



**CITY OF MOLALLA  
CITY COUNCIL REGULAR MEETING  
\*\*EXECUTIVE SESSION TO FOLLOW\*\*  
AGENDA**

Council Chambers | Molalla Civic Center - 315 Kennel Avenue - Molalla  
Wednesday | July 24, 2024 | 7:00 PM

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*NOTICE: City Council will hold this meeting in-person and through video Live-Streaming on the City's Facebook Page and YouTube Channel. Written comments may be delivered to City Hall or emailed to [recorder@cityofmolalla.com](mailto:recorder@cityofmolalla.com). Submissions must be received by 12:00 p.m. the day of the meeting.*

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*[This institution is an equal opportunity employer.](#)*

**1. CALL TO ORDER AND FLAG SALUTE**

**2. ROLL CALL**

**3. CONSENT AGENDA**

- A. City Council Meeting Minutes – July 10, 2024 Pg. 2

**4. PRESENTATIONS, PROCLAMATIONS, CEREMONIES**

**5. PUBLIC COMMENT**

*(Citizens are allowed up to 3 minutes to present information relevant to the City but not listed as an item on the agenda. Prior to speaking, citizens shall complete a comment form and deliver it to the City Recorder. The City Council does not generally engage in dialogue with those making comments but may refer the issue to the City Manager. Complaints shall first be addressed at the department level prior to addressing the City Council.)*

**6. PUBLIC HEARINGS**

**7. ORDINANCES AND RESOLUTIONS**

- A. Resolution No. 2024-11: Natural Hazard Mitigation Plan (Corthell) Pg. 29

**8. GENERAL BUSINESS**

- A. Astound Broadband – Rate Increase (Huff) Pg. 81  
B. Clackamas County Rural Needs Assessment (Huff)

**9. STAFF COMMUNICATION**

**10. COUNCIL COMMUNICATION**

**11. RECESS INTO EXECUTIVE SESSION**

Held pursuant to Oregon Public Record Law, ORS 192.660(2):

(e) To conduct deliberations with persons designated by the governing body to negotiate real property transactions.

**12. RECONVENE REGULAR SESSION**

**13. ADJOURN**

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*Agenda posted at City Hall, Library, and the City Website at <http://www.cityofmolalla.com/meetings>. This meeting location is wheelchair accessible. Disabled individuals requiring other assistance must make their request known 48 hours preceding the meeting by contacting the City Recorder's Office at 503-829-6855.*



City of Molalla  
City Council - Regular Meeting  
Minutes – July 10, 2024  
Molalla Civic Center | 315 Kennel Ave. | Molalla, OR

**CALL TO ORDER**

The Molalla City Council Meeting of July 10, 2024 was called to order by Mayor Scott Keyser at 7:00pm.

**COUNCIL ATTENDANCE**

Present: Mayor Scott Keyser, Council President Jody Newland, Councilor Leota Childress, Councilor Terry Shankle, Councilor Eric Vermillion, Councilor RaeLynn Botsford, and Councilor Darci Lightner. Grace Peterson, Student Council Liaison.

**STAFF IN ATTENDANCE**

Dan Huff, City Manager; Christie Teets, City Recorder; Mac Corthell, Assistant City Manager; Cindy Chauran; Finance Director.

**APPROVAL OF AGENDA**

Council President Newland requested that Item 7A, Resolution No. 2024-11: Adopting a Natural Hazard Mitigation Plan, be moved to the July 24, 2024 Council meeting.

**ACTION:**

Council President Newland made a motion to remove Item 7A, Councilor Vermillion seconded. Motion passed 7-0.

AYES: Vermillion, Shankle, Childress, Newland, Botsford, Lightner, Keyser.

NAYS: None.

ABSENTIONS: None.

**CONSENT AGENDA**

- A. Work Session Meeting Minutes – May 22, 2024
- B. Work Session Meeting Minutes – August 9, 2023
- C. City Council Meeting Minutes – June 26, 2024

**ACTION:**

Councilor Botsford moved to approve the Consent Agenda; Councilor Vermillion seconded. Motion passed 7-0.

AYES: Vermillion, Shankle, Childress, Newland, Botsford, Lightner, Keyser.

NAYS: None.

ABSENTIONS: None.

**PRESENTATIONS, PROCLAMATIONS, CEREMONIES**

- A. OLCC License Request – Michelades y Antojitos El Perico, LLC.

**ACTION:**

Council President Newland moved to approve the OLCC License Request; Councilor Shankle seconded. Motion passed 7-0.

AYES: Vermillion, Shankle, Childress, Newland, Botsford, Lightner, Keyser.

NAYS: None.

ABSENTIONS: None.

**PUBLIC COMMENT**

None.

**PUBLIC HEARINGS**

None.

**ORDINANCES AND RESOLUTIONS**

- ~~A. Resolution No. 2024-11: Adopting a Natural Hazard Mitigation Plan~~

Removed from Agenda, rescheduled for July 24, 2024 meeting.

B. Resolution No. 2024-12: Declaring the City's Election to Receive State Revenue Sharing

ACTION:

Council President Newland made a motion to approve Resolution No.2024-12; Councilor Vermillion seconded. Motion passed 7-0.

AYES: Vermillion, Shankle, Childress, Newland, Botsford, Lightner, Keyser.

NAYS: None.

ABSENTIONS: None.

C. Resolution No. 2024-13: Certifying All Requirements to Receive State Shared Revenues Have Been Met

ACTION:

Councilor Botsford made a motion to approve Resolution No. 2024-13; Councilor Vermillion seconded. Motion passed 7-0.

AYES: Vermillion, Shankle, Childress, Newland, Botsford, Lightner, Keyser.

NAYS: None.

ABSENTIONS: None.

GENERAL BUSINESS

A. Resurfacing Program Update

Assistant City Manager Corthell provided an update in the City's Resurfacing Program. Detailed information is provided in the Staff Report. (Pg. 79)

B. Community Development Quarterly Report

Assistant City Manager Corthell shared the Quarterly Report with Council, describing projects in detail. Mr. Corthell commended James Clifton, Water Treatment Operator, for his efforts in Public Works. (Report attached to these Meeting Minutes.)

C. Library Board Opening

City Recorder Teets announced an opening on the Library Board. Interested parties may contact her directly.

STAFF COMMUNICATION

- City Manager Huff shared that the 4<sup>th</sup> of July week went very well. Six event permits for July 4<sup>th</sup> only were issued, meaning that the community is very involved right now. Mr. Huff also announced that the LOC Conference will be held in Bend this fall, he would like Council to decide who will participate.
- Finance Director Chauran provided an update regarding this years audit, it is scheduled for September. Ms. Chauran also announced that our new Office Specialist began on July 1<sup>st</sup> and is a great addition to staff.
- City Recorder Teets announced that Planning Commission applications are still being received. She also reminded voters to register on or before October 15<sup>th</sup> for the upcoming November General Election.
- Assistant City Manager Corthell shared that the Water Treatment Plant earned an Outstanding Performance Award from Oregon Health Authority. He also announced that all funding for the new Wastewater Treatment Plant has been secured.

COUNCIL COMMUNICATION

- Student Council Liaison Peterson thanked volunteers that helped with the Rodeo and the Giant Street Parade. She encouraged folks to volunteer to help with the Parade next year. Miss Peterson commented on small businesses thriving on reviews. She noted that often people leave only poor reviews, and the importance of giving a business a positive review when you receive good customer service.
- Councilor Lightner promoted activities for Teen's at the Molalla Library, as well as Music in the Parks events throughout the summer.
- Councilor Botsford thanked City Staff, specifically Police and Public Works, for their help with the Giant Parade. She also offered her condolences to the Luttrell Family, who experienced a death in the family during the July 4<sup>th</sup> week.

- Councilor Vermillion expressed his gratitude to Molalla Police for their involvement with the Giant Street Parade.
- Councilor Shankle had nothing to report.
- Councilor Childress had nothing to report.
- Council President Newland commended staff and community members for the great 4<sup>th</sup> of July week. Parks CPC will focus fundraising on the equipment for the younger kids at Fox Park. Fairwinds and Flying Axes is hosting a Parks CPC fundraiser on July 20<sup>th</sup>. Garage Sale items are being accepted, and the sale is on July 25-27<sup>th</sup>.
- Mayor Keyser complimented the Police Department and appreciated their hard work at the Parade. He announced a change in the Car Show venue to Clark Park, as it is normally held at O'Reilly's. The VFW will be onhand to make pancakes, along with the Feedshack and Church of Smoke. He offered his prayers and condolences to the Luttrell family. Mayor Keyser is on the Safety Committee for the Molalla Corridor. He has contacted ODOT regarding signs that caution people to "Slow Down" in the the corridor. Mayor Keyser will attend the OMA Conference in Klamath Falls next week.

For the complete video account of the City Council Meeting, please go to YouTube  
"Molalla City Council Meetings – July 10, 2024"

**ADJOURN**

Mayor Keyser adjourned the meeting at 8:04pm.

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Scott Keyser, Mayor

ATTEST:

\_\_\_\_\_  
Christie Teets, CMC - City Recorder

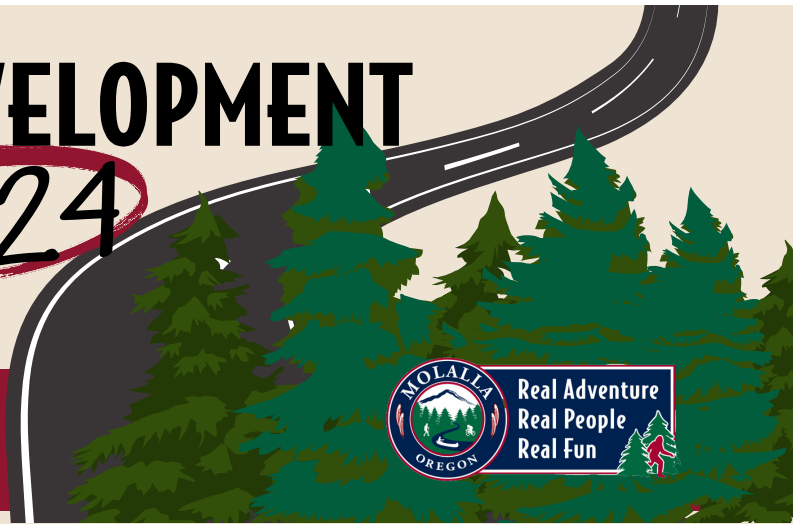
Attachments:

- Community Development Department Report

# COMMUNITY DEVELOPMENT REPORT Q2'24

315 Kennel Ave., Molalla, OR 97038

Phone (503)759-0205      www.cityofmolalla.com



## What's Inside

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- pg 8. CODE COMPLIANCE
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## Community Development Department

The Community Development Department is made up of the Planning Division, Public Works Division, Economic Development Section, and Code Compliance Section. Below is a summary of the activities of each Division and/or Section over the past Fiscal Year (2023-2024), as well as a list of accomplishments and goals for Fiscal Year 2024-2025.

## Department-Wide Goals for Fiscal Year 2024-2025

Main Goal	Tasks
iWorQ Work & Asset Management Platform	<ul style="list-style-type: none"> <li>● Development</li> <li>● Implementation</li> </ul>
Granicus Website	<ul style="list-style-type: none"> <li>● Overhaul</li> <li>● Implementation</li> </ul>
Molalla Forest Road at Chief Yelkus Park	<ul style="list-style-type: none"> <li>● ROW Encroachment Reconciliation</li> </ul>
Railroad Right of Way	<ul style="list-style-type: none"> <li>● Acquisition</li> </ul>

# PLANNING

## Land Use & Permitting

The Planning Division manages all development and permitting processes required to develop in Molalla and is supported by Clackamas County Building Codes, Molalla Fire District, and several state agencies as applicable for a given development.



Application Type	NEW	Approved	Open
<i>Pre-Application</i>	11	11	0
Zoning Letter	6	3	3
Building - Residential	11	10	0
Building - Comm/Ind/Pub	6	5	0
Type 1 - Other	80	73	0
Type II	2	1	0
Type III	4	4	0
Type IV	2	2	0
Final Plat	5	4	1
Council Appeals	0	0	0
LUBA Appeals	0	0	0
<i>*Note - withdrawn or migrated applications are not accounted for in this table.</i>			

## House Bill 2415 - Electronic Permitting

This bill requires all cities over 10,000 in population to provide an electronic permitting platform by January of 2025. To comply with that requirement, the City reviewed several options and determined that the most practical and cost-effective option for Molalla is a system called iWorQ. Planning and Engineering Staff have worked tirelessly to build the platform and is currently in beta testing with a projected go-live date of 8/1/24.

## PLANNING

### Long Range Planning

The Planning Division is currently engaged in multiple long-term planning processes to ensure the City's historic growth is managed in the best way possible under the law. Through these processes, city staff endeavors to preserve the small town feel of Molalla while simultaneously ensuring the people of Molalla reap the maximum benefits of managed growth.

## House Bill 2003

### Housing Production Strategies (HPS)

**What is the HPS?** The HPS is adoption of a set of housing production strategies to amend to the Comprehensive Plan for implementation over a 10-year period.

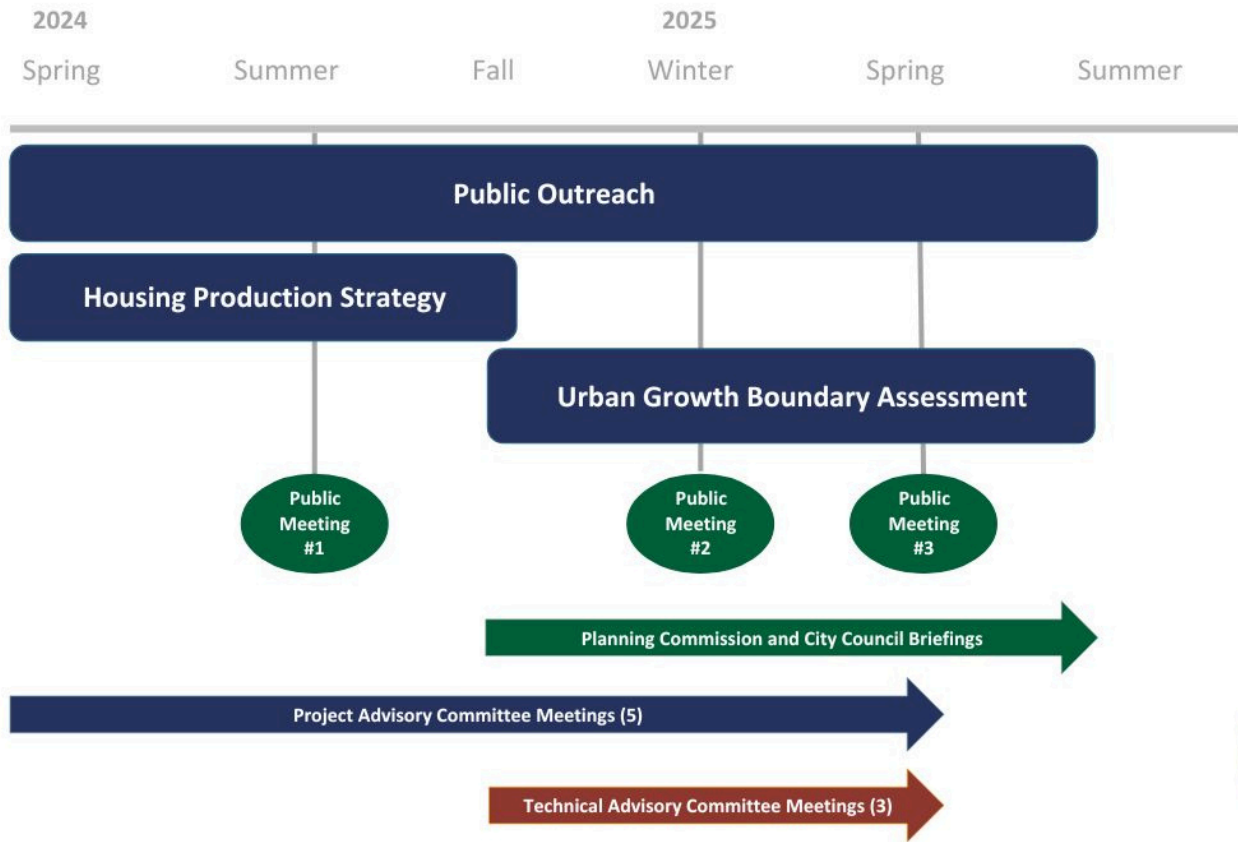
**Why are we completing the HPS?** The HPS is a requirement of House Bill 2003 for City's over 10,000 in population.

**How is this project funded?** This project is funded by 2 grants obtained by City Staff plus a \$10,000 cash and in-kind match.

**Who is involved in the HPS?** The project is spearheaded by the Planning Division with support from consultant 3J Planning. Significant public outreach has taken place including a town hall, community survey, planning commission review, and City Council review. Additional public outreach will be completed in conjunction with finalization of a draft HPS document.

