

Polk County Multi-Jurisdictional Natural Hazards Mitigation Plan

Polk County and the Cities of:
Dallas, Falls City, Independence, and Monmouth



Photo: Gary Halvorson (Oregon State Archives)

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Volume I: Basic Plan

Prepared for:

Polk County
Dallas, Falls City, Independence, and Monmouth

Prepared by:

University of Oregon
Community Service Center
Oregon Partnership for Disaster Resilience



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Special thanks to Sidney Mulder, Associate Planner, Polk County Community Development for her leadership in convening the committee.

Polk County NHMP Update Steering Committee

Polk County

- Convener, Sidney Mulder, Associate Planner
- Dean Bender, Emergency Manager
- Autumn Hillebrand, Office Manager
- Todd Whitaker, Public Works Director
- Austin McGuigan, Community Development Director

City of Dallas

- Convener, Jason Locke, Community Development/Operations Director
- Ron Foggin, City Manager
- Tom Simpson, Police Chief
- Fred Hertel, Fire Chief
- Fred Braun, City Engineer

City of Falls City

- Convener, City Manager
- Domenica Protheroe, City Clerk
- Terry Ungricht, Mayor and City Manager
- Don Poe, Lead Public Works Worker
- Members of the City Council

City of Independence

- Convener, Shawn Irvine, Economic Development Director
- Robert Mason, Police Chief
- Michael Danko, Community Development Director
- Jason Kistler, Information Services Manager
- Matthew Carpenter, Public Works Lead Worker

City of Monmouth

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- Russ Cooper, Monmouth Public Works Director
- Scott McClure, Monmouth City Manager
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- Michael Smith – Director Western Oregon University Facilities
- Ben Stange, Fire Chief, Polk County Fire District No. 1
- Darrell Tallen, Monmouth Chief of Police
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- Michael Howard, OPDR Assistant Program Manager
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About the Community Service Center

The Community Service Center (CSC), a research center affiliated with the Department of Planning, Public Policy, and Management at the University of Oregon, is an interdisciplinary organization that assists Oregon communities by providing planning and technical assistance to help solve local issues and improve the quality of life for Oregon residents. The role of the CSC is to link the skills, expertise, and innovation of higher education with the transportation, economic development, and environmental needs of communities and regions in the State of Oregon, thereby providing service to Oregon and learning opportunities to the students involved.

About the Oregon Partnership for Disaster Resilience

The Oregon Partnership for Disaster Resilience (OPDR) is a coalition of public, private, and professional organizations working collectively toward the mission of creating a disaster-resilient and sustainable state. Developed and coordinated by the Community Service Center at the University of Oregon, the OPDR employs a service-learning model to increase community capacity and enhance disaster safety and resilience statewide.

Plan Template Disclaimer

This Natural Hazards Mitigation Plan is based in part on a plan template developed by the Oregon Partnership for Disaster Resilience. The template is structured to address the requirements contained in 44 CFR 201.6; where language is applicable to communities throughout Oregon, OPDR encourages the use of standardized language. As part of this regional planning initiative, OPDR provided copies of the plan templates to communities for use in developing or updating their natural hazards mitigation plans. OPDR hereby authorizes the use of all content and language provided to Polk County in the plan template.

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PLAN SUMMARY

Polk County updated this Multi-Jurisdictional Natural Hazards Mitigation Plan (NHMP, MNHMP, or Plan) in an effort to prepare for the long-term effects resulting from natural hazards. It is impossible to predict exactly when these hazards will occur, or the extent to which they will affect the community. However, with careful planning and collaboration among public agencies, private sector organizations, and citizens within the community, it is possible to create a resilient community that will benefit from long-term recovery planning efforts.

The Federal Emergency Management Agency (FEMA) defines mitigation as “. . . the effort to reduce loss of life and property by lessening the impact of disasters . . . through risk analysis, which results in information that provides a foundation for mitigation activities that reduce risk.” Said another way, natural hazard mitigation is a method of permanently reducing or alleviating the losses of life, property, and injuries resulting from natural hazards through long and short-term strategies. Example strategies include policy changes, such as updated ordinances, projects, such as seismic retrofits to critical facilities; and education and outreach to targeted audiences, such as Spanish speaking residents or the elderly. Natural hazard mitigation is the responsibility of the “Whole Community” - individuals, private businesses and industries, state and local governments, and the federal government.

