

5.4 City of Wood Village



5.4.1 Mitigation Actions

Hazard		Action ID	Mitigation Actions – City of Wood Village						
Multi-Hazard	1	Work with local partners, including churches, to identify locations in the city that could be used for weather or smoke sheltering and develop strategies for operating sites.							
		<u>Plan Goals</u> – 1,2,4,5			<u>Hazards Addressed</u> – Severe Weather, Wildfire and Wildfire Smoke				
		<u>Lifelines</u> – Disaster Sheltering, Community Resilience			Prioritization Criteria				
		Implementation Lead	Coordinating Partnerships	Equity	Benefit	Cost	Risk	Capacity	Priority Score
		City Manager's Office	Multnomah County Emergency Management, Department of County Human Services	3	3	3	3	2	14
		Potential Funding –							
		Potential Implementation Methods –							
		Notes – Addresses lack of weather and smoke shelter sites in East County cities.							

Hazard Action ID		Mitigation Actions – City of Wood Village							
Multi-Hazard	2	Continue to integrate hazard mitigation goals into early design processes for public facilities and infrastructure projects.							
		<u>Plan Goals</u> – 1,2,3			<u>Hazards Addressed</u> – All Hazards				
		<u>Lifelines</u> – All City Infrastructure			Prioritization Criteria				
		Implementation Lead	Coordinating Partnerships	Equity	Benefit	Cost	Risk	Capacity	Priority Score
				1	3	2	3	2	11
		Potential Funding – Existing funding capacity							
		Potential Implementation Methods – Five-year budgets, City Council, Finance, Public Work							
		Notes – Continuing action from 2017 NHMP							
Multi-Hazard	3	Continue to identify retrofit programs to strengthen mobile homes from high winds and earthquakes.							
		<u>Plan Goals</u> – 1,3,4			<u>Hazards Addressed</u> – Earthquake, Severe Weather				
		<u>Lifelines</u> – Housing			Prioritization Criteria				
		Implementation Lead	Coordinating Partnerships	Equity	Benefit	Cost	Risk	Capacity	Priority Score
				3	2	1	2	2	10
		Potential Funding – External grant funding required, no internal budget to subsidize private complexes							
		Potential Implementation Methods – City Council, Public Works Capacity							
		Notes – Addresses Wood Village’s high proportion of manufactured homes as a total of housing supply. Continuing action from 2017 NHMP							

Hazard Action ID		Mitigation Actions – City of Wood Village							
Multi-Hazard	4	Implement natural hazard resilience actions identified in the upcoming update to the city's water and wastewater master plans.							
		<u>Plan Goals</u> – 2,3,5			<u>Hazards Addressed</u> – Earthquake, Flood				
		<u>Lifelines</u> – Water and Wastewater Systems			Prioritization Criteria				
		Implementation Lead	Coordinating Partnerships	Equity	Benefit	Cost	Risk	Capacity	Priority Score
				1	2	1	3	2	9
		Potential Funding – Federal grants - BRIC, EPA; state grants - OHA, DEQ							
		Potential Implementation Methods – Master Plan, Capital Outlays, Public Works Internal Procurement							
		Notes -							
Severe Weather	5	Collaborate with Multnomah County to identify potential in-home cooling interventions for the most at-risk residents living in mobile home parks within the city.							
		<u>Plan Goals</u> – 1,2,4,5			<u>Hazards Addressed</u> – Severe Weather (Extreme Heat)				
		<u>Lifelines</u> – Housing, Community Resilience			Prioritization Criteria				
		Implementation Lead	Coordinating Partnerships	Equity	Benefit	Cost	Risk	Capacity	Priority Score
		City Manager's Office	Multnomah County Emergency Management, Department of County Human Services	3	3	3	3	2	14
		Potential Funding – Existing County, State, Federal Programs							
		Potential Implementation Methods – Emergency Operations Plan							
		Notes - Addresses Wood Village's high proportion of manufactured homes as a total of housing supply.							

5.4.2 City Overview

The City of Wood Village was incorporated in 1949 and has continued as a primarily residential suburb since its origins as a wartime housing project for employees of an aluminum plant in 1942. Of the cities included in this plan, Wood Village is the most recently incorporated, and the smallest in size and population.



Figure 148 - Map of Wood Village city limits, outlined in red.