**Project Status:** The City and consultant have met with the Project Advisory Committee, a group of community stakeholders, to review a contextualized housing memorandum. The final product is projected for City Council review and adoption in September of 2024.

# 21-16 Urban Growth Boundary (UGB) Amendment



**Molalla Current Page:** <https://current.cityofmolalla.com/urban-growth-boundary>

## The Sequential UGB Process

### Approved by City Council, County Board of Commissioners and DLCD

Department of Land Conservation and Development (DLCD) formally approved Molalla to use the Sequential UGB Process on March 28, 2023. Molalla is the first in the state to use the sequential process. The Sequential process mitigates risk by considering each portion of the UGB studies and expansion separately, thus limiting challenges to the task at hand without delegitimizing the entire process.

### Housing Needs Analysis and Buildable Lands Inventory (HNA/BLI)

#### Approved by City Council as an amendment to the Comprehensive Plan on 7/26/23 (Ord. 2023-07)

This work was funded by a grant obtained by City Staff with a \$5k cash and in-kind city match. The HNA/BLI is the first step in the Sequential UGB Workplan. This study analyzes existing conditions, undeveloped land, underdeveloped land, and infill opportunities for the residential zones, then reconciles it against the 20-year projected growth line to determine how much additional acreage will likely be needed to facilitate residential growth and all of the public accoutrements that come with it (e.g. roads, schools, parks, etc.).



## **Employment Opportunities Analysis and Buildable Lands Inventory (EOA/BLI)**

**This analysis and inventory are currently in-work with projected completion by 12/31/24**

This work is funded by a grant obtained by City Staff with a \$5k cash match.

The EOA/BLI is the second step in the Sequential UGB Workplan. This study analyzes existing conditions, undeveloped land, underdeveloped land, and target industries for the Commercial and Industrial Zones, then reconciles it against the 20-year projected growth line to determine how much additional acreage will likely be needed for employers to provide job opportunities to the growing population of Molalla, and all of the necessary accoutrements to that (e.g. roads, etc.).

The public engagement process for this initiative is still ongoing. Currently a project advisory committee composed of local stakeholders is meeting on a regular basis. Additionally, direct stakeholder meetings are planned to take place over the next few months along with Planning Commission review and input, and City Council review, input, and adoption.

### **Efficiency Measures, Sufficiency Assessment, Study Area Identification & Evaluation**

**This work has been contracted and will be performed in the following timeframe: 10/1/24-6/1/25**

This work is funded by a grant obtained by City Staff with a \$5k cash and in-kind match.

In a nutshell, this work includes ensuring all efficiencies that can reasonably be taken to minimize the quantity of land needed to meet demand over the 20-year planning horizon, have been planned – then discounts the total land need accordingly. Next, the study area is identified (typically 1 mile from the city limits in all directions), and evaluated for a set of criteria such as soil quality, serviceability, and the like.

Once the evaluation is complete, the land that best fits the criteria and meets the 20-year land need is identified and the final expansion procedures begin (e.g. Council Approval, County Approval, State Approval, potential challenges and referendums, and so on).

## **22-32 Parks Master Plan**

**What is the Parks Master Plan?** The Parks Master Plan is the document that provides City Staff direction for policies, improvements, and capital projects related to the City’s parks and trails systems.



**Molalla Current Page:** <https://current.cityofmolalla.com/parks-trails-master-plan-update>

**Why are we updating the Parks Master Plan?** The Parks Plan, like all Master Planning Documents, provides for a planning horizon (10-year for parks), but as the plan is executed and conditions within the City change, the plan must be updated to reassess the situation given all of the changes that occur. Molalla's plan is now 10-year old and in desperate need of updating!

**How is this project funded?** The project is funded by a combination of Parks Capital Funds and Parks System Development Charges.

**Who is involved in the Parks Master Plan?** The project is spearheaded by the Planning Division with support from consultant Cameron McCarthy Landscape Architecture and Planning. Significant public outreach has taken, and will take place including a community survey with approximately 400 responses, direct outreach at several community events, regular meetings with the Project Advisory Committee, a townhall meeting, Parks CPC review, Planning Commission review, City Council review and adoption. Additional public outreach will be completed.

**Project Status:** This project is currently underway with completion project by January of 2025.

# PLANNING – ACHIEVEMENTS & GOALS

## Achievements for Fiscal Year 2023-2024

### Master Planning Initiatives COMPLETED

23-02 Emergency Operations Plan	21-16 Sequential UGB Process Approval	21-16 Housing Needs Analysis & BLI
23-02 National Hazard Mitigation Plan	21-16 Housing Production Strategies - Draft Complete	

### Molalla Municipal Code Updates COMPLETED

Bars & Tavers	PSP Zone Reconciliation
Bonding Requirement Reconciliation	Enterprise Zone Expansion

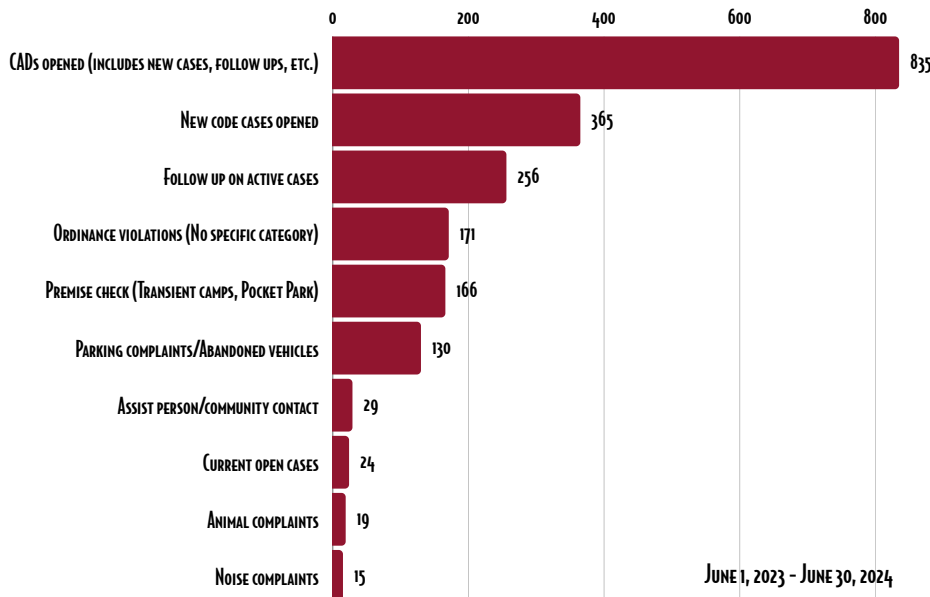
**Other:** Contract Planner for Overflow - Mid-Willamette Valley Council of Governments, Electronic Permitting Procurement and Development

## GOALS FOR FISCAL YEAR 2024-2025

- 21-16 Complete Employment Opportunities Analysis & BLI
- 21-16 Maintain Schedule for UGB Studies
- 22-32 Complete Parks Master Plan Update
- Develop & Implement InHouse Occupancy Tracker
- Develop Master Planning Document Workplan
- Complete Island Annexations
- Complete Electronic Permitting Implementation
- Complete Park Dedication & Fee in Lieu Ordinance
- Complete Mural Ordinance
- Assist in Development & Implementation of PW Work & Asset Management Platform
- Assist in Development & Implementation of New City Website



# CODE COMPLIANCE



## Additional information

Code Compliance is responding to an increased number of abandoned vehicle and garbage accumulation complaints. A developed process for these complaints and a working rapport with members of the community has resulted in quicker and lasting compliance. Code Compliance has responded with flyers and informational posting regarding parking and garbage removal standards.

The Ant Farm / Community Connect partnership continues to benefit the city with camp cleanups on public AND private property. Recently, camps have been located on property owned by private parties. These camps have been cleaned up to prevent continued activity and those areas continue to be monitored. Ant Farm has assisted several people in the community with vegetation clean ups, mitigating fire risk and providing a service to the Citizens of Molalla. Code Compliance has recently worked with several property owners on noxious vegetation violations. This initiative is almost complete with most properties inside the city now in compliance with noxious vegetation standards. This significantly reduces fire danger within the city limits.

## CODE COMPLIANCE ACHIEVEMENTS & GOALS

### Achievements for Fiscal Year 2023-2024

1. Developed Code Compliance Web Page on the Molalla Current
2. Designed and Implemented Code Compliance Program
3. Designed and Implemented Homeless Outreach Liaison Program
4. Designed and Implemented Hazard Mitigation Public Outreach Program
5. Integrated Code Compliance into Business License and Development Review Processes
6. Outfitted Code Compliance Officer with vehicle, uniforms, and other equipment as needed.
7. Cleared backlog of over 300 cases from multiple years prior to advent of the new program.
8. Joined the Oregon Code Enforcement Association and attended the annual conference
9. Heavily supported development of the Emergency Ops Plan, and National Hazard Mitigation Plan
10. Cleaned up and removed multiple transient camps from Molalla Parks and Private property.
11. Developed and fostered a strong partnership with Ant Farm Youth services for assistance in vegetation removal, and homeless camp removal
12. Reviewed potential bee ordinance with City Council presentation.

	<i>GOALS FOR FISCAL YEAR 2024-2025</i>
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	● <i>Public parking lot ordinance</i>
<input type="checkbox"/>	● <i>Noise ordinance</i>
<input type="checkbox"/>	● <i>Chicken ordinance</i>
<input type="checkbox"/>	● <i>Emergency Management Training</i>
<input type="checkbox"/>	● <i>Finalize Hazard &amp; Code Outreach Program</i>
<input type="checkbox"/>	● <i>Code Compliance Webpage</i>
<input type="checkbox"/>	● <i>Emergency Management &amp; Hazard Mitigation website</i>
<input type="checkbox"/>	
<input type="checkbox"/>	



## **ECONOMIC DEVELOPMENT**

The Economic Development Section is focused on business retention, business recruitment, and business assistance. This section was unmanned until April of 2024 when the Community Development Technician role was created and filled. This provided 0.35 FTE's to the Economic Development Section.

The work of this section will initially consist largely of bolstering Molalla events and other tourism to help draw consumers to the area. As the section continues to develop, employment land marketing, business recruitment, and relationship building will be added to the primary duties. Finally, other economic development programs will be explored by city staff and the City Council to determine what programs would be most effective and desirable in Molalla.

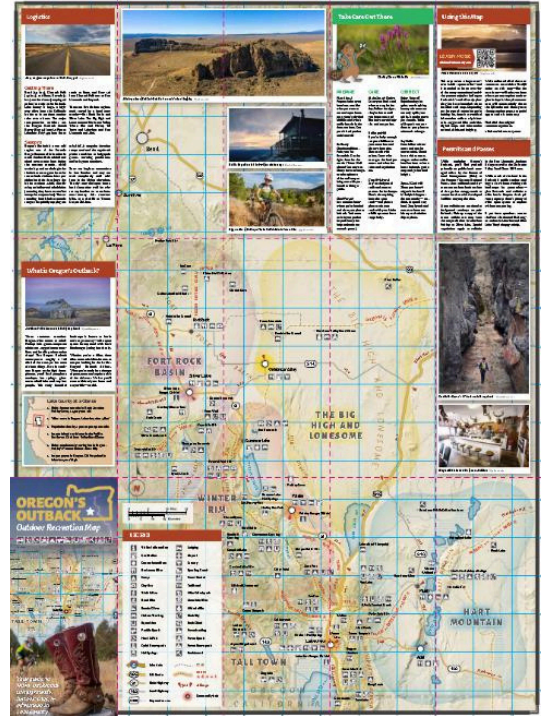
Despite being largely unmanned over Fiscal Year 2023-2024, the Economic Development Section was able to accomplish some exciting and impactful initiatives, with even more planned for this coming year!

## ACHIEVEMENTS FOR FISCAL YEAR 2024-2025

- Travel Oregon Destination Ready Action Project: Outdoor Recreation Maps were developed, printed, and distributed to tourist destinations around the region.
- Molalla Events Page ([current.cityofmolalla.com](http://current.cityofmolalla.com)), and events calendar published in the city newsletter.
- Became members of SEDCOR whose mission is to find and cultivate economic opportunities in the Willamette Valley.
- Hired a 1/3 staff member to man the Economic Development section.

## GOALS FOR FISCAL YEAR 2024-2025

- Continue training Community Development Technician
- Economic Development Webpage
- Industrial & Commercial Land Marketing Strategy
- Live/Work/Play Video
- Sidewalk Improvement Program Buildout
- Social Services Webpage
- Begin Business Outreach and Engagement



# PUBLIC WORKS

The Public Works Division is comprised of the Engineering Section, Public Works Maintenance Section, Water Treatment Plant Section, and Wastewater Treatment Plant Section. Together, these sections are responsible for capital improvement, maintenance, and operations of the City's Water System, Wastewater System, Stormwater System, Transportation System, and Parks System.

## Engineering Section

The Engineering Section is involved in every capital project that occurs in the City, and several of the maintenance projects on capital systems. Additionally, they manage the City's new Building Maintenance Program.

In addition to managing most of the projects below, the Engineering Section is integrally involved in the Master Planning processes, and the development and implementation of the public permitting platform.

## ACTIVE PROJECTS

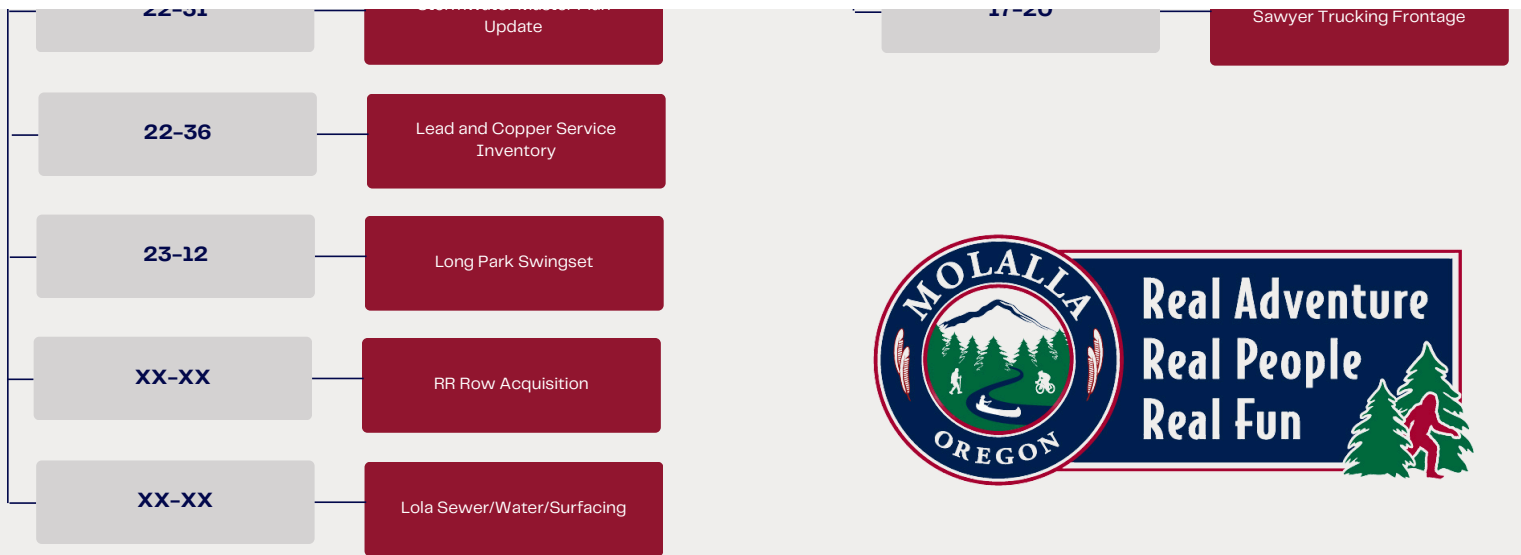
### PUBLIC INFRASTRUCTURE PROJECTS

### DEVELOPER INFRASTRUCTURE PROJECTS

18-04	Biosolid Dewatering/Hauling
19-10	WWTP Upgrade
21-02	Molalla Forest Road at Chief Yelkus Park
21-09	Chief Yelkus Park
21-13	Water Leak Survey & Repairs
21-15	S Molalla Ave 12" Water Main
22-04	New 2.0mg Water Reservoir
22-12	RWUP Update
22-19	MFR Resurface/Reopen
22-21	Section Street
22-24	Water System PRV's
22-29	Water Intake Structure Move & Reconstruction
23-31	Stormwater Master Plan

17-20	Sawyer's (Frontage on Toliver)
22-09/23-06	Bear Creek Apartments Phase 1 & 2 (Frontage on OR211 & Ona)
22-11	River Meadows Subdivision (Rachel Lane)
23-07	Stone Place Partition (S Leroy Ave Extension)
24-01	Leza Estates Subdivision (Toliver & Hezzie)
23-10	609 E Heintz Partition (Frontage on Heintz)
24-03	370 Metzler Multi-Family
24-04	1400 Fountain Way Expansion
22-07	Cascade Place Multi-Family
22-02	510 E Main St C-Store
19-04	Cascade Center Commercial
18-16	Hix Tractor Supply
17-20	





