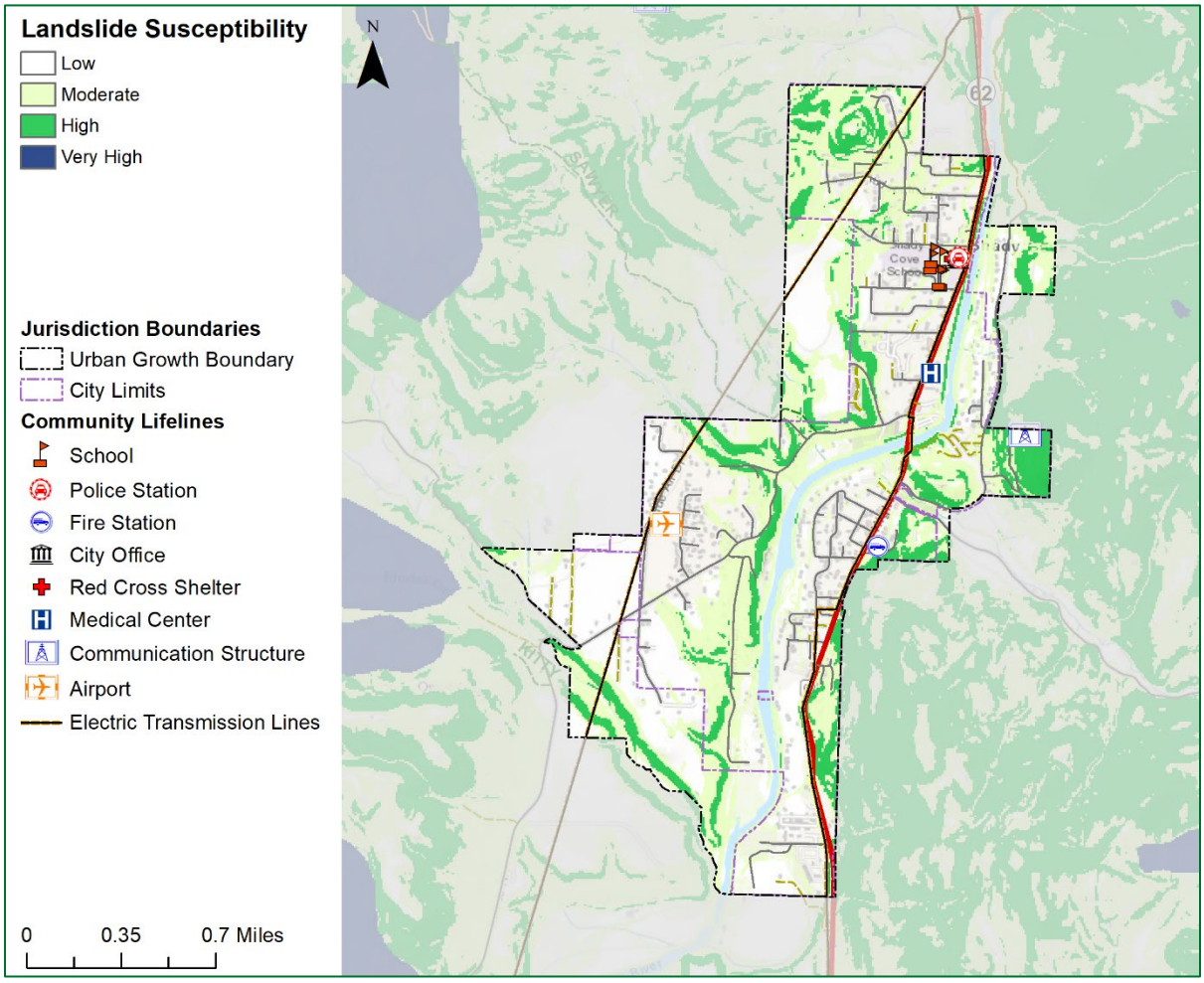
The steering committee determined that the City's probability for landslide is **high** (which is the same as the County's rating) and that their vulnerability to landslide is **high** (which is higher than the County's rating). *These ratings have not changed since the previous version of this NHMP.*

Volume I, Section 2 describes the characteristics of landslide hazards, 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 potential for landslide in Shady Cove is high. Critical transportation routes into the City may be susceptible to landslides. The City is concerned about roads that are subsiding along Highway 62 south of the City.