Wood Village is completely surrounded by other municipalities, and unlike its neighbors Gresham, Fairview and Troutdale, does not extend north all the way to the Columbia River. Because of these characteristics, Wood Village has less wetlands and floodplains, and less risk from hazards associated with those landscapes. Wood Village is still largely low-lying, so landslide risks are also low. Acute location-specific hazards, apart from earthquake, are not prevalent. Wood Village does face the same risk as all other entities from regional level climate events and air quality hazards.

Wood Village has seen consistent population growth over the last 20 years, which has taken place as infill and increased density since the city limits cannot expand. Despite that growth limitation, Wood Village remains one of the fastest growing cities in the county as of 2021.

Table 43 – Wood Village Population by Census Year (For population details, see Community Profile chapter)

Census Year	Total Population – City of Wood Village	Percentage Change
2000	2,860	1.6% (1990)
2010	3,878	35.6% (2000)
2015 (est)	3,910	
2020	4,387	10.9% (2015)
2021 (est) ⁸⁹	4,478	

Wood Village has exceptional population characteristics that may make it less resilient to hazards and require specific action planning for communicating natural hazard risk.

Of the participating entities in this plan, Wood Village has:

- The highest proportion of children;
- The highest proportion of people with limited proficiency in English;
- The highest proportion of Hispanic population;
- The highest proportion of mobile homes as a housing type.

Transportation

Interstate 84 runs east/west through the northern portion of Wood Village, including a major interchange and overpass at NE 238th Drive. Other key east-west routes are NE Glisan Street, NE Halsey Street, NE Sandy Boulevard, and NE Arata Road. NE 238th Drive is the key north/south route.

Public transportation is provided through TriMet bus service.

Utilities

Wood Village provides water to its residents via 12 miles of pipelines from four wells and three reservoirs within the city limits. The wells draw water from the Troutdale Aquifer. Wood Village also provides wastewater services, stormwater management, and residential street maintenance.

⁸⁹ 2021 population estimates from the Portland State University Population Center. All other totals or estimates come from the US Census Bureau.

Electricity is provided by Portland General Electric (PGE) and natural gas by NW Natural.

Critical Facilities

A full list of critical facilities can be found in the Human-Caused and Technological Hazard Identification and Risk Assessment, included as an annex to this plan. Communities define critical facilities through their own definition.

For this update, the City of Wood Village added the overpass bridge at Interstate 84 and NE 238th Drive as



Figure 149 - Photo of the Wood Village City Hall, opened in 2021. Photo - LRS Architects

critical infrastructure. The critical facilities existing in Wood Village, as defined in this plan:

- Bridge
- Childcare Facilities
- City Hall
- Residential Care Facilities

5.4.3 Five Year Update, 2017-2022

Event History

Wood Village was subject to impacts from extreme climate events that impacted all of Multnomah County, including disruptions to roads from winter storms and severe rainfall, and health effects from heat and smoke.

No deaths from the 2021 Heat Dome event were recorded in Wood Village’s zip code. Long-term health impacts from heat or smoke across Multnomah County are yet to be determined.

Mitigation Activities

Within the last five years, Wood Village has significantly expanded communications in Spanish and Russian, recognizing the main non-English languages used in the city. City newsletters are released monthly and always include an item related to hazards, and the city has added bilingual staff to better support residents’ needs.

A new Municipal Building was opened in 2021, providing central community space built to modern building code. A new splash pad at the site has seen extensive use, providing an additional cooling space for residents during heatwaves.

New Data

No new natural hazard risk or vulnerability data was created specifically for Wood Village, but the city is included in new studies that have provided up-to-date analyses for earthquake and landslide exposure, wildfire risk, and improved climate risk and social vulnerability data.

Updated flood risk maps were printed for the city in February 2019 as part of a remapping project that covered a portion of eastern Multnomah County.

Development Impacts

Growth occurring in Wood Village has increased the density of the city and increased the proportion of multi-family housing. Because of the significant liquefaction risk across much of the planning area, this increases the number of people at risk and has increased requirements for hazard communication and response planning. New construction is required to meet Oregon Residential and Structural Specialty Codes.

As noted above, Wood Village does not face acute hazard risk from flood, landslide, wildfire or volcano, so the location of new and denser development has not significantly increased risk from those hazards. The increase in population will increase the number of people at health risk from heat, cold, power loss, and wildfire smoke.

5.4.4 Local Hazard Analysis



Earthquake – Risk Rating High

See Earthquake Section for more detailed risk and vulnerability information.