## Completed Project List

23-04 Sewer Rate Model Update	22-05 WTP Tracer Study	22-35 WTP Auto-Shutdown Upgrade	22-30 WWTP Aeration Basin Bypass
22-25 PD HVAC Repair/Replace	22-20 Toliver at Trinity Waterline	22-15 Mercury TMDL Plan	22-10 WWTP Interim Capacity Study
22-03 Shaver at OR-211 Repair	22-01 City Hall Sewer Main Replace	21-11 Fox Park Playground Equipment	21-06 525 W Main Waterline
21-04 City Hall Upstairs Remodel	19-09 Signal at OR-211/Molalla Ave	17-12 Shirley Curb Extensions Repair	22-26 Temp Allocation in TMDL
20-07 Strawberry Park	18-14 City Shops Decant Facility	23-11 TMDL 5 Year Plan Update	23-05 Long Park Pickleball Courts
20-03 Eckard, Lola, 2nd Water/Sewer/Surfacing	18-08 Toliver & OR-213 Roundabout	21-10 Civic Center CDBG Project	22-02 Center Market
22-07 Cascade Place Apartments	22-13 Goodwill	22-16 Starbucks	22-23 5th St Duplex

# PUBLIC WORKS - Maintenance

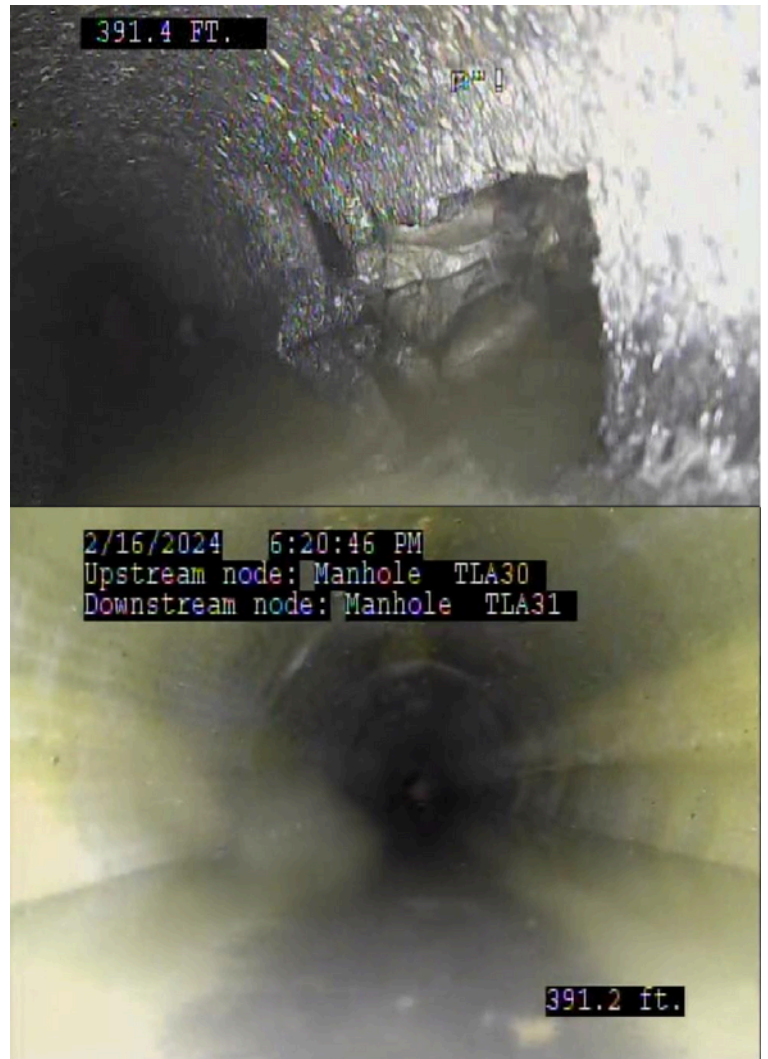
Sewer Collections – Cured in Place Piping

Following the successful 2023 completion of CIPP (Cured in Place Pipe) on Toliver Rd and S Molalla Ave, the City moved forward with a larger scale project for 2024.

This restoration of our deteriorating sewer mains was completed March of 2024 with a total of 5,100 linear feet lined. CIPP is the process of pulling a liner through the sewer main that is hardened via UV light. This process helps to eliminate water intrusion (I&I), roots, and re-establishes the life of the pipe as if it were new. The cost of this is approximately 20 cents on the dollar of a full dig out and replacement of the sewer main.

With this process, the City will be able to repair approximately 5 times the amount of pipe, limit the impact on the community and complete projects in a matter of days or weeks compared to months of a full dig out project.

**Right:** The pictures show the **Before** and **After** of the CIPP lining on East Main Street sewer main line.



## Park Maintenance

The arrival of spring has our Maintenance crew very busy in the parks. Throughout the City, the Maintenance crew maintains approximately 50 acres of park and field that require mowing, spraying, weeding, tree trimming, etc. Crews also maintain the restrooms and garbage daily and perform any necessary repairs to the facilities.

**Right:** Long Park in the Spring after regular maintenance by the Public Works Maintenance Crew.



### Water Distribution – Leak Repair & Flushing



With the recent warm weather, our Maintenance Division is beginning to see an increase in the number of service line leaks that are surfacing. Our crew has completed 5 water repairs during the first 2 quarters of the year and 1 more has been reported in the last week.

Depending on the location and severity of the leak, our crews will either do a full dig out and replacement of the line or find the exact location of the leak and place a repair band around the leak.

**Left:** A water leak later repaired by the Public Works Maintenance Crew.

Crews have also been busy flushing dead-end water mains. This ensures that citizens do not have stagnant water sitting in the main and scours the pipe to remove any sediment buildup within the pipe.

### Stormwater Management – Clearing Catch Basins, Ditches, and Detention Ponds

Throughout this rainy season, our Maintenance crew has been working hard to prevent any flooding issues in the City during our major rain events. During rain events, you will see them out clearing catch basins, ditches, and detention ponds of debris. Some areas in town are not accessible to our equipment and they will even be digging ditches out by hand if necessary.

**Right:** A stormwater management ditch that was hand cleared and hand dug by the Public Works Maintenance Crew.



### Street Maintenance – Pothole Filling, Crack Sealing, Resurfacing

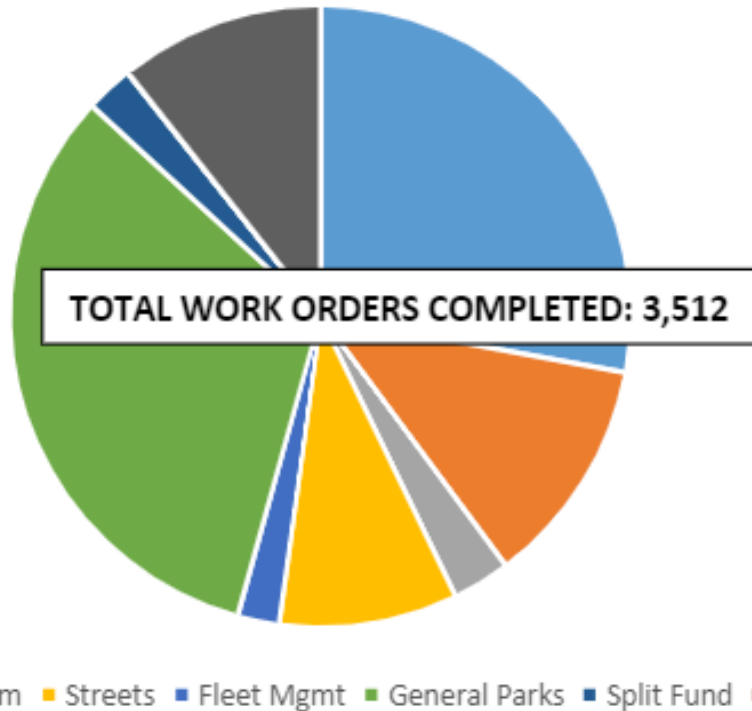
As weather allows, City crews have been busy filling potholes around the City. For the first quarter, the maintenance crew has put down approximately 9 tons of cold mix asphalt throughout town. Crews also recently completed a dig out and temporary patch of a severely degraded section of asphalt on the East 7th Street cul-de-sac. This section of road had no asphalt or gravel left and heavy vehicles were driving on bare clay that was directly over the water main. This work not only improved the driving experience for residents, but also served to protect the City's water distribution system from a catastrophic break

**Right:** The Public Works Maintenance Crew removes and replaces a degraded piece of asphalt on East 7th St.



## Public Works Maintenance Statistics

## Completed Work Orders 7/1/23 -6/30/24



# PUBLIC WORKS - Operations

## Water Treatment Plant

**Outstanding Performance!** The 2023/24 fiscal year started with the achievement of Outstanding Performance awarded from the Oregon Health Authority.

Outstanding performance is awarded to public water systems that have displayed their ability to meet all source, treatment, distribution, monitoring and reporting requirements. This is achieved through an onsite water system survey for the purpose of evaluating the system's capability of providing safe drinking water to the public. This was a great accomplishment and set the tone for the Water Treatment Plant as the remainder of the fiscal year has been geared towards continuing these efforts in operational efficiency, plant improvements, and special projects. The Water Treatment Staff have worked diligently, making great strides in achieving their goals this prior year.

**Production.** The table below shows the total treated water in gallons and average daily demand in million gallons per day for the most recent fiscal year as well as prior fiscal year for comparison.

	Total Treated, gallons	Average Daily Demand, MGD
FY 23/24	383,756,000	1.05
FY 22/23	379,612,000	1.04

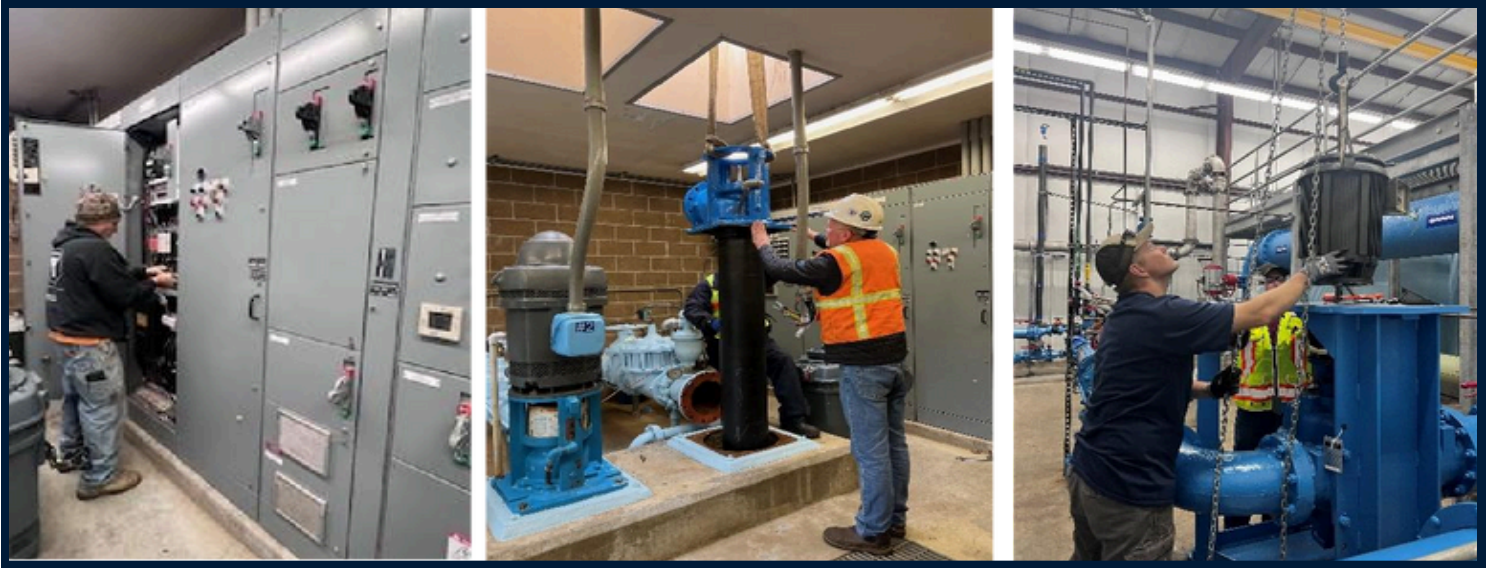
**Operations & Maintenance Projects.** The Water Plant’s preventative maintenance program has been an integral part of maintaining consistent operations as well as redundancies of critical assets. Staff were active this past year to ensure equipment was maintained to continue to deliver an uninterrupted supply of water.

- **SCADA Upgrade.** WTP staff completed an upgrade of the Supervisory Control and Data Acquisition (SCADA) system. The system when originally installed only provided viewing capabilities of operations. With the completion of the upgrade, staff have the ability to control and adjust certain operations remotely. This was a successful achievement as this has both significantly increased operational efficiency and increased response time in critical events allowing for maintained operations. Staff plan to build on the next phase of the SCADA improvements in this next fiscal year in addition to security upgrades.

- **Energy Trust-**Staff collaborated with Energy Trust of Oregon to conduct studies of potential energy saving incentives. The purpose of the study was to look at ways to reduce operating costs. The study was completed with a few energy saving incentive projects identified that would provide cash incentives if implemented, staff plan to explore these opportunities in the near future.

- **Intake Pump Rebuild-** The 100hp influent pump at our intake station has been rebuilt and inspected. The pump was originally removed for decreased flow output and shaft wear. The pump was installed successfully and is operating once again at its designed capacity.

- **Trident #1 Effluent Pump Motor Replacement** -Staff worked with a contractor to replace Trident Filter #1’s effluent pump motor with a redundant backup rebuilt motor onsite. The motor needed replacement ahead of the long filter run season and has since been inspected and rebuilt for future redundancy.



**IMPROVEMENT PROJECTS** - In an ongoing effort to preserve and maintain our facility assets/infrastructure, staff have worked hard to make necessary improvements.

- **Trident Grating**-Staff worked with a contractor to install additional grating to the trident filters as part of WTP’s safety upgrades.
- **Flooring**- The aged flooring in the laboratory/office area of the Water Treatment Plant was replaced.
- **Intake/Plant Pipe Painting**- A substantial amount of in-house maintenance on the piping at the Intake facility and the Treatment Plant has been completed. The piping was epoxy coated to prevent corrosion and to extend its life cycle. This was a high-ranking improvement project as the piping plays an important role in the transmission of water to and from the plant process.



### Regulatory Compliance Projects

- **Lead Service Line Inventory.** The city is on track in meeting the upcoming deadline to submit the Lead Service Line Inventory to the Oregon Health Authority in October of this year. The preliminary work has been completed and public works staff continue to move forward with the completion of physical inspections throughout the distribution system. The public works crew have completed almost two thirds of the inspections and WTP staff

have begun work to insert the data into the final report.

- **Tracer Study.** WTP Staff supported Dyer Engineering in the work to complete an updated Tracer Study as identified in the Water Master Plan. Tracer studies are required by OHA to review the system’s ability to meet disinfection contact time to inactivate pathogens. The study provides other vital information on the systems hydraulics, flow and mixing patterns, or potential short circuiting as the water moves through the reservoirs. Oregon Health Authority has reviewed and approved the recent tracer study conducted and the city continues to meet regulatory requirements.

**Other Projects.** Staff have been occupied with various other special projects this year to increase operational performance.

**Coagulant Study-**Staff assisted our chemical supplier engineer to conduct a coagulant study of the various coagulants and filter aids that may be more efficient for treatment of current water quality parameters. We were able to test a different coagulant that is more efficient and could provide savings in chemical costs. Staff plan to perform a test of the new coagulant this year to see if this would be a viable option.

- **Filter Performance Testing-** Staff have completed a series of thorough tests to evaluate the filtering capabilities of our trident filters. The test looked at both the adsorption clarifiers and media filters. The tests helped staff to determine if the solids removal through the filters was still optimal and whether the media is due for replacement.



# PUBLIC WORKS

# ACHIEVEMENTS & GOALS

## Achievements for Fiscal Year 2023-2024



Over the past few months as the winter weather has come in our flow have come up but the Wastewater Treatment Plant has been able to perform and keep up well. Even with repairs. So far in the Months of January, February, and March we took on approximately 119 MG of flow into the plant and sent out approximately 176 MG of clean Effluent water to the Molalla River.



The wastewater Treatment Plant crew takes advantage of the nice days in January-March to keep a clean and organized facility.

Maintenance is continually being performed on equipment at the WWTP. To the left WWTP staff completing operational cleaning

done to our Chlorine contact basin a few times a year.



To the right this winter's ice storm and power outages knocked out one of our aerators and the crew had to pull it out and get it repaired and back into service.



We had a small leak on our discharge pipe to the River in the Effluent Pumping Bldg.