Landslide susceptibility exposure for Shady Cove is shown in Figure SA-6. Most of Shady Cove demonstrates a low to moderate susceptibility to landslide exposure, with corridors of high

susceptibility. Approximately 13% of Shady Cove has high, and approximately 34% moderate, landslide susceptibility exposure.[13] *Note that even if a jurisdiction has a high percentage of area in a high or very high landslide exposure susceptibility zone, this does not mean there is a high risk, because risk is the intersection of hazard and assets.*

Figure SA-7 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.

Vulnerability Assessment

Due to insufficient data and resources, Shady Cove is currently unable to perform a quantitative risk assessment, or exposure analysis, for this hazard. Identified community lifelines that are exposed to this hazard are shown in Table SA-4. No development changes affected the jurisdiction's overall vulnerability to this hazard.

[13] *DOGAMI Open-File Report, O-16-02, Landslide Susceptibility Overview Map of Oregon (2016)*

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.

Please review Volume I, Section 3 for additional information on this hazard.

Severe Weather

Severe weather can account for a variety of intense and potentially damaging weather events. These events include extreme heat events, 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 the City'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). *This hazard was not assessed in the previous version of this NHMP.*

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 extreme heat relates to future climate projections (see OCCRI report). Generally, an event that affects the County is likely to affect the City 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.[14]

Extreme heat events can and have occurred in the city, 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.

[14] *DLCD. Oregon State Natural Hazard Mitigation Plan. 2020.*

Future Projections

According to the Oregon Climate Change Research Institute (OCCRI report) "Future Climate Projections, Jackson County,"[15] 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 the City'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). *The probability rating stayed the same and the vulnerability rating decreased since the previous version of this NHMP.*

Volume I, Section 2 describes the characteristics of windstorm hazards, 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 very rarely, snow. Other severe weather events that may accompany windstorms, including thunderstorms, hail, lightning strikes, and tornadoes are generally negligible for Shady Cove.

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.

Damage from high winds generally has resulted in downed utility lines and trees. Electrical power can be out anywhere from a few hours to several days. Outdoor signs have also suffered damage. If the high winds are accompanied by rain (which they often are), blowing leaves and debris clog drainage-ways, which in turn causes localized urban flooding.

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

[15] *Oregon Climate Change Research Institute, Future Climate Projections, Jackson County, Oregon. February 2023.*

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 the City'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 as the County's rating). *These ratings have not changed since the previous version of this NHMP.*

Volume I, Section 2 describes the characteristics of winter storm hazards, 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 the City 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 Shady Cove area and while they typically do not cause significant damage, they are frequent and have the potential to impact economic activity. Road and rail closures due to winter weather are uncommon occurrences but can interrupt commuter and commercial traffic. The City maintains roads with sanding equipment and County snow plows.

Future Projections

According to the Oregon Climate Change Research Institute (OCCRI report) "Future Climate Projections, Jackson County,"[16] 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 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 3 for additional information on this hazard.

[16] *Oregon Climate Change Research Institute, Future Climate Projections, Jackson County, Oregon. February 2023.*

Volcanic Event

The steering committee determined that the City'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). *These ratings have not changed since the previous version of this NHMP.*

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 Shady Cove as well. Shady Cove 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 the City'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 higher than the County's rating). *The probability and vulnerability ratings stayed the same since the previous version of this NHMP.*

Volume I, Section 2 describes the characteristics of wildland fire hazards, 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 wildland fire vary depending on fuel, topography, and weather conditions. There has been one large wildland fire in the Shady Cove area, the South Obenchain Fire in 2020. The South Obenchain Fire, a 32,600-acre fire, spread from Eagle Point to Shady Cove and Butte Falls. The fire destroyed 33 residences and 56 other structures. Weather and urbanization conditions are primarily at cause for the hazard level. Wildfires threaten subdivisions and mobile home parks on the edge of the City.