In scenarios of a Columbia Subduction Zone event and a Portland Hills crustal earthquake, Wood Village would expect to have strong, fairly uniform shaking across the entire city.

However, the threat of liquefaction is high in a band of loose soils tracking roughly along NE Halsey Street, including residential areas, the Municipal Building and an important commercial center near Interstate 84.

This soil characteristic gives Wood Village significant susceptibility to earthquake. Although overall impacts, particularly injury and loss of life, are not predicted to be as severe as in neighboring communities with critical community assets located in wet soils along the Columbia River, Wood Village is still expected to see significant building damage. The city's diverse population may also face resource or language barriers to pre-disaster preparation and post-disaster response and recovery actions. Wood Village's three major mobile home parks could also face higher risk of damage from ground shaking but are fortunately almost entirely located outside of the high risk liquefaction area.

Resilience of reservoirs is an area of concern and is being addressed as part of new water system master planning. The overpass at NE 238th and Interstate 84 has been added to this plan as critical infrastructure, because of its importance for local travel.

[An interactive version of this map can be found here \(Earthquake Hazard – Earthquake Liquefaction \(Soft Soil\) Hazard\)](#)

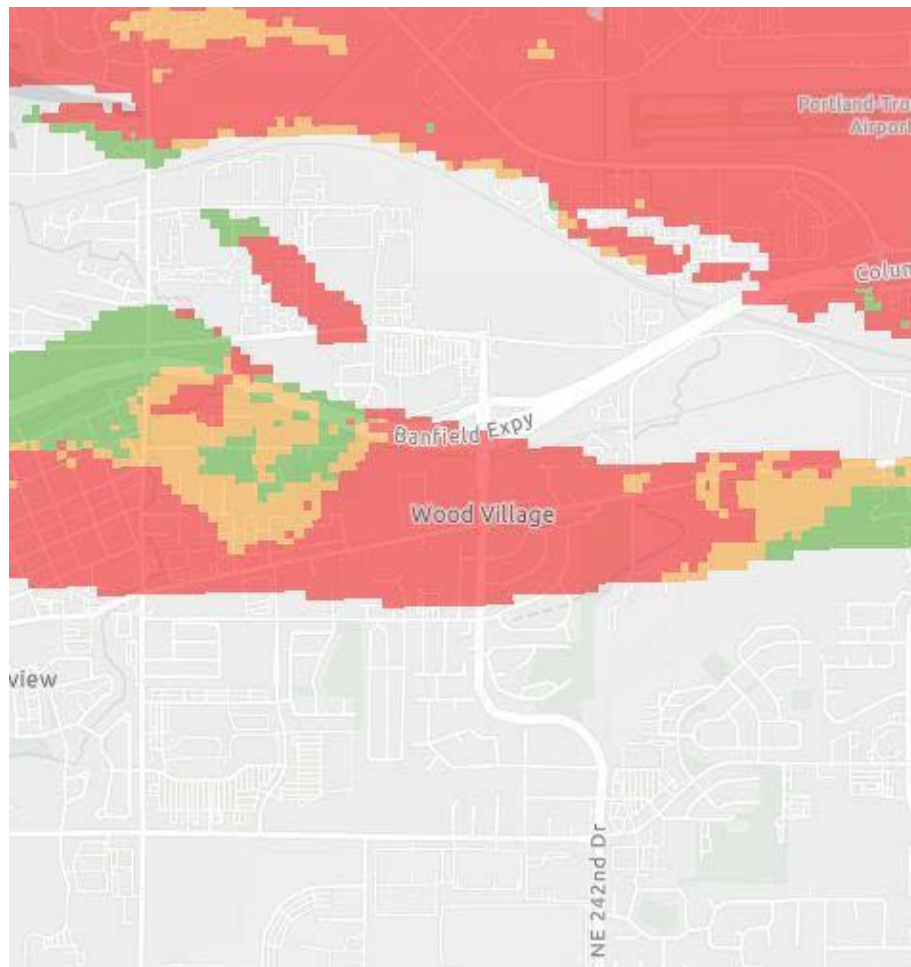


Figure 150- Map showing soil liquefaction risk areas in Wood Village, red is high risk, yellow is moderate risk and green is lower risk.. Map from DOGAMI HazVu site.



Flood – Risk Rating Low

See Flood Section for more detailed risk and vulnerability information.