The gasket inside the flange failed and leaked. If left alone, especially with chlorinated water (extremely corrosive) this would have only gotten worse. We had this replaced and with good coordination between the plant staff and the contractor we were able to get this repaired in less than a day. Ensuring minimal shut down time during our highest flow period of the year.

We were able to recognize one of our outstanding staff members, James Clifton, for his hard work and selfless dedication to the Molalla Community. He received the Wastewater Treatment Operator of the year award from OAWU.



Aside from the small projects and the day-to-day work to keep the plant operating. We have exciting news for the WWTP and our community. We have gone out to Bid on our New Wastewater Construction. Signaling the start of a new phase in all the hard work that many people in our organization and other have put in. This will bring Molalla into the newest generation of wastewater treatment and provide our staff with more flexibility for treatment. We will have a plant that can handle our community's growth for the next 20 years+. This will help prime us for the providing services for our growing community and Industry that can help promote local gainful employment.

**Operations & Maintenance Projects.** Please note that the Wastewater Treatment Plant has less projects than other sections due to also having lead on the most significant project in Molalla

currently, and possibly in Molalla’s history, the overhaul of the Wastewater Treatment Plant itself.

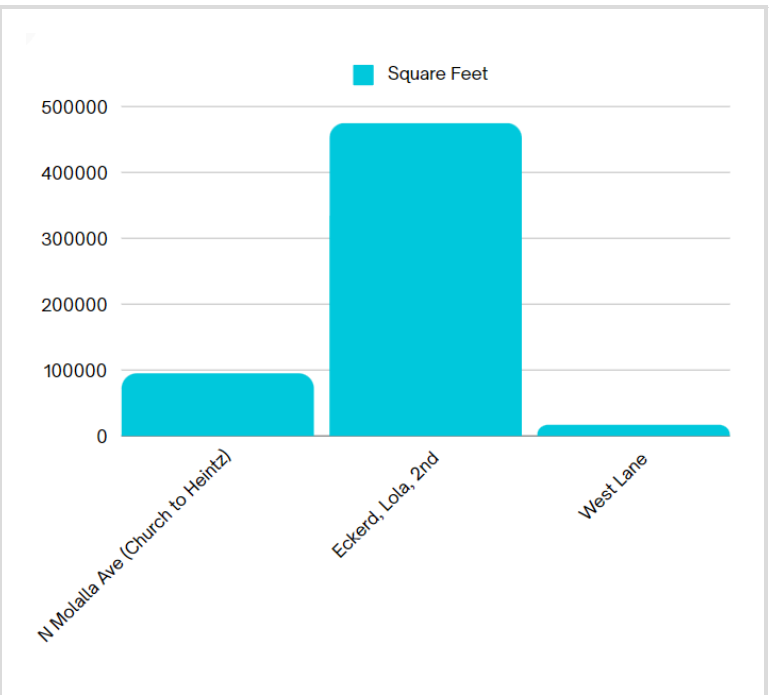
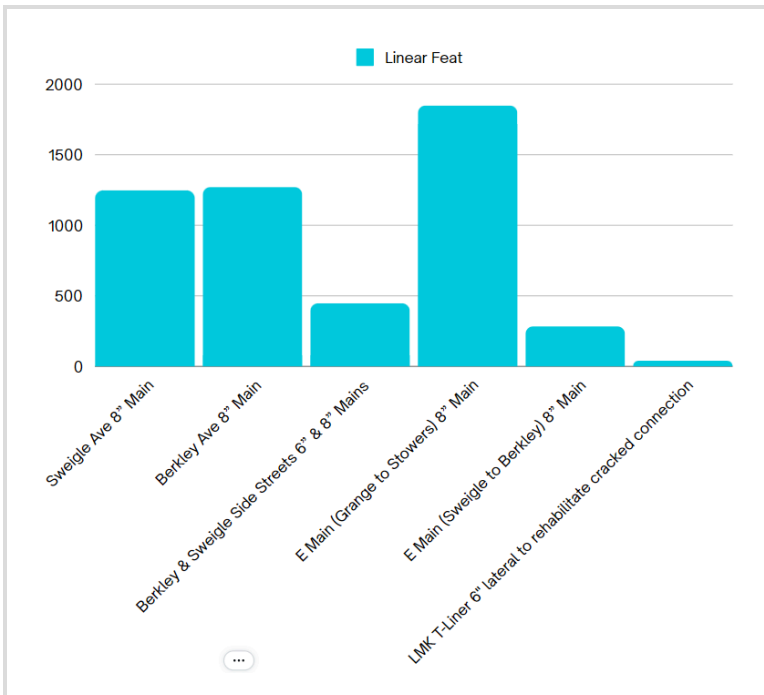
19-10 WWTP Upgrade

BG1(irrigation gun) Repaired

Rebuilt Media Filter #4

Remove and replace leaking flange on the 24" Effl...

Emergency Backup Generator Rebuild



# Goals for Fiscal Year 2024-2025

# GOALS FOR FISCAL YEAR 2024-2025

- Contract CIPP program for 5-year on-call contractor
- Continue progress on Wastewater Treatment Plant per Schedule Begin
- Begin preliminary work for Recycled Water Use Plan Update
- Complete biosolids removal for 2024
- Water Internship Program
- Water Intake Pump #1 Rebuild
- Water Reservoir Ladder Repair
- Complete 2mg Tank Property Acquisition and Pre-design Work
- Begin Water Intake Pre-Design and Begin BRIC Grant Application
- Complete Lead/Copper Service Line Inventory
- Complete Water Service Line Repairs
- Improved Water conservation program
- Complete Stormwater Master Plan
- Develop and Implement Stormwater Maintenance/Management Program
- Complete Section St. Overlay



## CITY OF MOLALLA

117 N. Molalla Avenue  
PO Box 248  
Molalla, OR 97038

### Staff Report

### Agenda Category: Resolutions

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**Agenda Date: July 24, 2024**

**From: Mac Corthell, Asst. City Manager**

**Approved by: Dan Huff, City Manager**

**SUBJECT:** Resolution 2024-11, Molalla Addendum to the Clackamas County Multi-Jurisdictional Hazard Mitigation Plan (National Hazard Mitigation Plan)

**FISCAL IMPACT:** No direct impact. Approval opens eligibility for federal grant funding resources related to Hazard Mitigation (e.g. BRIC grant).

**RECOMMENDATION/RECOMMEND MOTION:** Adopt / I move that the City of Molalla approve resolution 2024-11, THE CITY OF MOLALLA REPRESENTATION IN THE UPDATES TO THE CLACKAMAS COUNTY MULTI-JURISDICTIONAL NATURAL HAZARDS MITIGATION PLAN.

**BACKGROUND:**

In May of 2023 the City contracted with Healthy Sustainable Communities to assist in updating the City's Hazard Mitigation Plan. This plan identifies the highest risk hazards in the community and broadly identifies strategies to mitigate them.

The City's plan, once adopted, becomes an addendum to the Clackamas County Multi-Jurisdictional Hazard Mitigation Plan and is later adopted by the Federal Emergency Management Agency (FEMA) as a portion of the National Hazard Mitigation Plan.

In addition to identifying hazards and potential mitigation measures, the City's hazard mitigation plan – once adopted by FEMA – opens up various federal and state resources including grant funding for planning, construction, training, and the like.

The process for development and adoption was significant and included substantial public outreach and engagement that informed the decisions and inputs of the Technical Advisory Committee. Attached to this staff report is a summary of the public participation and outreach undertaken in development of this plan.

**Attachments**

1. Resolution 2024-11, Adopting Molalla Addendum to the National Hazard Mitigation Plan
2. NHMP Public Engagement Report
3. Molalla Addendum to National Hazard Mitigation Plan



**RESOLUTION NO. 2024-11**

**A RESOLUTION OF THE CITY OF MOLALLA, OREGON  
ADOPTING THE CITY OF MOLALLA REPRESENTATION IN THE  
UPDATES TO THE CLACKAMAS COUNTY MULTI-JURISDICTIONAL  
NATURAL HAZARDS MITIGATION PLAN**

**WHEREAS**, the City of Molalla recognizes the threat that natural hazards pose to people, property and infrastructure within our community; and

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

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

**WHEREAS**, the City of Molalla has fully participated in the FEMA prescribed mitigation planning process to prepare the *Clackamas 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 Molalla has identified natural hazard risks and prioritized a number of proposed actions and programs needed to mitigate the vulnerabilities of the City of Molalla to the impacts of future disasters within the *Clackamas County, Multi-Jurisdictional Natural Hazards Mitigation Plan*; and

**WHEREAS**, these proposed projects and programs have been incorporated into the *Clackamas 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 Clackamas County; and

**WHEREAS**, the Oregon Department of Emergency Management and Federal Emergency Management Agency, Region X officials have reviewed the *Clackamas County, Multi-*

*Jurisdictional Natural Hazards Mitigation Plan* and pre-approved it (dated, May 29, 2024) contingent upon this official adoption of the participating governments and entities;

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

**WHEREAS**, the NHMP is in an on-going cycle of development and revision to improve it’s effectiveness; and

**WHEREAS**, City of Molalla adopts the NHMP and directs the City Manager to develop, approve, and implement the mitigation strategies and any administrative changes to the NHMP.

**Now, Therefore, the City of Molalla Resolves:**

**Section 1.** The City of Molalla adopts *the Clackamas County Multi-Jurisdictional Natural Hazards Mitigation Plan* as an official plan.

**Section 2.** The City of Molalla will submit this Adoption Resolution to the Oregon Department of Emergency Management and Federal Emergency Management Agency, Region X officials to enable final approval of the *Clackamas County Multi-Jurisdictional Natural Hazards Mitigation Plan*.

**Section 3. Effective Date.** This Resolution shall be effective upon adoption.

Signed this 24th day of July 2024.

\_\_\_\_\_  
Scott Keyser, Mayor

ATTEST:

\_\_\_\_\_  
Christie Teets, CMC  
City Recorder



**Mac Corthell – Assistant City Manager**

315 Kennel Ave / PO Box 248

Molalla, OR 97038

Phone: (503) 829-7711

Email: [mcorthell@cityofmolalla.com](mailto:mcorthell@cityofmolalla.com)

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## **Molalla 2024 NHMP Addendum Update**

### **Summary of Public Participation and Outreach**

- **Technical Advisory Committee (TAC) Meetings:**

- 3/6/23
- 4/10/23
- 5/1/23
- 6/12/23
- 7/31/23

- **Planning Commission:**

- Reviewed Molalla NHMP Draft v4 on 1/4/24

- **City Council:**

- Reviewed Molalla NHMP Draft v4 on 1/10/24

- **Press Release to Pamplin Media:**

- Sent 1/17/24, [jbaker@pamplinmedia.com](mailto:jbaker@pamplinmedia.com)

- **Website Posting:**

- Published on 1/17/24
- Removal on 2/2/24
- URL: <https://current.cityofmolalla.com/emergency-operations-national-hazard-mitigation-plans>

- **Underserved Communities/Socially Vulnerable Populations:**

- Notice Distributed 1/17/24 directly to:
  - MRSD Superintendent, Tony Mann;
  - Ant Farm Youth services Director, Neal Hatley;
  - Molalla Communications Company, Lance Eves and Daphne Lisac;
  - Portland General Electric Local Government Affairs Manager, Julie Hernandez;
  - Molalla Area Chamber of Commerce Office Coordinator, Jill Gates;
  - Plaza Los Robles Property Manager ([plazalosrobles@cascade-management.com](mailto:plazalosrobles@cascade-management.com));
  - Todos Juntos Molalla Site Contact, Albert Garcia
  - Molalla Police
  - Molalla Public Works
  - Molalla Fire District

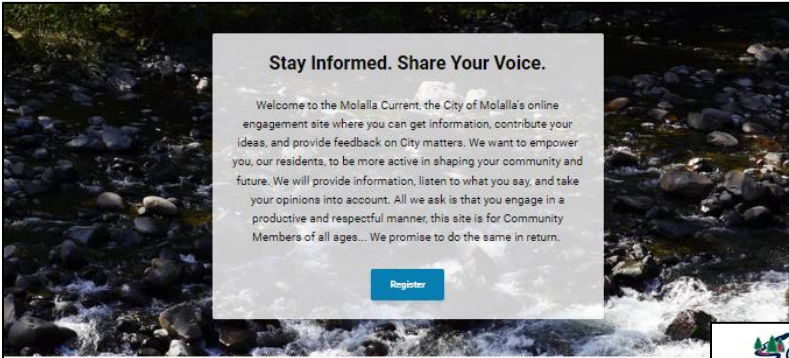
- **Other:**

- Email blast to 1,363 recipients via Molalla’s E-Newsletter Mailing List on 1/17/24
- Posted on City of Molalla Facebook Page on 1/17/24

**TAC Member Agencies:**

Molalla Public Works  
Molalla Police Department  
Molalla Fire District  
Molalla River School District  
South Clackamas Transit District  
Molalla Buckeroo Association  
Clackamas County Emergency  
Management





**Left: Posting on the Molalla Current  
Below: Email Blast  
Both Posted 1/17/24**

**National Hazard Mitigation Plan - Notice & Comment**

Please review the plan and provide any comments you may have!

[View Page](#)

**DID YOU KNOW?**

Did You Know?

Interesting Articles, Monthly Newsletter, Department Reports and More!

[View Page](#)

---

**Open Question & Answer Forum**

General questions about any city related business... Ask Away!

[View Page](#)

**NOTICE - MOLALLA'S DRAFT HAZARD MITIGATION PLAN UPDATE IS READY FOR YOUR COMMENTS!**

Hi [PARTICIPANT\_SCREEN\_NAME],

Every 5-years the City of Molalla updates its National Hazard Mitigation Plan for two big reasons:

1. To help keep the community safe by mitigating as many hazards as possible throughout the year.
2. To ensure the city remains eligible for federal hazard mitigation funding.

Part of the adoption process is to get as much feedback on the draft plan as possible:

Please take the time to review the plan and provide comment.


You can review the plan and provide comments on the National Hazard Mitigation Plan page of the Molalla Current: [current.cityofmolalla.com/emergency-operations-national-hazard-mitigation-plans](https://current.cityofmolalla.com/emergency-operations-national-hazard-mitigation-plans)

Kind regards,  
The Molalla Current Project Team

**City of Molalla, Oregon**  
Just now · 🌐

The Public Notice & Comment Period for Molalla's draft Hazard Mitigation Plan update has begun!

Please click the image below to review the plan and leave any comments you may have.



CURRENT.CITYOFMOLALLA.COM

**Molalla Hazard Plan - Public Notice & Comment**

Please review the draft update of Molalla's National Hazard Mitigation Plan! The plan can be viewed here:  
<https://current.cityofmolalla.com/23026/widgets/75790/documents/50425...>

[See insights and ads](#) [Boost post](#)

👍 Like    💬 Comment    ➦ Share

**Left: Facebook Post  
(1/17/24)**

# City of Molalla Addendum to the Clackamas County Multi-Jurisdictional Natural Hazard Mitigation Plan

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Photo Credit: City of Molalla

Effective:

July XX, 2024-July XX, 2029

Prepared for  
The City of Molalla

Updated:

[Date], 2024, (Resolution # 2024-xx)  
January 22, 2020, (Resolution # 2020-02)  
August 25, 2012 (amended October 28, 2015, Res. # 2015-11).  
[date of first FEMA approval] 2009 [OPDR to add]



This Natural Hazard Mitigation Plan was prepared by:



With support from:



UNIVERSITY OF  
OREGON

School of Planning, Public  
Policy and Management

Institute for Policy  
Research and Engagement

Planning grant funding provided by:

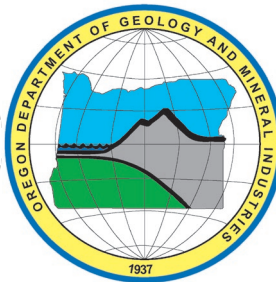


FEMA

Federal Emergency Management Agency (FEMA)

Project Award Number: DR-4562-39-P-OR

Additional Support Provided by:



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# Purpose

This is an update of the Molalla addendum to the Clackamas County Multi-Jurisdictional Natural Hazard Mitigation Plan (NHMP). This addendum supplements information contained in Volume I (Basic Plan) which serves as the NHMP foundation and Volume III (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 Molalla’s addendum are further discussed throughout the NHMP and within Volume III, Appendix B, which provides an overview of alterations to the document that took place during the update process.

Molalla adopted their addendum to the Clackamas County Multi-jurisdictional NHMP on [DATE TBD, 2024]. FEMA Region X approved the Clackamas County NHMP on [DATE TBD, 2024] and the City’s addendum on [DATE TBD, 2024]. With approval of this NHMP the City is now eligible to apply for the Robert T. Stafford Disaster Relief and Emergency Assistance Act’s hazard mitigation project grants through [DATE TBD-1, 2024].

# 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 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 NHMP to receive federal funds for mitigation projects. Local adoption, and federal approval of this NHMP ensures that the city will remain eligible for pre- and post-disaster mitigation project grants.