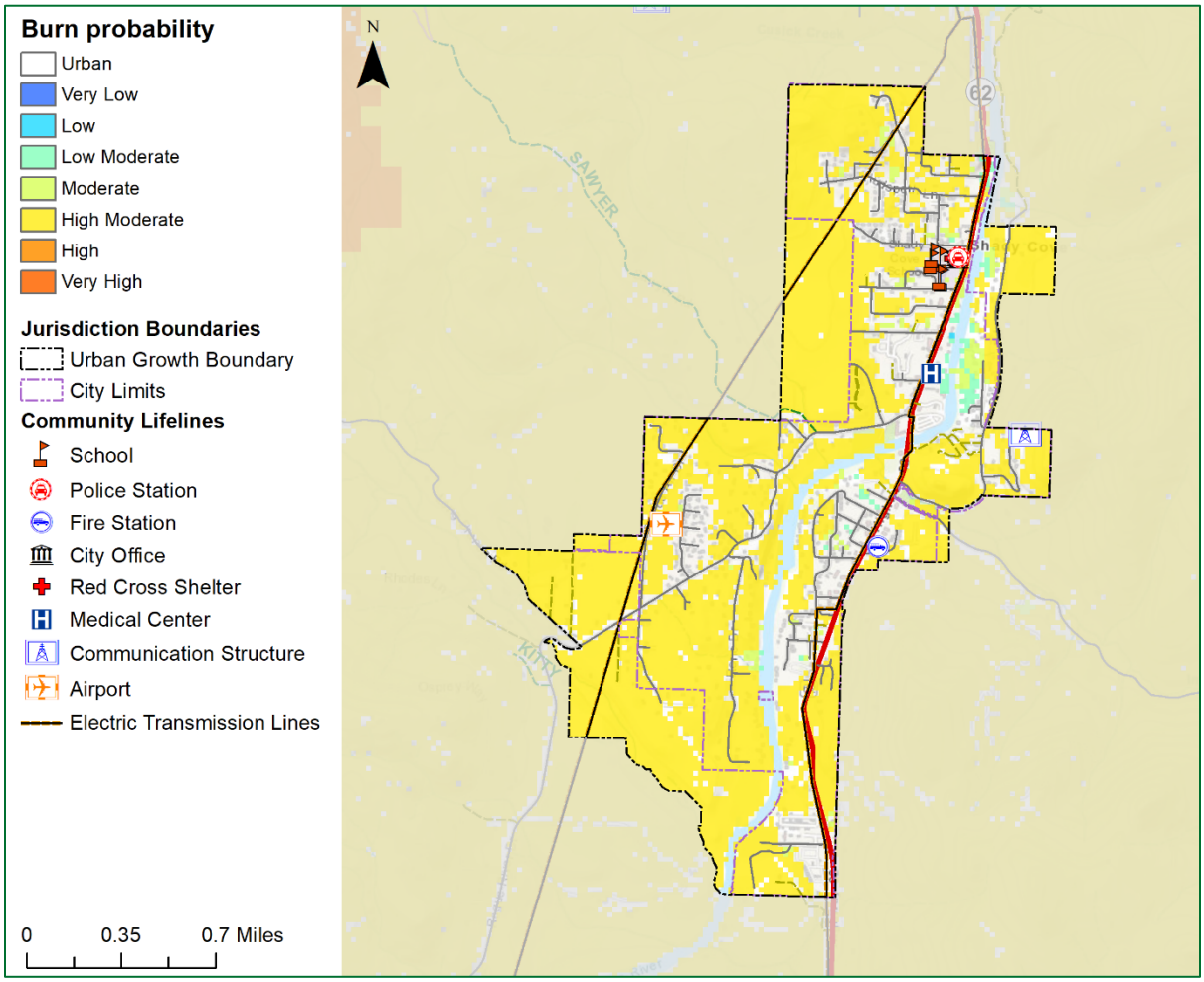
The potential community impacts and vulnerabilities described in Volume I, Section 3 are generally accurate for the City as well. The Rogue Valley Integrated Community Wildfire Protection Plan (RVIFP, updated 2019), assesses wildfire risk, maps wildland urban interface areas, and includes actions to mitigate wildfire risk. The City is included in the RVIFP and will update the City's wildfire risk assessment if the fire plan 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). Shady Cove is within an area of high wildfire prone urban landscape. Current wildfire mitigation activities include defensible space and fuels reduction projects. The City 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).