Wood Village is the least flood-threatened city in Multnomah County, with only a tiny area of mapped FEMA regulatory floodplain. This single flood risk zone is a ponding area from a backup of Salmon Creek that would reach the point where Interstate 84 passes under a rail overpass on the far northeastern corner of the city limits. No structures are threatened by this risk. Wood Village is also located southerly enough to be largely unaffected even by a significant levee breach along the Multnomah County Drainage District levee system.

Wood Village is the only jurisdiction in Multnomah County without any structures within the NFIP regulatory flood hazard. There are locations where a larger, 500-year flood event could impact the city, but those areas are also extremely limited.

Stormwater management will continue to be the primary flood concern as the city continues to develop within its fixed boundaries. The relative risk of flooding remains low however. It should be noted that flooding can occur anywhere and a quarter of flood claims are made outside of FEMA mapped risk areas.

[An interactive version of this map can be found here \(Flood Hazard – Effective FEMA Flood Data\)](#)

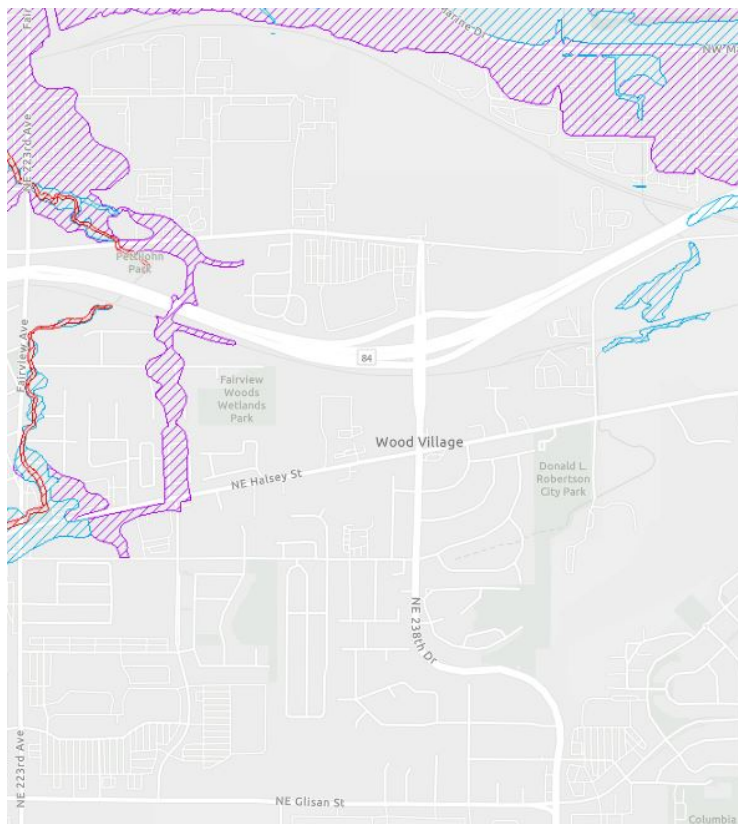


Figure 151 - Map showing FEMA mapped flood hazard area in and around the City of Wood Village. The regulatory 1% annual chance flood (100-year flood) area is shown in blue and the .2% annual chance flood (500-year flood) is shown in purple. Map - DOGAMI HazVu site.

Wood Village has participated in the National Flood Insurance Program since 1985, despite not having any mapped regulatory flood risk areas until 2019. Program participation allows city residents to purchase federal flood insurance and requires the city to maintain a flood protection ordinance that would regulate floodplain development if maps change in the future and new flood risk areas are identified. As of 2016, there were no active policies in the city and no record of any claims. As there are no historical claims, Wood Village has no repetitive loss or severe repetitive loss structures. Local administration of the NFIP is the responsibility of the Public Works department, under [Section 425](#) (Floodplain Hazard Areas) of the city's Development Code.

Urban stormwater is managed by the city, through its Storm Water System Facility Plan. Stormwater drainage is managed on Arata Creek, No Name Creek and Fairview Creek within the city limits.



Landslide – Risk Rating Low

See Landslide Section for more detailed risk and vulnerability information.

DOGAMI landslide inventories show no historic landslide records and no deep landslide deposits within the City of Wood Village (there are two small areas with evidence of historic alluvial fans), leading to the relative risk being determined as low. There is no identified area subject to deep landslides in the jurisdiction.