The Oregon Partnership for Disaster Resilience (OPDR) at the University of Oregon’s Institute for Policy Research, and Engagement (IPRE) collaborated with the Oregon Office of Emergency Management (OEM), Clackamas County, and Molalla to update their NHMP.

The Clackamas County NHMP, and Molalla addendum, are the result of a collaborative effort between citizens, public agencies, non-profit organizations, the private sector, and regional organizations. The Molalla HMAAC guided the process of developing the NHMP.

# Convener

The Molalla City Manager or designee serves as the NHMP addendum convener. The convener of the NHMP will take the lead in implementing, maintaining, and updating the addendum to the Clackamas County NHMP in collaboration with the designated convener of the Clackamas County NHMP (Clackamas County Resilience Coordinator).

Representatives from the City of Molalla HMAC met formally and informally, to discuss updates to their addendum (Updated Appendix). The HMAC reviewed and revised the City’s addendum, with 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 Clackamas County Resilience Coordinator, and the OPDR. The changes are highlighted with more detail throughout this document and within Volume III, Appendix B. Other documented changes include a revision of the City’s risk assessment and hazard identification sections, NHMP mission and goals, action items, and community profile.

The Molalla HMAC was comprised of the following representatives:

**City of Molalla:**

- Convener, City Manager, Dan Huff
- PW Operations Manager, Andy Peters
- PW Maintenance Section Manager, Adam Shultz
- Police Lieutenant, Bobby Call
- Police Chief, Chris Long
- Waste Water Treatment Manager, Seth Kelly
- Water Treatment Manager, Katie Niece
- Assistant City Manager, Mac Corthell
- Healthy Sustainable Communities, Jon Legarza (Consultant)

**Molalla Fire District:**

- Chief, Vince Stafford
- Fire Lieutenant, Mike Everhart
- Fire Lieutenant, Mike Penunuri

**Molalla River School District:**

- Superintendent, Tony Mann
- Finance Director, Keith McClung

**Clackamas County Emergency Management:**

- Daniel Nibouar
- Molly Caggiano

**Molalla Buckeroo Association:**

- Board Chair, Tim Anderson

**South Clackamas Transit District:**

Executive Director, Mike Strauch

The HMAC served as the local review body for the NHMP update.

## NHMP Implementation and Maintenance

The City Council will be responsible for adopting the Molalla addendum to the Clackamas County NHMP. This addendum designates a HMAC 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 HMAC will convene after re-adoption of the Molalla 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 convener will serve as the conveners and will be responsible for assembling the HMAC. The HMAC 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 HMAC 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 26, Volume I, Section 4, as one tool to help measure effectiveness); and
- Documenting successes and lessons learned during the year.

The HMAC will be responsible for the following activities described in detail in Volume I, Section 4:

The jurisdiction will utilize the same implementation and maintenance process identified in Volume I, Section 4.

The jurisdiction will provide continued public participation during the plan maintenance process through periodic presentations to elected officials, public meetings, postings on social media, and/or through interactive content on the jurisdiction's website (for more information see Volume I, Section 4).

The jurisdiction will utilize the same action item prioritization process as the County (for more information see Volume I, Section 4 and Volume III, Appendix E).

## Implementation through Existing Programs

This NHMP is strategic and non-regulatory in nature, meaning that it does not necessarily set forth any new policy. It does, however, provide: (1) a foundation for coordination and collaboration among agencies and the public in the city; (2) identification and prioritization of future mitigation activities; and (3) aid in meeting federal planning requirements and qualifying for assistance programs. The mitigation plan works in conjunction with other city plans and programs including the Comprehensive Land Use Plan, Capital Improvements Plan, and Building Codes, as well as the Clackamas County NHMP, and the State of Oregon NHMP.

The mitigation actions described herein (and in Attachment A) are intended to be implemented through existing plans and programs within the city. Plans and policies already in existence have support from residents, businesses, and policy makers. Where possible, Molalla will implement the NHMP's recommended actions through existing plans and policies. 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. Implementation opportunities are further defined in action items when applicable.

## Capability Assessment

The Capability Assessment identifies and describes the ability of the City of Molalla 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. As applicable



the 2019 NHMP was integrated into these authorities/documents over the last five years (e.g., land use regulations, water system master plan, capital improvement plan, etc.).

## 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.

Molalla addresses Statewide Planning Goal 7 Natural Hazards as part of their Comprehensive Plan Element, Natural Hazards. This plan was adopted in 2014. It identifies three potential natural hazards – flooding associated with the Molalla River, slope hazards, and earthquakes, associated with weak foundation soils. The Natural Hazard Policies recognize the adoption of the joint Molalla/Clackamas County Hazard Mitigation Plan. Hazard assessments and mapping from the NHMP are used to help determine the suitability of a location for development. Policy #5 states that “the City shall continue to work cooperatively with Clackamas County to implement that plan.”

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.

### **Title 13 – Public Services**

The City of Molalla Municipal Code, Title 13-Public Services provides requirements for the protection of the City's storm drainage system by reducing illegal discharge and cross connections.

### **Title 17 – Development Code**

The City of Molalla completed and adopted revisions to the City of Molalla Development Code on October 11, 2017. Code sections uphold water quality efforts, protect, and enhance significant wetlands and floodplains in the Molalla Natural Features Inventory (Water Resources Overlay, 17-2.4.030), and establish requirements for development on steep slopes and expansive soils. Subdivision regulations are also part of this code, which requires adequate drainage to reduce exposure to flood damage and improve water quality (17-4.3) and avoidance of natural hazards in master plan layout (17.4.8-040). Their flood prevention code section is based on the Oregon Model Flood Hazard Prevention code, which includes provisions addressing substantial improvement/substantial damage.

### **Title 21 – Additional Regulations**

The City of Molalla Municipal Code, Title 21-Additional Regulations includes provisions for excavation, fills, grading, and erosion control.

The Community Development Department is composed of the Planning, Parks & Recreation, Public Works, Economic Development and Code Compliance. The Molalla Community Development Department is the oversight entity for all matters related to long range planning, development review, and code enforcement. It is responsible for the administration of state, county, and local land use policies and regulations as they relate to the preservation and quality development of property lying within the city limits and urban growth boundary (UGB). The Planning Division is also responsible for administering and maintaining the Molalla Comprehensive Plan and Community Development Code. They work closely with the County and neighboring jurisdictions to ensure plans are aligned.

## 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.

The Molalla Community Development Department contracts with the Clackamas County Building Department to administer and enforce the 2022 Oregon Structural Specialty Code. The Molalla Fire District administers the 2022 Oregon Fire Code. 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 Molalla Public Works Division is part of the Community Development Department, and is composed of the Engineering Section, the Maintenance Section, the Water Section, and the Wastewater Section. They are responsible for surface water management, water treatment and delivery, wastewater collection and treatment, street maintenance, and public facilities maintenance. Much of their work is associated with the reduction of hazards to the community and the implementation of resilience measures.

### 2017 Molalla Standard Specifications for Public Works Construction

Public Works standards are part of the regulatory policies used to implement many resilience measures, including Erosion Prevention and Sediment Control (1.18.4), General Design Requirements (Stormwater (3.1.2), Water Quality Facility Design Standards (3.5.1), etc.

## City Administration

The City Council of Molalla 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 Molalla and Clackamas County to explore integration into other planning documents and processes. Molalla has made significant progress in integrating the NHMP into its portfolio of planning processes and programs over the last five years.

### Transportation System Plan (2018)

Goals include: minimize and/or mitigate the effects of transportation projects and systems on natural resources and systems; preserve and maintain the existing transportation system assets to extend their useful life; and address existing and potential future safety issues.

### **Wastewater Facility and Collection System Master Plan (2018)**

This document updated the City's most recent Wastewater Facility Plan, adopted in 2000. It was necessary to satisfy conditions stipulated in a Mutual Agreement Order with the Oregon Department of Environmental Quality (DEQ) over violations of the City's NPDES permit. It quantifies existing loads, evaluates existing infrastructure, identifies deficiencies, and contains a comprehensive Capital Improvement Plan for the next twenty years.

### **Water Management, Conservation and Water System Master Plan (2021)**

This Water Management, Conservation and Water System Master Plan (WMCWSMP) was compiled to provide guidance to address the City of Molalla's future water needs. This Plan summarizes the components of the existing water distribution system, analyzes local water demand patterns, evaluates the performance of the water system with respect to critical service standards, and identifies the improvements necessary to remedy system deficiencies and accommodate future growth. This Plan recommends specific projects to the water distribution system for inclusion in the City of Molalla's Capital Improvement Plan (CIP).

### **Capital Improvement Plan (2022-2027)**

The Capital Improvement Plan (CIP) is the primary tool used by the City in determining the Capital Improvement Fund Budget Proposal. The 5-year CIP is created using the master planning documents from each system, staff knowledge of needs that have arisen since master plan adoption, and community input as provided by the City Council. The CIP is essentially a tool that the Council uses to provide staff with marching orders for Capital Improvements; it aids staff in planning, budgeting, and managing growth and development of the City's infrastructure systems in accordance with best practices and community need.<sup>1</sup>

### **TMDL Plan (2022)**

The City maintains a Total Maximum Daily Load (TMDL) Plan (updated in 2022). The Total Maximum Daily Load (TMDL) program is intended to comply with the Willamette Basin TMDL order and to meet pollutant load allocations for the Molalla-Pudding Subbasin. The goal of this Implementation Plan is to minimize and reduce temperature, bacteria, and mercury contributions to surface waters within Molalla. The NHMP actions are incorporated into this document as appropriate. Example projects include participation in regional stormwater outreach projects, staff training on pollution control, and street cleaning after major storm events.

### **Community Wildfire Protection Plan (2024)**

The Clackamas County Community Wildfire Protection Plan (CWPP) will be incorporated into this Plan as a functioning annex and into the City's Capital Improvement Plan. The CWPP is expected to be adopted in early 2024.

## **Personnel**

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

**Emergency Management:** City Manager

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<sup>1</sup> City of Molalla Staff Report, Resolution 2022-03 Adopting a 5-year Capital Improvement Plan (CIP), dated April 27, 2022.

**Public Information Officer:** City Manager

**Floodplain Manager:** Community Development Director

**Grant writing (for Public Works or emergency management):** Community Development Director

**Capital improvement planning:** Community Development Director

**Capital improvement execution:** Engineering Section Manager

Molalla 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

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

The following mitigation-related or resilience projects have been completed since 2018<sup>2</sup>

- Transportation System Master Plan Update (2018)
- Recycled Water Reuse Plan Update (2018)
- Wastewater Facility and Collection System Master Plan Update (2018)
- WWTP O&M Manual Update (2019)
- Fenton Avenue Sewer Replacement (2019)
- Fenton Avenue Sewer Replacement (2020)
- Patrol Street Sewer Replacement (2020)
- WWTP New Headworks Screen (2020)
- Molalla Ave PS Sewer Replacement (2021)
- Sewer Line installation on S Leroy Ave (2022)
- City Hall Public Sewer Line Replacement (2022)
- Molalla Avenue Waterline Improvements (2018)
- WTP Security Fencing and Gate Improvements (2018)
- Faurie Avenue Waterline Replacement (2018)
- Fenton Avenue Waterline Replacement Ph 1 (2019)
- Fenton Avenue Waterline Replacement Ph 2 (2020)
- Patrol Street Waterline Replacement Ph 2 (2020)
- Trout Creek Monitoring Station (2020)
- WTP New 2MGD Filtration Unit (2021)
- WTP Sodium Hypochlorite and SCADA Upgrades (2021)
- Water Management, Conservation, and Water System Master Plan (2021)
- Comprehensive Leak Analysis (2021)
- Water Main Upsize at Cascade Center (2022)
- City Shops/Elementary School to WWTP Waterline Replacement (2022) Stormwater
- Molalla Avenue Stormwater Improvements (2018)
- Ross Street Stormwater Improvements (2018)
- 5 YR TMDL Implementation Plan (2018)
- City Shops Bioswale (2020)
- Creamery Creek Storm Culvert Improvement (2021)
- Mercury TMDL Implementation Plan (2022)

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<sup>2</sup> City of Molalla 2022-2026 Capital Improvement Plan, adopted by Resolution 2022-03.

- Clark Park Improvements Phase 4 (2022)
- Public Works Shops (2020)
- City Hall Remodel – Phase 3 (2021)
- New Police Facility Land Acquisition (2021)
- City Hall Remodel – Phase 4 (2022)
- Civic Center Remodel – Phase 1 (2022)

Ongoing projects that enhance the City’s resilience include:

- Wastewater Treatment Plant Upgrade
- New Police Facility
- Undergrounding of all new utilities

Proposed projects that relate to hazard mitigation and resilience within the next five years include:

- Pump station improvements
- New raw water intake
- Tank replacement (2 million gallon reservoir)
- Stormwater Master Plan Update
- Parks Master Plan Update
- Seismic retrofit of 1.5 million gallon reservoir structure

## Mitigation Successes

The community has several examples of mitigation success including the following projects funded through FEMA [Hazard Mitigation Assistance](#) and the Oregon Infrastructure Finance Authority’s [Seismic Rehabilitation Grant Program](#)<sup>3</sup>.

### FEMA Funded Mitigation Successes

- None identified

### Seismic Rehabilitation Grant Program Mitigation Successes

- 2019: Clarkes Elementary School (\$2,498,235)
- 2017: Molalla Fire District Station 82 (\$1,189,967)

## Capital Resources

Molalla maintains several capital resources that have important roles to play in the implementation of the natural hazard mitigation plan.

- Critical facilities with power generators for use during emergency blackouts: 3 lift stations, water treatment plant, wastewater treatment plant, City Hall
- Food pantries: Foothill Church, Molla River School District
- Fueling storage: 2,000 gallon diesel fueling storage bladder at Public Works Shop

## 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

<sup>3</sup> The Seismic Rehabilitation Grant Program (SRGP) is a state of Oregon competitive grant program that provides funding for the seismic rehabilitation of critical public buildings, particularly public schools, and emergency services facilities.

Molalla staff are assigned hazard mitigation responsibilities as a (small) part of their larger job responsibilities. Restricted 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**

Molalla operates on a limited budget with many conflicting priorities. 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 identify priority needs.

## **Mitigation Plan Mission**

The 2024 HMAC reviewed the previous NHMP Mission and Goals in comparison to the State NHMP Goals and determined that they would make necessary updates to include references to community lifelines and to advance equity and inclusion in hazard mitigation.

The NHMP mission states the purpose and defines the primary functions of NHMP. It is intended to be adaptable to any future changes made to the NHMP and need not change unless the community's environment or priorities change.

The mission of the NHMP is to:

Enhance county resiliency and capacity to address natural hazards by promoting sound public policy and effective mitigation strategies designed to equitably reduce risk and impacts on community members, community lifelines, historic and cultural resources property, and ecological systems.

This can be achieved by increasing public awareness, documenting the resources for risk reduction and loss-prevention, and identifying activities to guide the county towards building a safer, more sustainable community.

## **Mitigation Plan Goals**

Mitigation plan goals are more specific statements of direction that residents and public and private partners can take while working to reduce the risk from natural hazards. These statements of direction form a bridge between the broad mission statement and action items. The goals listed here serve as checkpoints as agencies and organizations begin implementing mitigation action items.

Meetings with the HMAC, previous hazard event reports, and the previous NHMPs served as methods to obtain input and identify priorities in developing goals for reducing risk and preventing loss from natural hazards.

All the NHMP goals are important and are listed below in no order of priority. Establishing community priorities within action items neither negates nor eliminates any goals, but it establishes which action items to consider implementing first, should funding become available.

### **Goal 1: Protect Life and Property**

- Develop and implement mitigation and climate adaptation projects and policies that aid in protecting lives by making homes, businesses, community lifelines, and other property more resilient to natural hazards and impacts from climate change.
- Establish mitigation projects and policies that minimize losses and repetitive damages from recurring disasters while promoting insurance coverage for severe hazards.
- Improve hazard identification and risk assessment information to inform and provide recommendations for enhanced resilience in new development decisions and promote preventative measures for existing development in areas vulnerable to natural hazards.

### **Goal 2: Enhance Natural Systems**

- Incorporate natural hazard mitigation planning and activities into watershed planning, natural resource management, natural systems enhancement, and land use planning to protect life, property, and ecological system.

### **Goal 3: Augment Emergency Services**

- Strengthen emergency operations by enhancing communication, collaboration, and coordination of natural hazard mitigation activities and policies across agencies at all levels and regions of government, sovereign tribal nations, and the private sector.

### **Goal 4: Encourage Partnerships for Implementation**

- Improve communication, coordination, and participation among and with public agencies, community members, community lifelines, and private sector organizations to prioritize and implement hazard mitigation activities and policies.
- Enhance efforts toward identifying and optimizing opportunities across state agencies, surrounding communities, and private entities for resource sharing, mutual aid, and funding sources/support.

### **Goal 5: Promote Public Awareness**

- Build community resilience and awareness and reduce the effects of natural hazards and climate change through community-wide engagement, collaboration, resource-sharing, learning, leadership-building, and identifying mitigation project-related funding opportunities.