44 CFR 201.6 – The local mitigation plan is the representation of the jurisdiction’s commitment to reduce risks from natural hazards, serving as a guide for decision makers as they commit resources to reducing the effects of natural hazards. . . .

Why Develop this Mitigation Plan?

In addition to establishing a comprehensive community-level mitigation strategy, the Disaster Mitigation Act of 2000 (DMA2K) and the regulations contained in 44 CFR 201 require that jurisdictions maintain an approved Natural Hazard Mitigation Plan (NHMP) in order to receive federal funds for mitigation projects. Local and federal approval of this Plan ensures that the county and listed jurisdictions will remain eligible for pre- and post-disaster mitigation project grants.

44 CFR 201.6(a)(1) – A local government must have a mitigation plan approved pursuant to this section in order to receive HMGP project grants . . .

What is Mitigation?

“Any sustained action taken to reduce or eliminate long-term risk to life and property from a hazard event.”

- U.S. Federal Emergency Management Agency

Who Participated in Developing the Plan?

The Polk County NHMP is the result of a collaborative effort between the county, cities, special districts, citizens, public agencies, non-profit organizations, the private sector and regional organizations. County and City steering committees guided the plan development process.

The County Steering Committee included representatives from the following jurisdictions:

- Polk County
- City of Dallas
- City of Falls City
- City of Independence
- City of Monmouth

44 CFR 201.6(c)(1) – Documentation of the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

The Polk County Planning Department convened the planning process and will take the lead in implementing, maintaining and updating the plan. Polk County is dedicated to directly involving the public in the continual review and update of the natural hazards mitigation plan. The public will have the opportunity to continue to provide feedback about the plan throughout the implementation and maintenance period.

How Does this Mitigation Plan Reduce Risk?

The NHMP is intended to assist Polk County reduce the risk from natural hazards by identifying resources, information, and strategies for risk reduction. It is also intended to guide and coordinate mitigation activities throughout the county. A risk assessment consists of three phases: hazard identification, vulnerability assessment, and risk analysis, as illustrated in the following graphic.

*44 CFR 201.6(c)(2) – A Risk Assessment that provides the factual basis for activities proposed in the strategy
...*

Figure PS-I Understanding Risk



Source: Oregon Partnership for Disaster Resilience.

By identifying and understanding the relationship between natural hazards, vulnerable systems, and existing capacity, Polk County is better equipped to identify and implement actions aimed at reducing the overall risk to natural hazards.

What is Polk County’s Overall Risk to Hazards?

Polk County reviewed and updated their risk assessment to evaluate the probability of each hazard as well as the vulnerability of the community to that hazard. Scores are based on the Polk County Hazard Analysis submitted to the Oregon Office of Emergency Management (January 2016) and updated by the steering committee in 2016. Table PS-1 below summarizes hazard probability and vulnerability as determined by the county steering committee (for more information see Section 2, Risk Assessment).

Table PS-I Risk Assessment Summary

Hazard	Probability	Vulnerability	Total Threat Score	Hazard Rank
Windstorm	High	High	230	# 1
Winter Storm	High	High	230	# 1
Flood - Riverine	High	Moderate	165	# 3
Earthquake (Cascadia)	Moderate	Moderate	162	# 4
Earthquake (Crustal)	Moderate	Moderate	162	# 4
Drought	Moderate	Moderate	160	# 6
Wildfire (WUI)	Moderate	Moderate	120	# 7
Landslide	High	Low	93	# 8
Volcano	Low	Moderate	84	# 9

Source: Polk County NHMP Steering Committee (2016)

At the end of this executive summary, hazard briefs provide summary information for priority hazards in Polk County.

What is the Plan's Mission?

The mission of the Polk County NHMP is to:

Mission: *To assist in reducing risk, preventing loss, and protecting life, property, and the environment from future natural hazard events. The plan fosters collaboration and coordinated partnerships among public and private partners. This can be achieved by increasing public awareness and education and identifying activities to guide the county towards building a safer community.*

44 CFR 201.6(c)(3)(i) – A description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.

What are the Plan Goals?

The plan goals describe the overall direction that the participating jurisdiction's agencies, organizations, and citizens can take toward mitigating risk from natural hazards. Below is a list of the plan goals (Note: although numbered the goals are not prioritized):

GOAL 1: PUBLIC EDUCATION AND AWARENESS

Provide public information and education/awareness to all residents of the county concerning natural hazard areas and mitigation efforts.