[An interactive version of this map can be found here \(Landslide Susceptibility – Susceptability to Shallow Landslides\)](#)

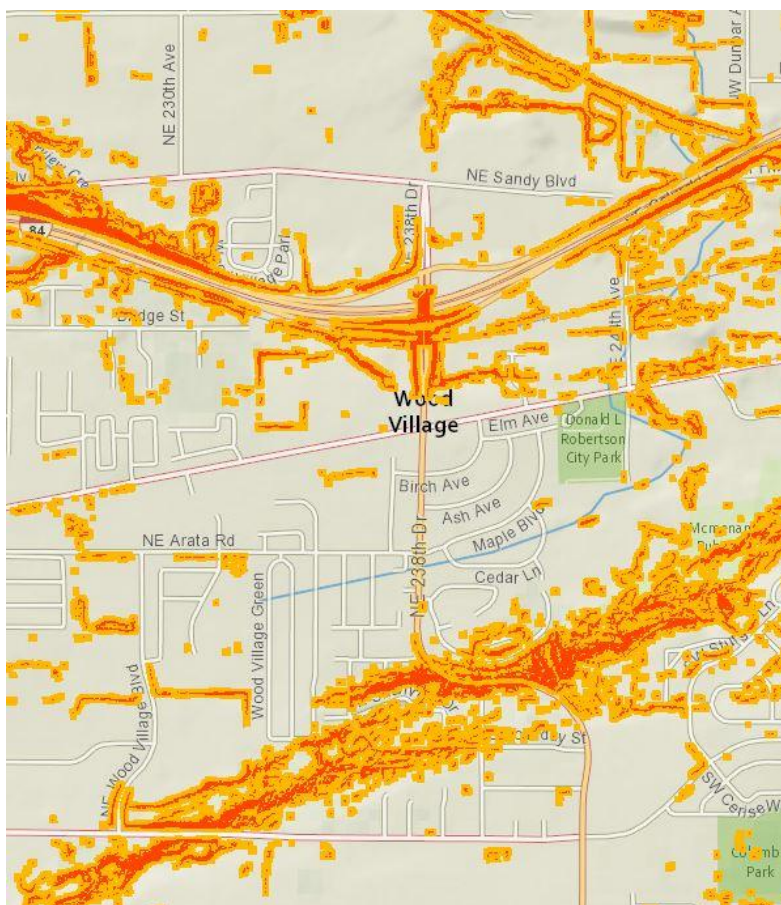


Figure 152 - Map showing shallow landslide risk in the City of Wood Village. The darker color of orange represents areas with higher risk. Map - DOGAMI SLIDO map.

There are a number of small slopes that meet thresholds for potential of shallow landslides. Areas with particular vulnerability to landslide in Wood Village are the hilly ridge shown in the southern portion of the City, especially where it crosses NE 238th Drive. However, these slides

would be expected to be minor and the highest risk areas do not have any structures at risk. Road berms around the Interstate 84 interchange are also highlighted in the mapping as potential locations of small landslides.

Severe Weather



- **Extreme Heat** – Risk Rating High
- **Winter Storm** – Risk Rating High
- **Wind Storm** – Risk Rating Moderate
- **Drought** – Risk Rating Low



See Severe Weather Section for more detailed risk and vulnerability information.

Wood Village identified severe weather as its highest risk hazard in the 2017 version of this plan. In this update, Wood Village has broken out risk scoring for each of the four severe weather hazards, maintaining Extreme Heat and Winter Storm as the highest risk hazards to the city.

Extreme heat is a threat to all city residents, especially to those with existing health conditions, older residents, and those living in uncooled spaces. Wood Village's high proportion of residents living in mobile homes are more likely to lack central cooling and be at risk during extreme events. Overall, Wood Village does not have an extremely high rate of urban heat islands because of its lower density development patterns, but there are some residential areas with hotspots and industrial areas in the northern part of the city may have risk for those working outdoors.

No emergency sheltering for heat, cold or smoke has been formally established yet within Wood Village.