### **Goal 6: Advance Equity and Inclusion**

- Mitigate the inequitable impacts of natural hazards by prioritizing the directing of resources and efforts to build resilience and engagement in the most vulnerable communities least able to prepare, respond, and recover.
- Strengthen efforts aimed at increasing engagement, outreach, and collaboration with community and cultural organizations and agencies that are dedicated to providing services and support to vulnerable and underserved communities.

## **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 2009 NHMP planning process and revised during subsequent NHMP updates. During these processes, the HMAC assessed the City's risk, identified potential issues, and developed a mitigation strategy (action items).

During the 2023 update process, the City re-evaluated their mitigation strategy (action items). During this process action items were updated, noting if the action is complete, not complete and whether the

actions were still relevant; any new action items were identified at this time (see Attachment B for more information on changes to action items).

## Action Items

Table MO-1 documents the title of each action along with, the lead organization, partners, timeline, cost, and potential funding resources. The HMAC decided to modify the prioritization of action items in this update to reflect current conditions (risk assessment), needs, and capacity (see Attachment A for more information). High priority actions are shown with orange highlight. The City will focus their attention, and resource availability, upon these achievable, high leverage, activities over the next five-years. Although this methodology provides a guide for the HMAC in terms of implementation, the HMAC has the option to implement any of the action items at any time. This option to consider all action items for implementation allows the committee to consider mitigation strategies as new opportunities arise, such as capitalizing on funding sources that could pertain to an action item that is not currently listed as the highest priority. Refer to Attachment A for changes to actions since the previous NHMP.



Table MO-1 Action Items

Action Item #	Statement	Impacted Hazard									Implementation and Maintenance			
		Drought	Earthquake	Extreme Heat	Flood	Landslide	Volcanic Event	Wildfire	Windstorm	Winter Storm	Lead	Timeline	Potential Funding Source	Estimated Cost
1	Develop and conduct public education and outreach, with a focus on wildfire, water system improvements, and critical redundant systems to support the community.	X	X	X	X	X	X	X	X	X	City Manager and Community Development Department	Short	Local Resources. DLCDC TA, FEMA HMA	Medium
2	Integrate the goals and action items from the City of Molalla NHMP into existing Capital Improvement Plan and programs.	X	X	X	X	X	X	X	X	X	City Manager and Community Development Department	Ongoing	Local Resources. DLCDC TA, FEMA HMA	Low
3	Improve vegetation management throughout the city. Work with code enforcement to reduce the risk of wildfire and to improve the resiliency with the community around parks, trails, transportation corridors to ensure necessary protection from natural hazard events.	X		X	X			X	X	X	Code Enforcement	Short	Local Resources. DLCDC TA, FEMA HMA	High
4	Identify and map evacuation routes for all hazards. Create update mapping system to be accessible for residents through mobile applications for hazard incidents.		X		X	X		X		X	GIS	Ongoing	Local Resources. DLCDC TA, FEMA HMA	Low
5	Reduce hazardous fuels from vegetation in the city parks and trails to mitigate risk from drought and wildfires.	X						X			Community Development	Ongoing	Local, State, Federal Grants and BRIC	High

Action Item #	Statement	Impacted Hazard								Implementation and Maintenance						
		Drought	Earthquake	Extreme Heat	Flood	Landslide	Volcanic Event	Wildfire	Windstorm	Winter Storm	Lead	Timeline	Potential Funding Source	Estimated Cost		
6	Identify planning and capital funding for 2 MG Treated Water Tank (including Land Acquisition and installation of Water Storage Seismic valves on existing tank and new tank) per Water Master Plan. Estimated \$7 million project cost.	X	X							X			City Manager/ Community Development	Ongoing	Local, State and Federal Grants and BRIC	High
7	Conduct building assessments on all city facilities to identify seismic and landslide hazards and recommend capital improvements for facilities based on the ASTM. Ensure recommendations for structural and non-structural seismic retrofits are included in the capital improvement plan.		X			X							Community Development	Long	Local and State	Medium
8	Conduct infrastructure improvements to reduce flood risk from Bear Creek.				X								Community Development/ Public Works	Medium	Local Resources, FEMA HMA (FMA)	Medium
9	Install emergency generators to provide redundant power in five pump station locations Estimate at \$250,000 each for a total project cost of \$1,250,000.		X			X	X	X	X	X			Community Development/ Public Works	Ongoing	Local, State, Federal Grants and BRIC	High
10	Acquire emergency equipment to help with tree removal and snow removal following severe storms (snow, ice, wind, etc.). Estimate equipment cost of \$150,000.									X	X		Community Development/ Public Works	Ongoing	Local Resources, FEMA HMA (FMA)	High

Action Item #	Statement	Impacted Hazard									Implementation and Maintenance			
		Drought	Earthquake	Extreme Heat	Flood	Landslide	Volcanic Event	Wildfire	Windstorm	Winter Storm	Lead	Timeline	Potential Funding Source	Estimated Cost
11	Identify Capital Funding for permanent water intake. The existing city intake structure is “temporary” in nature and has become susceptible to low river flows due to changes in river hydrology over time. Water resiliency is critical to development of the city and mitigation of drought and extreme heat effects. Additionally, Molalla’s water supply has been the primary resource for fighting wildfires on BLM, National Forest, and Private Timber lands in and around the Molalla River Corridor.	X	X	X	X	X		X			City Manager/ Community Development	Short	Local Resources, FEMA TA, FEMA HMA	High
12	Coordinate wildfire mitigation action items through the Clackamas County Community Wildfire Protection Plan.							X		Community Development/ Public Works	Ongoing	Local Resources, FEMA HMA, CWDG	Low to High	
13	Install pressure reducing valves to increase system redundancy. The city has one main line that is stressed during periods of drought. Additional capacity is also needed for fire protection. Conservation of water is critical. Estimated \$1.5 million project cost.	X	X	X				X	X	Community Development/ Public Works	Medium	Local Resources, FEMA HMA	High	

Source: Molalla NHMP HMA, updated 2023

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

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

Priority Actions: Identified with orange highlight

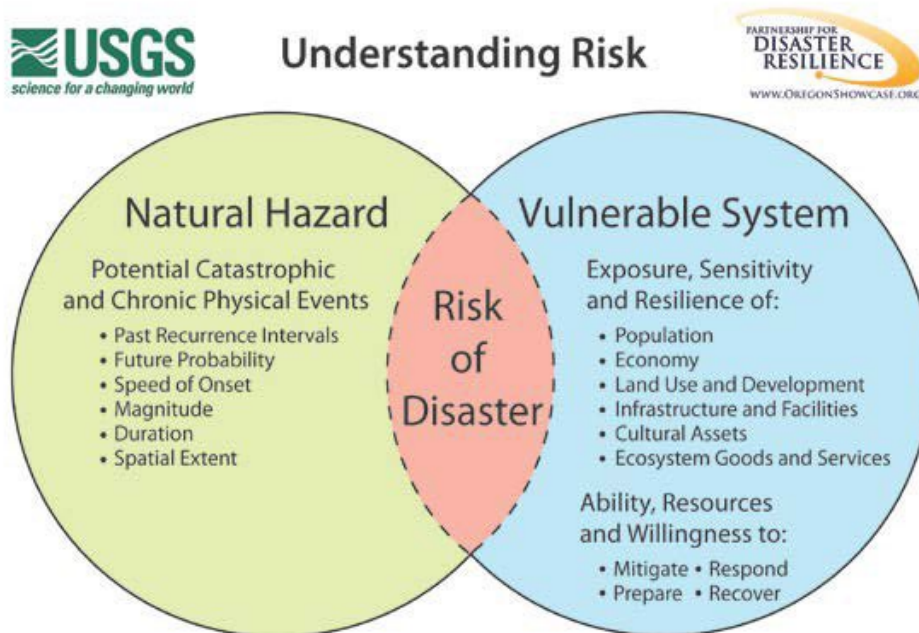
# Risk Assessment

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, Section 3 and Volume III, Appendix C. The risk assessment process is graphically depicted in Figure MO-1. Ultimately, the goal of hazard mitigation is to reduce the area of risk, where hazards overlap vulnerable systems.

**Figure MO-1: Understanding Risk**



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

## Hazard Analysis

The Molalla HMA developed their hazard vulnerability assessment (HVA), using their previous HVA and the County’s HVA as a reference. Changes from their previous HVA and the County’s HVA were made where appropriate to reflect distinctions in vulnerability and risk from natural hazards unique to Molalla, which are discussed throughout this addendum.

Table MO-2 shows the HVA matrix for Molalla 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 hazard. Two catastrophic hazards (Cascadia Subduction Zone earthquake and Crustal earthquake) and two chronic hazards (wildfire, winter storm, and drought) rank as the top hazard threats to the City (Top Tier). Windstorm, extreme heat event, and flood comprise the next highest ranked hazards (Middle Tier), while volcanic event and landslide comprise the lowest ranked hazards (Bottom Tier).

**Table MO-2 Hazard Analysis Matrix – Molalla**

Hazard	History	Vulnerability	Maximum Threat	Probability	Total Threat Score	Hazard Rank	Hazard Tiers
Earthquake - Cascadia	2	45	100	35	182	1	<i>Top Tier</i>
Wildfire	6	40	80	56	182	2	
Earthquake - Crustal	6	50	100	21	177	3	
Winter Storm	10	35	70	49	164	4	
Drought	10	35	60	56	161	5	
Windstorm	10	35	50	35	130	6	<i>Middle Tier</i>
Extreme Heat Event	10	15	50	35	110	7	
Flood	6	25	40	35	106	8	
Volcanic Event	2	25	50	7	84	9	<i>Bottom Tier</i>
Landslide	16	20	30	14	80	10	

Source: Molalla HMAc, 2023.

## Community Characteristics

Table MO-3 and the following section provides information on City specific demographics and assets. 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.

The city has three drainage basins: Molalla River basin, Creamery Creek basin, and Bear Creek basin. Located at 371 feet above sea level, Molalla’s climate is consistent with a Mediterranean climate zone, with warm summers and cool, wet winters. Molalla receives most of its rainfall between October and May, and averages 42 inches of rain, and around 6 inches of snow, per year.<sup>4</sup>

### Population, Housing, and Income

Molalla has grown substantially since its incorporation in 1913 and has an area today of 2.26 square miles. It is in the south-central region of Clackamas County, located approximately 29 miles southeast of the City of Portland. The City is within the Molalla River watershed, with the Molalla River about a mile east of the UGB.<sup>5</sup>

Between 2016 and 2022 the City grew by 1,213 people (13%; as of 2022 the population is 10,298) and median household income increased by about 20%. Between 2022 and 2045 the population is forecast to grow by 13% to 11,618.

Most of the population is White/Caucasian (89%) and about 18% of the population is Hispanic or Latino. The poverty rate is 8% (7% of children under 18, 11% for people 65 and older), 5% do not have health insurance, and 50% of renters pay more than 30% of their household income on rent (28% for owners). About 16% of the population has a bachelor’s degree or higher (6% do not have a high school degree). Approximately 14% of the population lives with a disability (41% of population 65 and older), and 35% are either below 15 (24%) or over 65 (11%) years of age. About 9% of the population are 65 or older and living alone and 17% are single parents.

The City includes a diversity of land uses but is zoned primarily residential. About 72% of housing units are single-family, 24% are multifamily, and 5% are mobile homes. Less than one-fifth of homes (17%) were built before 1970 and 61% were built after 1990. Newer homes are more likely to be built to current seismic, flood, wildfire, and other hazard standards. Almost two-thirds (64%) of housing units are owner occupied, 34% are renter occupied, 1% are seasonal homes, and 1% are vacant.

The City is pursuing an urban growth boundary expansion within the next five years that may expand development into areas that are at greater risk to landslide and other hazards.

## Transportation and Infrastructure

Molalla is roughly 29 miles from Portland and is connected to surrounding communities by two state highways that run through the downtown area. Highway 211 runs east-west and connects Molalla to Interstate 5 and 99E. Highway 213 runs north-south through the City and connects it to both Silverton and Oregon City. Molalla’s proximity to Portland and Salem has enabled residents to live in town and work elsewhere.

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<sup>4</sup> [“Monthly Average for Molalla, OR”](#) The Weather Channel Interactive, Inc. Retrieved March 10, 2018.

<sup>5</sup> [Annual Water Quality Report](#) (2017). City of Molalla. Retrieved March 10, 2019.

Motor vehicles represent the dominant mode of travel through and within Molalla. Twenty-three percent (23%) of renters and 3% of owners do not have a vehicle. Most workers drive alone to work (78%); 9% carpool, 1% use public transit, 3% either walk or use a bicycle, and 9% work at home. The South Clackamas Transportation District (SCTD) is the bus service that provides public transit to the City. There are no port services available on Molalla River, a tributary of the Willamette River, but there are recreational areas along the river.

## Economy

Molalla's proximity to major transportation routes and access to rail has made it a desirable place for commercial and industrial development. Historically Molalla's economy focused on forestry and farming, which is still has a major presence in the workforce. About 51% of the resident population 16 and over is in the labor force (5,083 people) and are employed in a variety of occupations including construction, extraction, and maintenance (18%), office and administrative (17%), professional (16%), management, business, and financial (12%), and production (9%) occupations.

Molalla has an economic advantage due to its location at the north end of the Willamette Valley and its proximity to Portland. A significant portion of the land available for industrial development in Clackamas County is in the Molalla area. There are new expansions in existing industries currently underway with available industrial land in the Industrial Parks.<sup>6</sup>

Most workers residing in the city (91%, 4,277 people) travel outside of the city for work primarily to Portland and surrounding areas.<sup>7</sup> A significant population of people travel to the city for work, (80% of the workforce, 2,063 people) primarily from Portland and surrounding areas.<sup>8</sup>

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<sup>6</sup> Economic Development (2019). City of Molalla. <https://www.cityofmolalla.com/ed>

<sup>7</sup> U.S. Census Bureau. LEHD Origin-Destination Employment Statistics (2002-2021). Longitudinal-Employer Household Dynamics Program, accessed on December 18, 2023 at <https://onthemap.ces.census.gov>.

<sup>8</sup> Ibid.

Table MO-3 Community Characteristics

Population Characteristics		Population	Household Characteristics	
		Growth		
<b>2016 Population Estimate</b>	9,085		<b>Housing Units</b>	
<b>2022 Population Estimate</b>	10,298	13%	Single-Family (includes duplexes)	2,740 72%
<b>2045 Population Forecast*</b>	11,618	13%	Multi-Family	909 24%
<b>Race</b>			Mobile Homes (includes RV, Van, etc.)	178 5%
American Indian and Alaska Native		< 1%	<b>Household Type</b>	
Asian		1%	Family Household	2,456 66%
Black/ African American		< 1%	Married couple (w/ children)	1,167 31%
Native Hawaiian and Other Pacific Islander		0%	Single (w/ children)	628 17%
White		89%	Living Alone 65+	320 9%
Some Other Race		0%	<b>Year Structure Built</b>	
Two or More Races		1%	Pre-1970	640 17%
<b>Hispanic or Latino/a (of any race)</b>			1970-1989	853 22%
<b>Limited or No English Spoken</b>	122	1%	1990-2009	2,101 55%
<b>Vulnerable Age Groups</b>			2010 or later	233 6%
Less than 5 Years	626	6%	<b>Housing Tenure and Vacancy</b>	
Less than 15 Years	2,400	24%	Owner-occupied	2,441 64%
65 Years and Older	1,144	11%	Renter-occupied	1,296 34%
85 Years and Older	92	1%	Seasonal	45 1%
Age Dependency Ratio		0.54	Vacant	45 1%
<b>Disability Status (Percent age cohort)</b>			<b>Vehicles Available (Occupied Units)</b>	
Total Disabled Population	1,363	14%	No Vehicle (owner occupied)	69 3%
Children (Under 18)	111	4%	Two+ vehicles (owner occupied)	1,992 82%
Working Age (18 to 64)	800	13%	No Vehicle (renter occupied)	297 23%
Seniors (65 and older)	452	41%	Two+ vehicles (renter occupied)	613 47%
<b>Income Characteristics</b>			<b>Employment Characteristics</b>	
<b>Households by Income Category</b>			<b>Labor Force (Population 16+)</b>	
Less than \$15,000	199	5%	In labor Force (% Total Population)	5,083 51%
\$15,000-\$29,999	483	13%	Unemployed (% Labor Force)	325 6%
\$30,000-\$44,999	291	8%	<b>Occupation (Top 5) (Employed 16+)</b>	
\$45,000-\$59,999	439	12%	Construction, Extraction, & Maint.	912 18%
\$60,000-\$74,999	460	12%	Office & Administrative	853 17%
\$75,000-\$99,999	628	17%	Professional	820 16%
\$100,000-\$199,999	1,123	30%	Management, Business, & Financial	610 12%
\$200,000 or more	114	3%	Production	471 9%
<b>Median Household Income</b>		\$74,718	<b>Health Insurance</b>	
<b>Gini Index of Income Inequality</b>		0.37	No Health Insurance	485 5%
<b>Poverty Rates (Percent age cohort)</b>			Public Health Insurance	3,075 31%
Total Population	815	8%	Private Health Insurance	7,485 75%
Children (Under 18)	186	7%	<b>Transportation to Work (Workers 16+)</b>	
Working Age (18 to 64)	509	8%	Drove Alone	3,927 78%
Seniors (65 and older)	120	11%	Carpooled	457 9%
<b>Housing Cost Burden (Cost &gt; 30% of household income)</b>			Public Transit	68 1%
Owners with a Mortgage	557	28%	Motorcycle	0 0%
Owners without a Mortgage	51	11%	Bicycle/Walk	150 3%
Renters	654	50%	Work at Home	440 9%

Source: U.S. Census Bureau, 2016-2021 American Community Survey; Portland State University, Population Research Center, "Annual Population Estimates", 2016 & 2022; Portland State University, Population Research Center, "Population Forecast Tables", (2023, [Preliminary](#)).