GOAL 2: PREVENTIVE AND IMPLEMENTATION

Develop and implement activities to protect human life, commerce, property and natural systems.

GOAL 3: COLLABORATION AND COORDINATION

Strengthen hazard mitigation by increasing collaboration and coordination among citizens, public agencies, non-profit organizations, businesses, and industry.

GOAL 4: FUNDING AND PARTNERSHIPS

Seek partnerships in funding and resources for future mitigation efforts.

GOAL 5: EMERGENCY OPERATIONS

Coordinate and integrate natural hazard mitigation activities, where appropriate, with emergency operations plans and procedures.

GOAL 6: NATURAL RESOURCES UTILIZATION

Link land use planning, development criteria, codes, and natural resources and watershed planning with natural hazard mitigation.

How are the Action Items Organized?

The action items are organized within an action matrix included within Section 3, Mitigation Strategy.

44 CFR 201.6(c)(3)(ii) – A section that identifies and analyzes a comprehensive range of specific mitigation actions . . .

Data collection, research and the public participation process resulted in the development of the action items. The Action Item Matrix portrays the overall Plan framework and identifies linkages between the plan goals and actions. The matrix documents the title of each action along with, the coordinating organization, timeline, and the plan goals addressed. Action items particular to each of the participating cities are included at the end of the action item matrix in Section 3, Mitigation Strategy and in the jurisdictional addenda.

Comprehensive Action Plan

The following table summarizes specific **priority** NHMP actions. Refer to the Mitigation Strategy section for a complete list of actions.

Action ID Key: MH = Multi-Hazard, DR = Drought, EQ = Earthquake, FL = Flood, LS = Landslide, WF = Wildfire, WT = Winter Storm

Table PS-2 Polk County High Priority NHMP Actions

Action Item #	Description	Managing Department / Agency	Timeframe	Potential Funding Source(s)	Benefit- Costs / Technical Feasibility
Priority Actions					
Multi-Hazard Actions (MH)					
MH #1	Identify primary and secondary transportation routes to interconnect critical facilities. Create a map with these emergency routes to be used in the event of a natural hazard.	Emergency Management - HMT	Ongoing	General Fund	BC: TBD TF: Yes
MH #2	Reduce potential isolation of critical facilities in the event of a natural hazard by creating redundancy. Create a map with alternatives transportation routes. Create a plan for multiple communication alternatives.	Public Works/Emergency Management	1-5 years	General Fund	BC: TBD TF: Yes
MH #3	Utilize social media as a communication outlet in the event of a natural hazard.	Emergency Management	Ongoing	General Fund	BC: TBD TF: Yes
Windstorm Actions (WS)					
WS #1	Develop and implement programs to keep trees from threatening lives, property, and public infrastructure during windstorm events. Identify hazard trees, encourage harvesting of hazard trees within utility and road corridors, and those blown down during storm events.	Emergency Management- HMT, Public Works, Community Development	Ongoing	General Fund, HMGP	BC: TBD TF: Yes

Source: Polk County NHMP Steering Committee (2017)

Table PS-3 Dallas High Priority NHMP Actions

Action Item #	Description	Managing Department / Agency	Timeline	Potential Funding Source(s)	Benefit- Costs / Technical Feasibility
Priority Actions					
Multi-Hazard Actions (MH)					
MH #1	Perform hydrologic and hydraulic engineering, and drainage studies and analyses. Use information obtained for feasibility determination and project design. This information should be a key component, directly related to a proposed project.	Community Development	Ongoing	General Fund	BC: TBD TF: Yes
MH #2	Harden utility headers located along river embankments to mitigate potential flood, debris, and erosion damages.	Public Works	Ongoing	General Fund	BC: TBD TF: Yes
Earthquake Actions (EQ)					
EQ #1	Evaluate critical public facility seismic performance for fire stations, public works buildings, potable water systems, wastewater systems, electric power systems, and bridges within the jurisdiction.	Community Development, Police, Fire, Public Work	Short Term (0-2 Years)	General Fund, HMGP, HMA	BC: TBD TF: Yes
Flood Action (FL) - including erosion					
FL #1	Install bank protection such as rock, concrete, asphalt, vegetation, or other armoring or protective materials to provide river bank protection.	Public Works	Ongoing	General Fund, HMGP, HMA, NRCS	BC: TBD TF: Yes
FL #2	Establish flood mitigation priorities for critical facilities and residential and commercial buildings located within the 100-year floodplain using survey elevation data.	Community Development, Public Works	Short Term (0-2 Years)	General Fund, HMA	BC: TBD TF: Yes
Wildfire Actions (WF)					
WF #1	Participate in the maintenance, implementation, and update of the Polk County Community Wildfire Protection Plan (2009).	PC SW Rural Fire District Polk County & City Manager	Ongoing	General Fund	BC: TBD TF: Yes