[An interactive version of this map can be found here](#)

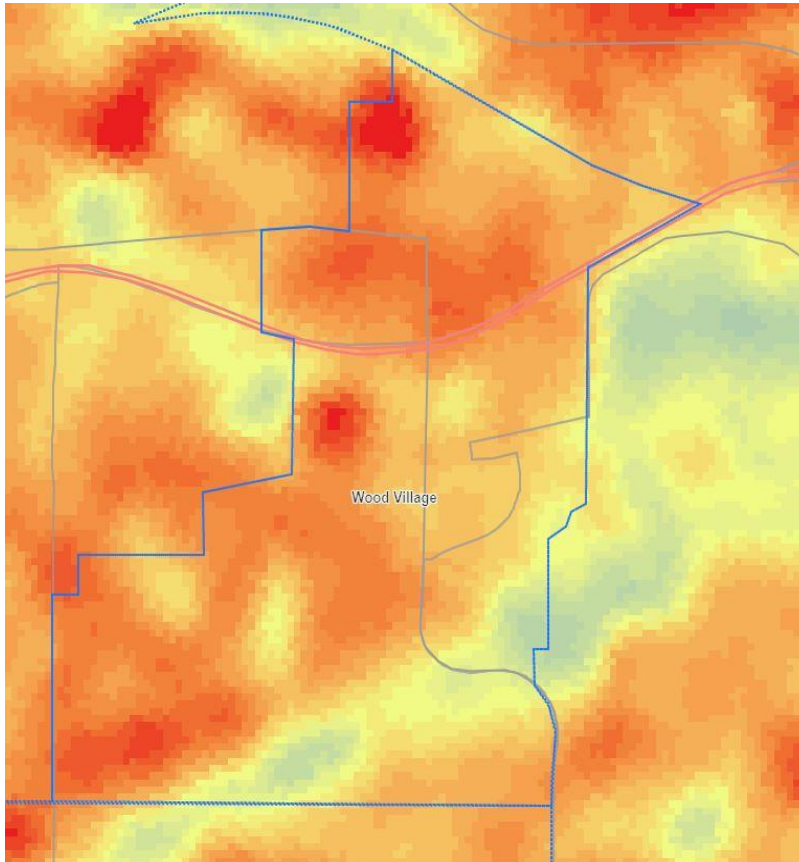


Figure 153 - Map showing urban heat island areas in the City of Wood Village. Areas with the strongest effect are shown in red. Map - Metro

Winter storms are also a high hazard across Wood Village because of threat to health and safety and risk to infrastructure. The limited amount of public transportation available makes travel during winter events difficult, but the city has been able to manage support of residents because of its small size.

Wood Village has continued a mitigation action for windstorm risk from the 2017 plan. Wood Village has three large mobile home parks, where residences could be blown off of foundations by extreme straight-line winds or tornadoes.

Drought is rated as a low risk because Wood Village's municipal water comes from local underground aquifers that are able to recharge year-round from rain.



Volcano – Risk Rating Low

See Volcano Section for more detailed risk and vulnerability information.

A major eruption of Mount Hood could send a massive debris flow down the Sandy River to the Columbia River. This inundation would be expected to spread along low-lying areas along the river for miles. Wood Village could see small amounts of this impact in the worst case eruption scenario, but the probability of this level of event is extremely low and impacts would be much less than in neighboring communities.

[An interactive version of this map can be found here \(Volcano Hazard – Moderate Hazard Zone\)](#)



Figure 154 - Map showing potential lahar impacts from an extreme (10,000-100,000 year event) Mount Hood eruption. Map from DOGAMI HazVu site.

A full vulnerability analysis of potential lahar damage in Wood Village has not yet been performed. Mapping indicates that even in a ‘worst-case’ scenario, impact would be limited to industrial properties in the far northern part of the city.

An ashfall event would impact Wood Village similarly to other jurisdictions in the county, causing respiratory health impacts, disrupting transportation routes and potentially impacting structural stability and systems.

Wildfire and Wildfire Smoke



Wildfire – Risk Rating Low



Wildfire Smoke – Risk Rating High

See Wildfire and Wildfire Smoke Section for more detailed risk and vulnerability information.

Wildfire smoke is considered a high risk for the City of Wood Village. As with all other cities in this plan, all of Wood Village’s population, especially those with existing health risk factors, face impacts from wildfire smoke events coming from wildfires across the region. Because of the city’s small size, formal emergency clean air spaces as part of a countywide response have not been provided in Wood Village in previous events.

Wildfire smoke is not likely to come from wildfires within the city limits, because of limited areas with sufficient vegetation to cause a large fire. Wood Village is considered to have low risk for wildfire, although potential of small fires not mapped by the Oregon Wildfire Risk Explorer still have potential to spread to structures and parts of the city are considered to be Wildland Urban Interface areas because of their proximity to large potential fire sites east of Troutdale and Gresham.