Note: ACS 5-year estimates represent average characteristics from 2012-2016 or 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 Lifelines

This section outlines the resources, facilities, and infrastructure that, if damaged, could significantly impact the public safety, economic conditions, and environmental integrity of the city. [Community Lifelines](#) are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function. Mitigating these facilities will increase the community’s resilience.

The community lifelines identified below were identified by the City of Molalla. This integrated network of assets, services, and capabilities are used day-to-day to support the recurring needs of the community and enable all other aspects of society to function. Decisive intervention (e.g., rapid re-establishment or employment of contingency response solutions) is required to maintain/reestablish these facilities and services following a hazard incident.

## Critical Facilities

Facilities that are critical and/or essential 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. Table MO-4 includes critical facilities identified in the DOGAMI Risk Report (2024) and assumed impact from individual hazards.

**Table MO-4 Critical Facilities in Molalla**

Critical Facilities by Community	Flood 1% Annual Chance	CSZ 9.0 Earthquake Moderate to Complete Damage	Canby-Molalla Fault Mw-6.8 Moderate to Complete Damage	Landslide High and Very High Susceptibility	Wildfire High or Moderate Risk
	Exposed	>50% Prob.	>50% Prob.	Exposed	Exposed
Far Horizons Academy	-	-	-	-	-
Molalla Elementary School	-	-	X	-	-
Molalla High School	-	-	X	-	-
Molalla Police Department & City Hall	-	-	X	-	-
Molalla Public Works	-	-	X	-	-
Molalla RFPD 73 - Station 382	-	-	X	-	-
Molalla River Middle School	-	X	X	-	-
Molalla Sewage Treatment Plant	-	X	X	-	-
Molalla Urgent Care	-	X	X	-	-

Source: DOGAMI, *Multi-Hazard Risk Report for Clackamas County, Oregon* (2024), Table A-29.

Note: Police Facility to be constructed per local bond, estimated completion 2025. Molalla Civic Center (EOC Temporary) and Molalla Water Treatment Plan not included in DOGAMI analysis.

Additional Critical Facilities not included in the DOGAMI Risk Report:

- Fleet Services
  - Water Treatment Plant
- Hospitals**
- Providence Medical

### Potential Shelter Sites

- Molalla Adult Community Center
- All Churches (see p. 21 for list)

## Critical Infrastructure

Infrastructure that provides necessary services for emergency response include:

### Arterials

\*designates road maintained by others

- Highway 213\*
- Highway 211\*

### Bridges

- Bridge over the Molalla River
- Feyer Park Bridge
- Milk Creek Bridge
- Mulino Bridge\*
- Pudding River Bridge
- Wagon Wheel Park Bridge

### Other Critical Infrastructure

- Communication Towers
- NW Natural Pipelines
- Power Substations
- Sewage Infrastructure
- Water Distribution/Drainage Infrastructure

## 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: community gathering places, commercial centers, and other public facilities such as school fields.

### Granges

- Molalla Grange

### Churches

- Church of Christ of Latter-Day Saints
- Church of the Nazarene
- Country Church
- Foothills Community Church
- Grace Lutheran Church
- Molalla Assembly of God
- Molalla Christian Church
- Molalla Church of Christ
- Saint James Catholic Church
- Seventh-Day Adventist
- United Methodist Church

### Food Providers

- Safeway
- Grocery Outlet

### Other Essential Facilities

- High School Football Field
- Masonic Lodge
- Molalla Aquatic Center
- Molalla Buckeroo Grounds
- Molalla Communications Company
- Molalla Public Library
- Moose Lodge
- Safeway
- Skydive Oregon Airport

## Environmental Facilities

Environmental assets are those parks, green spaces, wetlands, and rivers that provide an aesthetic and functional ecosystem service for the community include: Bear Creek Byway, Billy Sheets Field, Bohlander Field, Clark Park, High School Sports Complex, Ivor Davies Trail Park, Leonard Long Park, Rosse Posse Acres (Elk Farm), Sally Fox Park, and the Molalla BMX Track.

## Vulnerable Populations

Vulnerable populations, including seniors, disabled citizens, women, and children, as well those people living in poverty, often experience the impacts of natural hazards and disasters more acutely. Populations that have special needs or require special consideration include:

### Assisted Living Facilities

- Evergreen Court
- Molalla Manor
- Pheasant Pointe
- Twin Firs Mobile Home Park

### Child Care Centers

- 24 Hours Child Care/Preschool
- Early Horizons Preschool Childcare, Inc.

### Schools

- Country Christian School
- Molalla Elementary School
- Molalla High School
- Molalla River Middle School
- Molalla River Academy
- Rural Dell Elementary

### Other Vulnerable Populations

- Cole Apartments (Spanish speaking)
- Molalla Adult Community Center
- Molalla Mobile Manor
- Plaza Los Robles (Spanish speaking)

## Hazardous Materials

Facilities that, if damaged, could cause serious secondary impacts may also be considered “critical.” Hazardous materials sites are particularly vulnerable to earthquake, landslide, volcanic event, wildfire, and winter storm hazards. A hazardous material facility is one example of this type of critical facility. Those sites that store, manufacture, or use potentially hazardous materials include: Gas Stations, IXL Propane, IDMS, Molalla Aquatic Center, Molalla Wastewater Treatment Plant, Molalla Water Treatment Plant, and Pacer Propane.

## Economic Assets/Population Centers

Economic assets include businesses that employ large numbers of people and provide an economic resource to the city of Happy Valley. If damaged, the loss of these economic assets could significantly affect economic stability, and prosperity. Population Centers usually are aligned with economic centers, and are a concern during evacuation/notification during a hazard event include:

### Economic Centers

- Bus Company – First Student
- Cascade Center(Grocery Outlet/Goodwill)
- Cash Ice
- Dentist of Main
- Fountain Valley Dental
- International Forest Products Limited
- IXL Propane
- Lincotech
- Molalla Buckaroo
- Molalla Family Dental
- Molalla Market Center
- Molalla Redi-Mix
- Molalla Square (Bi-Mart)
- Northwest Polymers
- Pacer Propane
- Quanex
- Safeway Shopping Center
- Titanic Ice

## Population Centers

- Bear Creek Apartments
- Bear Creek Subdivision
- Big Meadows Subdivision
- Colima Apartments
- Fir Crest Apartments
- Lexington Estates
- Molalla School District
- Rondel Court
- Schools
- Shel Mar Estates
- Stone Place Apartments
- Sunrise Acres
- Toliver Terrace
- Twin Meadows Subdivision

## Cultural and Historic Assets

The cultural and historic heritage of a community is more than just tourist charm. For families that have lived in the city for generations and new resident alike, it is the unique places, stories, and annual events that makes the community an appealing place to live. The cultural and historic assets are both intangible benefits and obvious quality-of-life- enhancing amenities. Because of their role in defining and supporting the community, protecting these resources from the impact of disasters is important.

An example of the types of properties that should be considered before, during, and after an event include the following properties identified on the National Register of Historic Places within Molalla:

- Horace and Julia Ann Von der Ahe House and Summer Kitchen
- Dibble House, 616 Molalla Avenue

## Hazard Characteristics

The following subsections briefly describe relevant information for each hazard. For additional background on the hazards, vulnerabilities and general risk assessment information for hazards in the City refer to Volume I, Section 2 and the [Risk Assessment for Region 2, Northern Willamette Valley/Portland Metro, of the Oregon NHMP \(2020\)](#).

### Drought

The HMAC determined that the City's probability for drought is **high** and that their vulnerability to drought is **moderate**. *The probability rating increased and the vulnerability rating did not change since the previous version of this NHMP.*

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

The City of Molalla Public Works Department manages Molalla's water supply. Molalla houses one large water intake facility and water treatment plant, which provides water to the City of Molalla. The City draws its water supply from the Molalla River and serves approximately 10,335 residents.<sup>9</sup> There are potential contamination sources within Molalla's drinking water protection area from agriculture, managed forest land, and other sources.

There is an action item to construct a second accessible water source for the City in case of contamination or drought.

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<sup>9</sup> Population Research Center, "Annual Population Estimates", 2023

## Vulnerability Assessment

Due to insufficient data and resources, Molalla is currently unable to perform a quantitative risk assessment, or exposure analysis, for this hazard. For a list of facilities and infrastructure vulnerable to this hazard see the Community Assets section and Table MO-4.

## Future Projections

According to the Oregon Climate Change Research Institute “Future Climate Projections, Clackamas County,”<sup>10</sup> 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 Clackamas 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.

## Earthquake (Cascadia Subduction Zone)

The HMAC determined that the City’s probability for a Cascadia Subduction Zone (CSZ) earthquake is **moderate** and that their vulnerability to a CSZ earthquake is **high**. *These ratings did not change since the previous version of this NHMP.*

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

Figure MO-2 displays relative shaking hazards from a Cascadia Subduction Zone earthquake event. As shown in the figure, most of the city is expected to experience very strong shaking (orange), while areas around the city will experience severe shaking (light red) (shown by the red northeast corner) in a CSZ event.

Within the Northern Willamette Valley/Portland Metro Region, three potential faults and/or zones can generate high-magnitude earthquakes. These include the Cascadia Subduction Zone, Gales Creek-Newberg-Mt Angel Structural Zone, Portland Hills Fault Zone, and the Canby-Molalla Fault Zone (discussed in the crustal earthquake section).

## Cascadia Subduction Zone

The Cascadia Subduction Zone is a 680-mile-long zone of active tectonic convergence where oceanic crust of the Juan de Fuca Plate is subducting beneath the North American continent at a rate of 4 cm per year. Scientists have found evidence that 11 large, tsunami-producing earthquakes have occurred off the Pacific Northwest coast in the past 6,000 years. These earthquakes took place roughly between 300 and 5,400 years ago with an average occurrence interval of about 510 years. The most recent of these large earthquakes took place in approximately 1700 A.D.<sup>11</sup>

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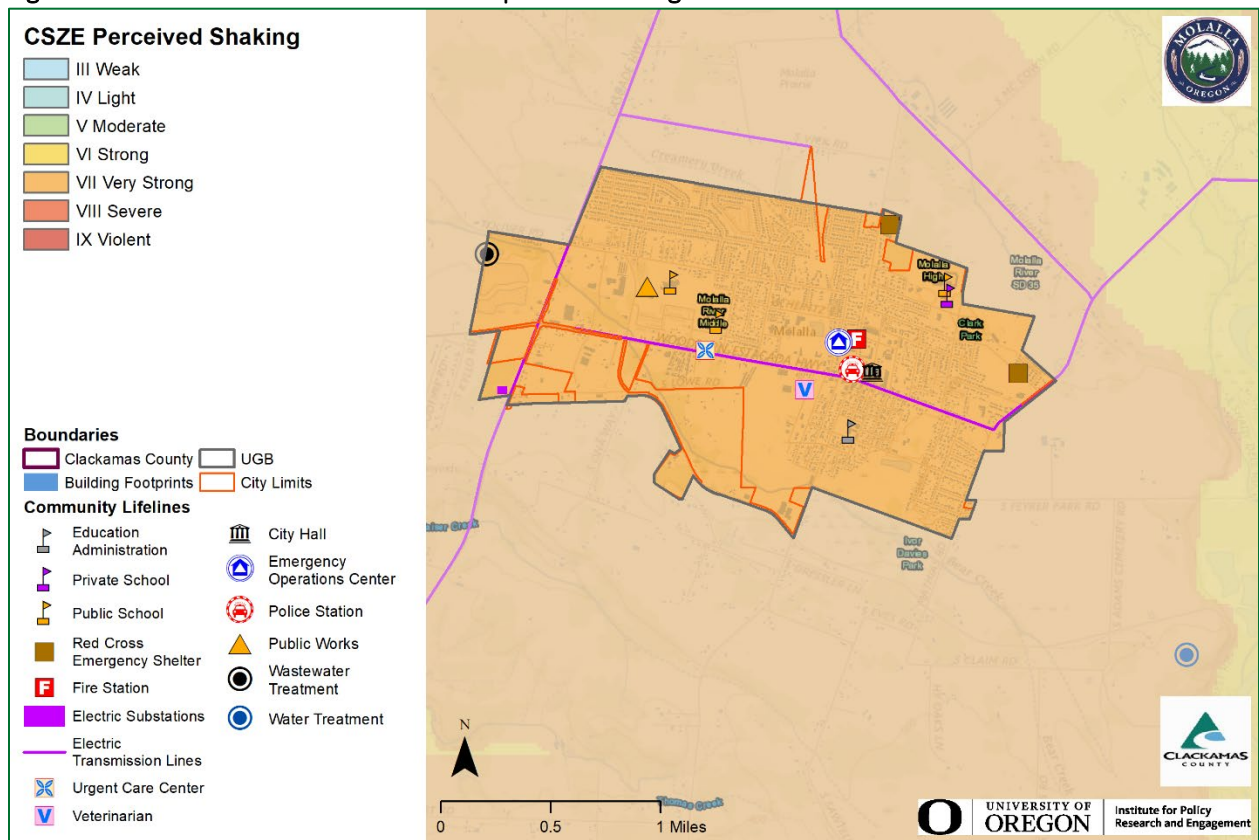
<sup>10</sup> Oregon Climate Change Research Institute, *Future Climate Projections, Clackamas County, Oregon*. February 2023.

<sup>11</sup> The Cascadia Region Earthquake Workgroup, 2005. Cascadia Subduction Zone Earthquakes: A magnitude 9.0 earthquake scenario. <http://www.crew.org/PDFs/CREWSubductionZoneSmall.pdf>

The city'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 city 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 the city predominately within the "Valley Zone" (Valley Zone, from the summit of the Coast Range to the summit of the Cascades). Within the Northwest 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.

The City is not within the severe shaking area, though there is significant area around the City that have severe and very severe shaking if a large earthquake were to occur. These areas include Highway 211 and Highway 213, which could result in Molalla having access issues from emergency vehicles and other response efforts.

Figure MO-2 Cascadia Subduction Zone Expected Shaking



Source: Map created by Oregon Partnership for Disaster Resilience.

Data: Oregon Department of Geology and Mineral Industries. Preparedness Framework Implementation Team (IRIS v3).

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

## Earthquake (Crustal)

The HMAC determined that the City's probability for a crustal earthquake is **low** and that their vulnerability to crustal earthquake is **high**. *These ratings did not change since the previous version of this NHMP.*

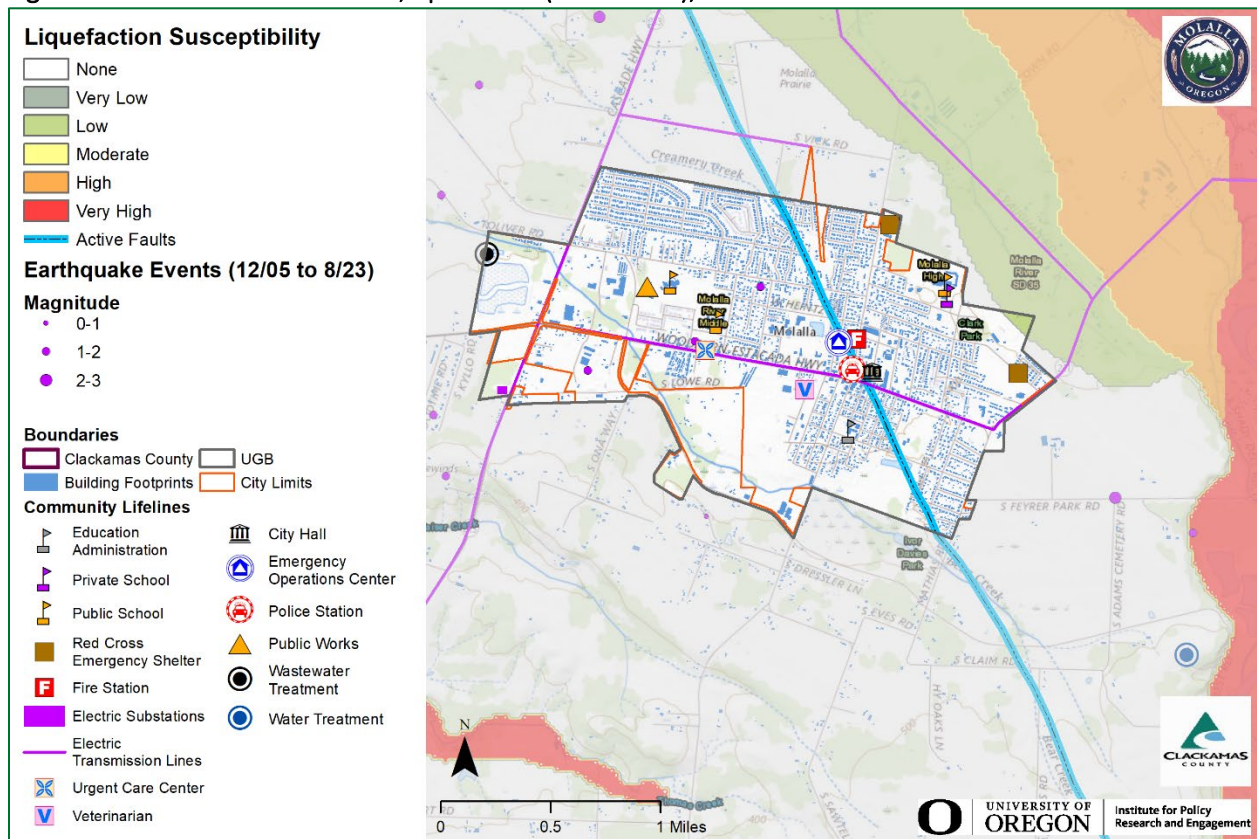
Volume I, Section 2 describes the causes and characteristics of earthquake hazards, history, as well as the location, extent, and probability of a potential event. Generally, an event that affects the County is likely to affect Molalla as well. Figure MO-3 shows a generalized geologic map of the Molalla area that includes

the areas for potential regional active faults, earthquake history (1971-2008), and soft soils (liquefaction) hazard. The figure shows the areas of greatest concern within the City limits as red and orange.