Figure SA-7 show burn probability in Shady Cove for community lifelines and historic buildings.

Figure SA-8 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.

Vulnerability Assessment

Due to insufficient data and resources, Shady Cove is currently unable to perform a quantitative risk assessment, or exposure analysis, for this hazard. Identified community lifelines that are exposed to this hazard are shown in Table SA-4. Note that even if a facility

has exposure*, it does not mean there is a high risk (vulnerability).* No development changes affected the jurisdiction's overall vulnerability to this hazard.

Future Projections

According to the Oregon Climate Change Research Institute "Future Climate Projections, Jackson County,"[17] 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 3 for additional information on this hazard.

[17] *Oregon Climate Change Research Institute, Future Climate Projections, Jackson County, Oregon. February 2023.*

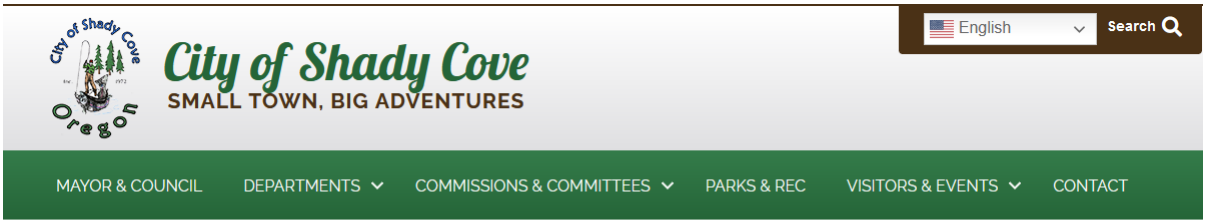
Attachment A: Public Involvement Summary

Members of the steering committee provided edits and updates 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 of Shady Cove (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 11 and through the FEMA review process on the City's website. The plan was also posted and announced on the County's website. There was one comment provided that has been reviewed and integrated into the NHMP as applicable. Additional opportunities for stakeholders and the public to be involved in the planning process are addressed in Volume III, 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



Comments Welcome on draft Natural Hazard Mitigation Plan

Posted: October 11, 2023

Shady Cove Addendum FINAL DRAFT

Jackson County
Pre-Disaster Mitigation Planning

PRESS RELEASE

SUBJECT: Addendum to the Jackson County Multi-Jurisdictional Natural Hazard Mitigation Plan Update – Notice and Opportunity for Public Comment

The City of Shady Cove seeks additional public input on update to Natural Hazard Mitigation Plan

Search

Recent Posts

110923 Planning Commission Public Hearing

110623 Emergency Management Commission Meeting

(Shady Cove, OR) – The City of Shady Cove is in the process of updating their existing 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 re-adoption of the plan, Shady Cove will regain its eligibility to apply for federal funding towards natural hazard mitigation projects. This local planning process includes a wide range of representatives from city and county government, emergency management personnel, and outreach to members of the public in the form of an electronic survey.

A natural hazard mitigation plan provides communities with a set of goals, action items, and resources designed to reduce risk from future natural disaster events. Engaging in mitigation activities provides jurisdictions with a number of benefits, including reduced loss of life, property, essential services, critical facilities, and economic hardship; reduced short-term and long-term recovery and reconstruction costs; increased cooperation and communication within the community through the planning process; and increased potential for state and federal funding for recovery and reconstruction projects.

An electronic version of the updated draft City of Shady Cove NHMP addendum will be available for formal public comment prior to the City Council meetings on October 5 and October 19. To view the draft please visit: ShadyCove.org

If you have any questions regarding the Shady Cove NHMP addendum or the update process in general, please contact: City Hall at 541-878-2225 or email Tcorrigan@ShadyCove.org or Michael Howard, Director for the Oregon Partnership for Disaster Resilience at mrhoward@uoregon.edu.