[An interactive version of this map can be found here \(Wildfire Potential Impacts – Overall Potential Impacts\)](#)

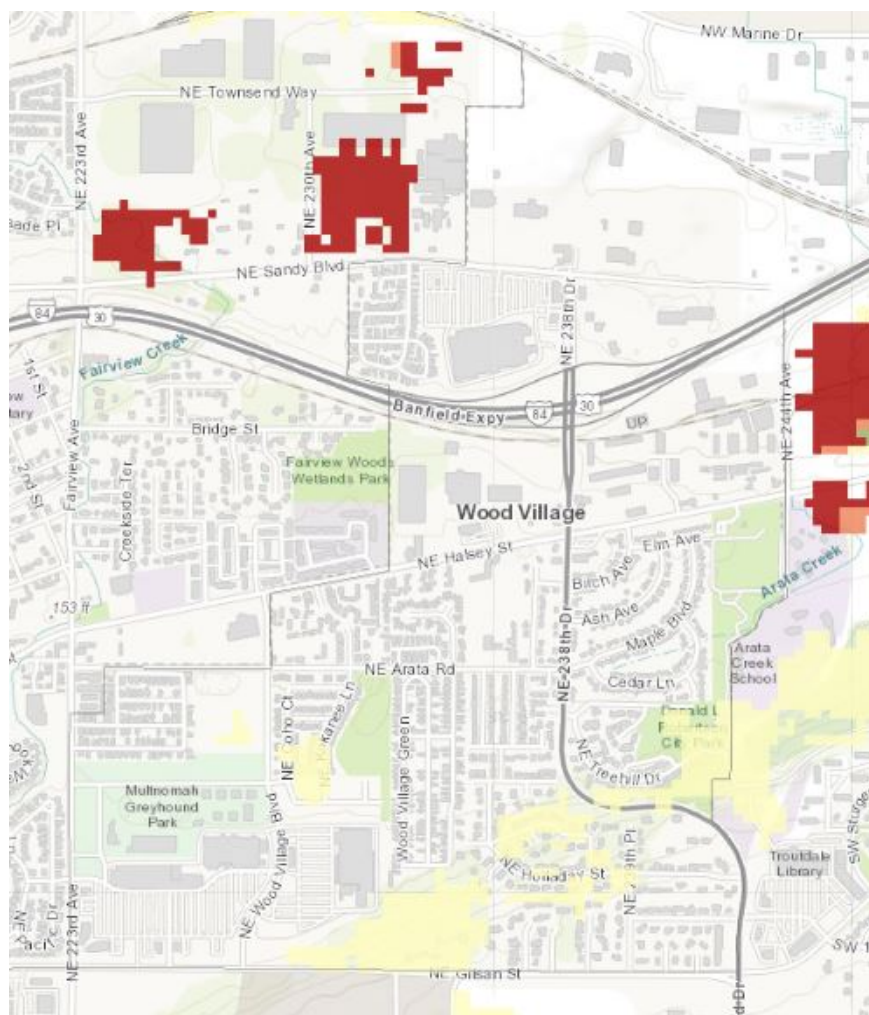


Figure 155 - Map showing potential impact from wildfire to structures, infrastructure and natural resources in the City of Wood Village. Sites in red have the highest potential impact, but are located outside of the city. Yellow areas inside the City have lower predicted impact. Map from Oregon Wildfire Explorer with data from PNW-QWRA.

The Oregon Wildfire Risk Explorer indicates the location of fire starts growing to 250 acres or larger. Probabilities at this scale are less reliable and it is possible that an urban fire could be caused by a fire beginning outside of the city boundaries and spreading into the city. However, increased industrial development north of Interstate 84 is reducing the number of vegetated lots that could be an ignition point of an urban wildfire.

5.4.5 Hazard Risk Scoring

The identified levels of risk from each hazard were determined by the City of Wood Village, using a scoring methodology designed by Oregon Emergency Management, and applied across the state to contextualize local risk perception.