Source: Dallas NHMP Steering Committee (2017)

Table PS-4 Falls City High Priority NHMP Actions

Action Item #	Description	Managing Department / Agency	Timeline	Potential Funding Source(s)	Benefit- Costs / Technical Feasibility
Priority Actions					
Multi-Hazard Actions (MH)					
MH #1	Purchase and install generators with main power distribution disconnect switches for identified and prioritized critical facilities (particularly schools) susceptible to short term power disruption.	Falls City School District	Mid-Term (2-5 Years)	HMGP, School District Bond	BC: TBD TF: Yes
Earthquake Actions (EQ)					
EQ #1	Disseminate FEMA pamphlets to educate and encourage homeowners concerning seismic structural and non-structural retrofit benefits.	City Manager	Ongoing	General Fund, NEHRP, HMGP	BC: TBD TF: Yes
EQ #2	Repair Dayton Street Bridge	City Manager, Public Works	Mid-Term (2-5 Years)	OR-IFA, USDA, OPRD	BC: \$116,000 TF: Yes
Flood Action (FL) - including erosion					
FL #1	Develop an outreach program to educate public concerning NFIP participation benefits, floodplain development, land use regulation, and NFIP flood insurance availability to facilitate continued compliance with the NFIP.	MWVCOG Planning, City Manager, & Public Works	Short Term (0-2 Years)	General Fund	BC: TBD TF: Yes

Source: Falls City NHMP Steering Committee (2017)

Table PS-5 Independence High Priority NHMP Actions

Action Item #	Description	Managing Department / Agency	Timeline	Potential Funding Source(s)	Benefit-Costs / Technical Feasibility
Priority Actions					
Multi-Hazard Actions (MH)					
MH #1	Develop a secondary or backup communication link to the County EOC for assured communication during natural or manmade hazards.	Police Dept.	Short Term (0-2 Years)	Homeland Security Grants/ Partnerships	BC: TBD TF: Yes
Earthquake Actions (EQ)					
EQ #1	Inspect, prioritize, and retrofit any critical facility or public infrastructure that does not meet current Building Codes.	Community Development	Short Term (0-2 Years)	General Fund, HMGP, HMA, SRGP	BC: TBD TF: Yes
EQ #2	Structurally retrofit the historic buildings in the downtown core for earthquake survivability.	Historic Preservation Commission	Long Term (5+ Years)	URD/Property Owners	BC: TBD TF: Yes
Flood Action (FL) - including erosion					
FL #1	Build a new Gun Club Road bridge to mitigate the flood and the resultant transportation hazard.	Community Development	Short Term (0-2 Years)	Transportation Fund/ General Fund/ Storm Fund	BC: TBD TF: Yes
FL #2	Identify and resolve areas of persistent stormwater flooding due to undersized, underperforming, stormwater infrastructure.	Public Works	Mid-Term (2-5 Years)	OWEB, General Fund, Grants, SDCs	BC: TBD TF: Yes
FL #3	Create access along Ash Creek to allow for early discovery of debris dams which causes backflow flooding and allow emergency removal of flood causing debris blockages.	Community Development	Short Term (0-2 Years)	State Parks/ Transportation Fund/ Watershed Enhancement grant	BC: TBD TF: Yes

Source: Independence NHMP Steering Committee (2017)