Shady Cove Steering Committee

Steering committee members possessed familiarity with the community of Shady Cove and how it is affected by natural hazard events. The steering committee guided the update process through several steps including goal confirmation and prioritization, action item review and development, and information sharing, to update the NHMP and to make the NHMP as comprehensive as possible. The steering committee met formally on the following date:

Meeting #1: Shady Cove steering committee, May 3, 2023 (via Zoom)
During this meeting, the steering committee reviewed the previous NHMP, and were provided updates on hazard mitigation planning, the NHMP update process, and project timeline. The steering committee:

- Updated recent history of hazard events in the city.
- Reviewed and confirmed the NHMP's mission and goals.
- Discussed the NHMP public outreach strategy.
- Discussed development changes and community lifelines.
- Reviewed and provided feedback on the draft risk assessment update including community vulnerabilities and hazard information.
- Reviewed and updated their existing mitigation strategy (actions).
- Reviewed and updated their implementation and maintenance program.

Meeting Attendees:

- Convener, Tom Corrigan, City Administrator
- Kathy Nuckles, Council President
- Greg Winfrey, Chief (retired) Jackson County Fire District #4
- Ed Mayer, Emergency Management Consultant
- Spencer McMahon, Public Works
- Rowan Fairchild, Planner (RVCOG)

UNIVERSITY OF OREGON

AGENDA

Meeting: **Jackson County NHMP Update: Shady Cove Addendum**
Date: **5/3/23**
Time: 2:00pm – 3:30pm
Location: Zoom (link here)

Meeting Goals:

- To share information that the student team needs to draft jurisdictional addenda, namely:
  - To review and update Shady Cove's hazard vulnerability assessment
  - To review and update Shady Cove's action items

I. **Welcome and Introductions**

II. **Development Information and Community Lifelines**
   a. Development information (if not already provided)
   b. Review Community Lifelines for any missed facilities

III. **Jurisdiction-Specific Risk Assessment**
   a. Review Shady Cove-specific Hazard Vulnerability Assessment (HVA)

IV. **Jurisdiction-Specific Mitigation Strategy**
   a. Update action items
   b. Prioritize action items

V. **Overview of Implementation and Maintenance**

VI. **Next Steps**
   a. We will send your jurisdiction's addendum to you for your review and give you two weeks to review the addendum and provide us with any edits

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1209 University of Oregon | Eugene, Oregon 97403 | T: 541.346.3889 | F: 541.346.2040 https://ipre.uoregon.edu/

Attachment B: Action Item Changes

Table SA-7 is an accounting of the status (complete or not complete) and major changes to actions since the previous NHMP. All actions were renumbered in this update to be consistent with other jurisdictions that are participating in the multi-jurisdictional NHMP. Actions identified as still relevant are included in the updated action plan (Table SA-1).

Previous NHMP Actions that are Complete:
Flood #4, *"Preserve water quality by using stormwater best management practices (BMP)."*
Complete. Part of normal operations.

Previous NHMP Actions that are Not Complete and No Longer Relevant:
None identified.

Table SA-7 Status of All Hazard Mitigation Actions in the Previous Plan

2018 Action Item	2024 Action Item	Status	Still Relevant? (Yes/No)
Multi-Hazard Mitigation Items			
MH #1	1.2	Not Complete	Yes
MH #2	1.3	Not Complete	Yes
	1.1	New	-
Air Quality Mitigation Items			
-	2.1	New	-
Drought Mitigation Items			
-	3.0	New	-
Earthquake Mitigation Items			
EQ #1	4.1	Not Complete	Yes
Emerging Infectious Disease Mitigation Items			
-	5.0	New	-
Flood Mitigation Items			
FL #1	6.1	Not Complete	Yes
FL #2	6.2	Not Complete	Yes
FL #3	6.3	Not Complete	Yes
FL #4	-	Complete	No
FL #5	6.5	Not Complete	Yes

2018 Action Item	2024 Action Item	Status	Still Relevant? (Yes/No)
FL #6	6.6	Not Complete	Yes
-	6.4	New	-
Landslide Mitigation Items			
-	7.0	New	-
Severe Weather Mitigation Items			
SW #1	8.1	Not Complete	Yes
SW #2	8.2	Not Complete	Yes
-	8.3	New	-
Volcanic Event Mitigation Items			
-	9.0	New	-
Wildfire Mitigation Items			
WF #1	10.1	Not Complete	Yes
WF #2	10.2	Not Complete	Yes
WF #3	10.3	Not Complete	Yes
WF #4	10.4	Not Complete	Yes
WF #5	10.5	Not Complete	Yes