Wood Village Hazard Risk Analysis										
Hazard	History (Weight Factor = 2)		Vulnerability				Probability (Weight Factor = 7)		Risk Score	Initial Risk Ranking
			Average (WF = 5)		Max (WF = 10)					
Earthquake	2 x	1	5 x	10	10 x	9	7 x	1	149	High
Flood	2 x	3	5 x	3	10 x	3	7 x	3	72	Low
Landslide	2 x	2	5 x	3	10 x	3	7 x	2	63	Low
Severe Weather – Extreme Heat	2 x	4	5 x	6	10 x	6	7 x	8	154	High
Severe Weather – Winter Storm	2 x	8	5 x	7	10 x	8	7 x	8	187	High
Severe Weather – Wind Storm	2 x	5	5 x	4	10 x	5	7 x	7	129	Moderate
Severe Weather – Drought	2 x	2	5 x	2	10 x	2	7 x	5	69	Low
Volcano	2 x	1	5 x	1	10 x	1	7 x	2	31	Low
Wildfire	2 x	3	5 x	2	10 x	3	7 x	3	67	Low
Wildfire Smoke	2 x	6	5 x	7	10 x	7	7 x	6	159	High

5.4.6 Wood Village Aligned Plans and Other Implementation Processes

Overview

Wood Village has a similar set of plans and processes as other communities in Oregon, under the statewide Building Code and Land Use Programs. Wood Village is the smallest city included in this plan, but still manages its own stormwater, wastewater collection, drinking water and local streets. Wood Village is reliant on managing some day-to-day operations through contracts and outsourcing and does not have resources to significantly expand in-house resilience programs through grants management or plan and code expansion. Mitigation strategies in this update rely on integrating mitigation into existing infrastructure system planning or using existing city resources and budgets. Lifeline resilience is enhanced by Intergovernmental Agreements (IGAs) with neighboring cities to support each other in emergencies to maintain critical services.

- [Comprehensive Plan](#)
 - Most recently amended in 2017

- Chapter 7 of the plan addresses the extent of and severity of natural hazards to Wood Village. References to the NHMP should be updated in the next revision, and risk assessment information from this plan update should be incorporated where relevant.
- [City Budget](#)
 - Updated for each fiscal year, beginning July 1
 - The annual budget provides funding that can be used to improve the resilience of Wood Village. The risk assessment and identified mitigation strategies in this plan can be brought to future budget processes to identify opportunities where funding can increase city resilience.
- Emergency Operations Plan (EOP)
 - Most recently updated in 2012
 - The NHMP mission and goals work together with the EOP to coordinate response to natural disasters. The next update to the EOP should be revised to match the risk assessment in the NHMP.
- [Transportation System Plan \(TSP\)](#)
 - Most recently updated in 2017
 - The TSP guides the implementation of transportation programs in the city, and impact from natural hazards can damage or limit systems. The plan has room for additional description of natural hazard threats that would impact transportation infrastructure and operations.
- [Water Master Plan](#)
 - Current plan adopted in 2023
 - The Water Master Plan outlines the existing water service infrastructure and opportunities for improvement. The updated master plan will be used to identify future water system resilience projects, as noted in this plan update.
- [Sanitary Sewer Master Plan](#)
 - Current plan adopted in 2023, an update is in process as of 2023
 - The Sanitary Sewer Master Plan identifies improvements and long-term planning for the system. The plan can be used to identify mitigation opportunities by incorporating information from the NHMP risk assessment, and this opportunity is part of an action in this plan update.
- [Parks Master Plan](#)
 - Adopted in 2015, and most recently updated in October 2018
 - Parks can serve as amenities to mitigate hazards or be subject to hazards themselves. Parks planning can be used in coordination with this plan to identify locations of future parks that support hazard mitigation goals.
- [Stormwater Management Plan](#)
 - Updated for 2022-23 fiscal year.
 - The Stormwater Management plan builds off of the 2012 Stormwater System Master Plan by identifying a number of specific strategies to meet program goals. Many actions support water quality, but stormwater flood prevention is also mentioned and can continue to align with NHMP goals relating to stormwater risks.
- [Stormwater System Master Plan](#)
 - Adopted March 2012
 - The Stormwater System Master Plan is the overview of existing and planned stormwater facilities. Updates that can inform the NHMP may come from updated

risk assessments based on higher discharge rates that could result from climate related rainstorms. Historic stormwater flood events are listed in the plan.

- [Urban Renewal District Plan](#)
 - Plan approved in 2010
 - The Urban Renewal Plan provides a long-term framework for community improvements in area eligible for Tax Increment Financing. Future updates to the plan could align renewal projects with risk reduction efforts identified in this plan’s risk assessment.
- [Zoning and Development Code](#)
 - Most recently amended in May 2022
 - The code creates land use and building code requirements in the city, some of which are directly related to natural hazards. Future development regulations can use the revised risk assessment in this plan to inform strategies and develop future hazard mitigation planning.