Table PS-6 Monmouth High Priority NHMP Actions

Action Item #	Description	Managing Department / Agency	Timeline	Potential Funding Source(s)	Benefit-Costs / Technical Feasibility
Priority Actions					
Multi-Hazard Actions (MH)					
MH #1	Develop and incorporate city ordinances commensurate with building and fire codes to reflect survivability from wind, seismic, fire, and other hazards to ensure life safety.	Community Development Department, Building Department, Fire District	Ongoing	General Fund	BC: TBD TF: Yes
MH #2	Review ordinances and develop outreach programs to assure propane tanks are properly anchored and hazardous materials are properly stored and protected from known natural hazards such as seismic or flooding events.	Building Department, Fire District	Ongoing	General Fund, HMGP, HMA	BC: TBD TF: Yes
Earthquake Actions (EQ)					
EQ #1	Update the City Code to adopt, implement, and enforce current State of Oregon Building Codes.	Building Department	Ongoing	General Fund	BC: TBD TF: Yes
EQ #2	Retrofit important public facilities with significant seismic vulnerabilities (City Hall, etc.), such as unreinforced masonry construction. Consider structural and non-structural options.	City Manager, Central School District	Long Term (5+ Years)	General Fund, NEHRP, HMGP, SRGP	BC: TBD TF: Yes
Flood Action (FL) - including erosion					
FL #1	Develop, or revise, adopt, and enforce storm water ordinances and regulations to manage run-off from new development, including buffers and retention basins.	Community Development Department, Public Works Department	Ongoing	General Fund, HMA	BC: TBD TF: Yes
FL #2	Identify and resolve areas of persistent stormwater flooding due to undersized, underperforming, stormwater infrastructure.	Public Works	Mid-Term (2-5 Years)	OWEB, General Fund, Grants, SDCs	BC: TBD TF: Yes
Winter Storm Actions (WT)					
WT #1	Implement and enforce the most current Uniform International, and State, Building Codes to ensure structures can withstand winter storm hazards such as high winds, rain, water, and snow.	Building Department	Short Term (0-2 Years)	General Fund	BC: TBD TF: Yes
WT #2	Develop and implement tree clearing mitigation programs to keep trees from threatening lives, property, and public infrastructure from severe weather events.	Public Works Department, Monmouth Power & Light	Short Term (0-2 Years)	General Fund, HMGP, HMA	BC: TBD TF: Yes

Source: Monmouth NHMP Steering Committee (2017)

How will the plan be implemented?

The plan maintenance section of this Plan details the formal process that will ensure that the Polk County NHMP remains an active and relevant document. The plan will be implemented, maintained, and updated by a designated convener. The Polk County Planning Department is the designated convener (Plan Convener) and is responsible for overseeing the review and implementation processes (see jurisdictional addenda for city conveners). The plan maintenance process includes a schedule for monitoring and evaluating the plan semi-annually and producing a plan revision every five years. This section also describes how the communities will integrate public participation throughout the plan maintenance process.

44 CFR 201.6(c)(3)(iii) – An action plan describing how the actions . . . will be prioritized, implemented and administered . . .

44 CFR 201.6(c)(4) – A plan maintenance process . . .

Plan Adoption

Once the plan is locally reviewed and deemed complete the plan Convener submits it to the State Hazard Mitigation Officer at the Oregon Military Department – Office of Emergency Management (OEM). OEM reviews the plan and submits it to the Federal Emergency Management Agency (FEMA – Region X) for review. This review will address the federal criteria outlined in FEMA Interim Final Rule 44 CFR Part 201.6. Once the plan is pre-approved by FEMA, the county and cities formally adopt the plan via resolution. The Polk County Plan Convener will be responsible for ensuring local adoption of the Polk County NHMP and providing the support necessary to ensure plan implementation. Once the resolution is executed at the local level and documentation is provided to FEMA, the plan is formally acknowledged by FEMA and the county (and participating cities) will re-establish eligibility for the Pre-Disaster Mitigation Grant Program, the Hazard Mitigation Grant Program funds, and the Flood Mitigation Assistance program funds.

44 CFR 201.6(c)(5) – Documentation that the plan has been formally adopted by the governing body of the jurisdiction . . .

44 CFR 201.6(d) – Plan review [process] . . .

The accomplishment of the NHMP goals and actions depends upon regular Steering Committee participation and adequate support from county and city leadership. Thorough familiarity with this Plan will result in the efficient and effective implementation of appropriate mitigation activities and a reduction in the risk and the potential for loss from future natural hazard events.

The Steering Committees for Polk County and participating cities each met to review the plan update process and their governing bodies adopted the NHMP as shown below:

Polk County adopted the plan on **January 10, 2018**

The City of Dallas adopted the plan on **January 16, 2018**

The City of Falls City adopted the plan on **December 14, 2017**

The City of Independence adopted the plan on **February 27, 2018**

The City of Monmouth adopted the plan on **January 16, 2018**

FEMA Region X approved the Polk County NHMP on **February 6, 2018**. With approval of this Plan, the entities listed above are now eligible to apply for the Robert T. Stafford Disaster Relief and Emergency Assistance Act's hazard mitigation project grants through **February 5, 2023**.

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