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.

The Canby-Molalla Fault runs through the center of the City and can generate high- magnitude earthquakes. The City is also 15 miles away from the Portland Hills Fault Zone (discussed in greater detail below). Historical records count over 56 earthquakes in the Portland-metro area. The more severe ones occurred in 1877, 1880, 1953 and 1962. The most recent severe earthquake was the March 25, 1993, Scotts Mills quake. It was a 5.6 magnitude quake with aftershocks continuing at least through April 8. In December 2017 a 4.0 tremor was felt in Molalla along the same epicenter as the 5.6 quake; this time, no damage occurred.

Figure MO-3 Active Crustal Faults, Epicenters (1971-2008), and Soft Soils



Source: Map created by Oregon Partnership for Disaster Resilience.

Data: Oregon Department of Geology and Mineral Industries. Preparedness Framework Implementation Team (IRIS v3).

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

### Canby-Molalla Fault Zone

The Canby-Molalla Fault Zone is a series of NE-trending fault that vertically displace the Columbia River Basalt with discontinuous aeromagnetic anomalies that represent significant offset of Eocene basement and volcanic rocks. The fault zone extends for 31 miles from the vicinity of Tigard south through the towns of Canby and Molalla in northern Oregon.

## Portland Hills Fault Zone

The Portland Hills Fault Zone is a series of NW-trending faults that vertically displace the Columbia River Basalt by 1,130 feet and appear to control thickness changes in late Pleistocene (approx. 780,000 years ago) sediment. The fault zone extends along the eastern margin of the Portland Hills for 25 miles and lies about 15 miles northeast of Molalla.

## Vulnerability Assessment

In 2018 the Department of Geology and Mineral Industries (DOGAMI) completed a regional impact analysis for earthquakes originating from the Cascadia Subduction Zone and Portland Hills faults ([O-18-02](#)). Findings from that report are provided at the end of the crustal earthquakes hazard section.

Seismic building codes were implemented in Oregon in the 1970s; however, stricter standards did not take effect until 1991 and early 2000s. As noted in the community profile, approximately 36% of residential buildings were built prior to 1990, which increases 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 MO-5; each “X” represents one building within that ranking category. Of the facilities evaluated by DOGAMI using their Rapid Visual Survey (RVS), zero (0) have a very high (100% chance) collapse potential and zero (0) have a high (greater than 10% chance) collapse potential.

For a list of facilities and infrastructure vulnerable to this hazard see the Community Assets Section and Table MO-4.

**Table MO-5 Rapid Visual Survey Scores**

Facility	Site ID*	Level of Collapse Potential			
		Low (<1%)	Moderate (>1%)	High (>10%)	Very High (100%)
<b>Schools</b>					
Molalla Elementary (910 Toliver Rd)	Clac_sch32	X			
Molalla River Middle (318 Leroy Ave)	Clac_sch33	X			
Molalla High (357 Francis St)	Clac_sch68	X			
<b>Fire Facilities</b>					
Molalla RFPD #73 – Station 82 EOC (320 N Molalla Ave)	Clac_fir18	X			
<b>See Mitigation Successes</b>					
<b>Law Enforcement Facilities</b>					
City Hall/Police Department (117 N Molalla Ave)	Clac_pol10	X			

Source: [DOGAMI 2007. Open File Report O-07-02. Statewide Seismic Needs Assessment Using Rapid Visual Assessment.](#)

“\*” – Site ID is referenced on the [RVS Clackamas County Map](#)

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



Utility systems will be significantly damaged, including damaged buildings and damage to utility infrastructure, including water 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.

### **Earthquake Regional Impact Analysis**

In 2018 DOGAMI completed a regional impact analysis for earthquakes originating from the Cascadia Subduction Zone and Portland Hills faults (O-18-02). Their study focused on damage to buildings, and the people that occupy them, and on two key infrastructure sectors: electric power transmission and emergency transportation routes. Each earthquake was studied with wet and dry soil conditions and for events that occur during the daytime (2 PM) and nighttime (2 AM). Impacts to buildings and people were tabulated at the county, jurisdictional (city), and neighborhood unit level. Estimated damage varied widely across the study area depending on local geology, soil moisture conditions, type of building, and distance from the studied faults. In general, damage from the Cascadia Subduction Zone scenario was greater in the western portion of the study area, however, damage could still be significant in some areas east of the Willamette River. The report found that damage to high-value commercial and industrial buildings was high since many of these facilities are in areas of high to very high liquefaction hazard. Casualties were higher during the daytime scenario (generally double) since more people would be at work and occupying non-wood structures that fare worse in an earthquake.

The Portland Hills fault scenario created greater damages than the Cascade Subduction Zone scenario due primarily to its placement relative to population centers and regional assets; however, at distances 15 or more miles from the Portland Hills fault the damages from the Cascadia Subduction Zone scenario generally were higher. In both the Cascadia Subduction Zone and Portland Hills Fault scenarios it is forecasted that emergency transportation routes will be fragmented, affecting the distribution of goods and services, conditions are worse under the Portland Hills Fault scenario. Portions of the electric distribution system are also expected to be impacted under both scenarios; however, the impact is considerably less than it is to the transportation routes. Additional capacity or redundancy within the electric distribution network may be beneficial in select areas that are likely to have greater impacts.

Table MO-6 shows the permanent resident population that are vulnerable to injury or death (casualty) and the buildings in the City that are susceptible to liquefaction and landslides, it does not predict that damage will occur in specific areas due to either liquefaction or landslide. More population and property are exposed to higher degrees of expected damage or casualty under the Portland Hills Fault “wet” scenario than in any other scenario.

The critical facilities at most risk within Molalla are the middle school, sewer treatment plan, water treatment plan, and Molalla Urgent Care.

**Table MO-6 Expected damages and casualties for the CSZ fault and Portland Hills fault: earthquake, soil moisture, and event time scenarios**

	Cascadia Subduction Zone (M9.0)		Portland Hills Fault (M6.8)	
	"Dry" Soil	"Wet" Saturated Soil	"Dry" Soil	"Wet" Saturated Soil
Number of Buildings	3,176	3,176	3,176	3,176
Building Value (\$ Million)	854	854	854	854
Building Repair Cost (\$ Million)	21	21	37	37
Building Loss Ratio	2%	2%	4%	4%
Debris (Thousands of Tons)	11	11	14	16
Long-Term Displaced Population	8	8	17	17
Total Casualties (Daytime)	12	12	17	17
Level 4 (Killed)	0	0	1	1
Total Casualties (Nighttime)	3	3	7	7
Level 4 (Killed)	0	0	0	0

Source: DOGAMI, Earthquake regional impact analysis for Clackamas, Multnomah, and Washington Counties, Oregon (2018, O-18-02), Tables 12-8, 12-9, 12-10, and 12-11.

### Cascadia Subduction Zone Scenario

The City of Molalla is expected to have a 2% building loss ratio with a repair cost of \$21 million under the CSZ “dry” scenario, and under the CSZ “wet” scenario.<sup>12</sup> The city is expected to have around 12 daytime or 3 nighttime casualties during the CSZ “dry” scenario and 12 daytime or 3 nighttime casualties during the CSZ “wet” scenario. It is expected that there will be a long-term displaced population of around 8 for the CSZ “dry” scenario and 8 for the CSZ “wet” scenario.<sup>13</sup> (See Risk Report content for additional information.)

### Portland Hills Fault Scenario

The City of Molalla is expected to have a 4% building loss ratio with a repair cost of \$37 million under the CSZ “dry” scenario, and under the CSZ “wet” scenario.<sup>14</sup> The long-term displaced population and casualties are greatly increased for all the Portland Hills Fault scenarios. The city is expected to have around 17 daytime or 7 nighttime casualties during the Portland Hills Fault “dry” scenario and 17 daytime or 7 nighttime casualties during the Portland Hills Fault “wet” scenario. It is expected that there will be a long-term displaced population of around 17 for the Portland Hills Fault “dry” scenario and 17 for the Portland Hills Fault “wet” scenario.<sup>15</sup>

Recommendations from the DOGAMI report included topics within Planning, Recovery, Resiliency: Buildings, Resiliency: Infrastructure Improvements, Resiliency: Essential and Critical Facilities, Enhanced Emergency Management Tools, Database Improvements, Public Awareness, and Future Reports. The recommendations of this study are largely incorporated within this NHMPs mitigation strategies (Table MO-1 and Volume I, Section 3). For more detailed information on the report, the damage estimates, and the recommendations see: *Earthquake regional impact analysis for Clackamas, Multnomah, and Washington Counties, Oregon* (2018, [O-18-02](#)).

<sup>12</sup> DOGAMI, Earthquake regional impact analysis for Clackamas, Multnomah, and Washington Counties, Oregon (2018, O-18-02), Tables 12-8 and 12-9.

<sup>13</sup> Ibid, Tables 12-8 and 12-9.

<sup>14</sup> Ibid, Tables 12-10 and 12-11.

<sup>15</sup> Ibid, Tables 12-10 and 12-11.

## Natural Hazard Risk Report for Clackamas County

The **Risk Report** (DOGAMI, [2024](#))<sup>16</sup> provides hazard analysis summary tables that identify populations and property countywide that are vulnerable to the earthquake hazard.

According to the Risk Reports the following population and property within the study area may be impacted by the profiled events:

**Cascadia Subduction Zone event (M9.0 Deterministic):** 47 buildings (3 critical facilities) are expected to be damaged for a total potential loss of \$27.6 million (a loss ratio of about 3%). About 10 residents may potentially be displaced (less than 1% of the population).

**Crustal event (Canby-Molalla fault M6.8 Deterministic):** 528 buildings (8 critical facilities) are expected to be damaged, for a total potential loss of \$150.8 million (a loss ratio of about 15%). About 409 residents may be displaced (about 4% of the population).

### Future Projections

Future development (residential, commercial, or industrial) within Clackamas 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.

## Flood

The HMAC determined that the City's probability of flooding is **moderate** and that their vulnerability to flooding is **moderate**. *These ratings did not change since the previous version of this NHMP.*

Volume I, Section 2 describes the characteristics of flood hazards, history, as well as the location, extent, and probability of a potential event. Figure MO-4 illustrates the flood hazard area for Molalla.

The latest flooding incident was in February 2014 when Main Street was flooded. While Molalla does not show any areas within the FEMA mapped special flood hazard areas (100- year flood vulnerability), the city regularly experiences urban flooding. This is primarily due to inadequate storm drainpipes, and culverts that are too small. Molalla also has clay soils, which means that the percolation rate is very slow, and the water table is very high.

Additionally, the extent of flooding will vary depending on climatic conditions and precipitation levels. Areas within Molalla that are frequently impacted by urban flooding events include: the intersection of South Cole and Main Street; East 3rd Street; Mathias Road south of 8th Street; areas south of 7th Street; and Highway 213 south of Toliver Road.

Typically, roads are covered with water in urban flooding events, and water will occasionally overflow manholes in some parts of the city. Newer homes are built on higher ground to avoid flooding issues, and many older homes have pumps within their crawlspaces to avoid flood events.

### Future Projections

According to the Oregon Climate Change Research Institute "Future Climate Projections, Clackamas County,"<sup>17</sup> winter flood risk at mid- to low elevations in Clackamas 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

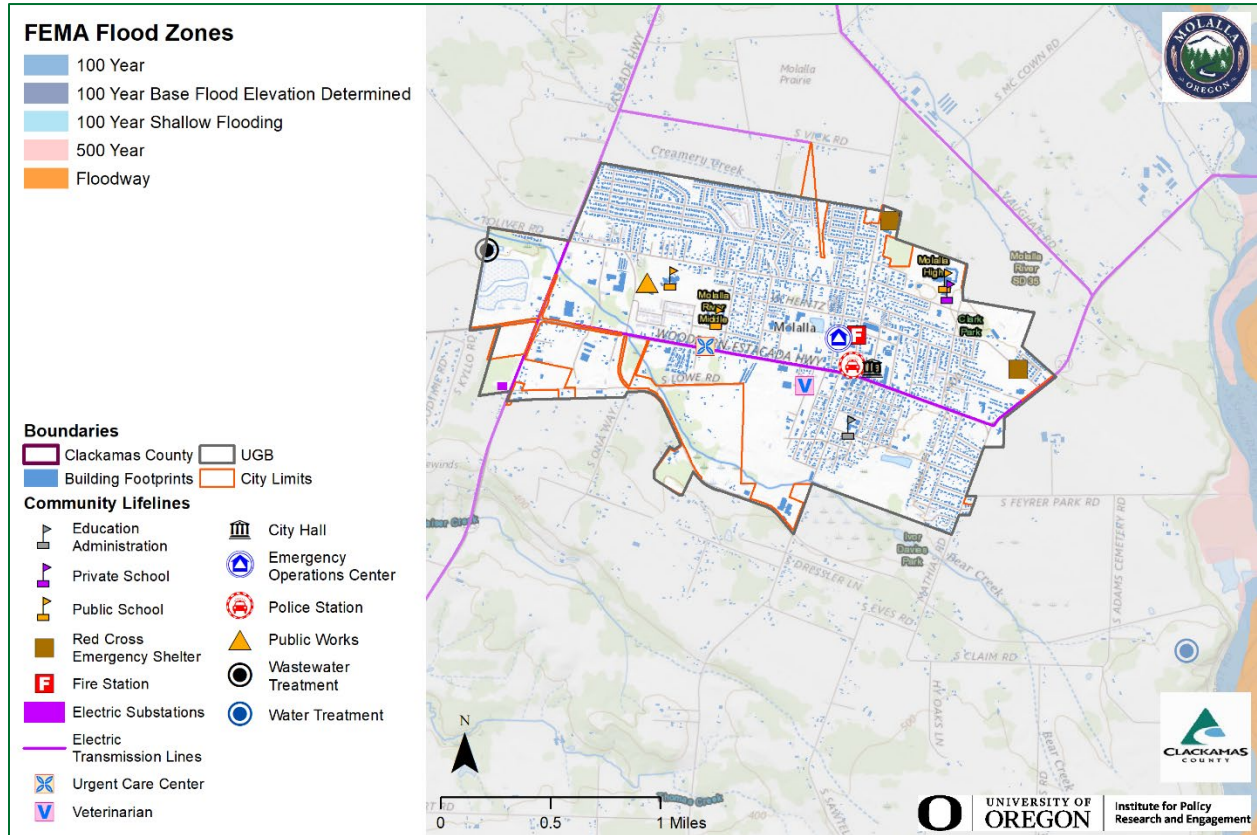
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<sup>16</sup> DOGAMI, *Multi-Hazard Risk Report for Clackamas County, Oregon* (2024), Table A-28.

<sup>17</sup> Oregon Climate Change Research Institute, *Future Climate Projections, Clackamas County, Oregon*. February 2023.

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.

Figure MO-4 FEMA Flood Zones



Source: Map created by Oregon Partnership for Disaster Resilience.  
 Data: Oregon Department of Geology and Mineral Industries. Preparedness Framework Implementation Team (IRIS v3).  
 Note: To view hazard detail click this [link](#) to access Oregon HazVu

### Vulnerability Assessment

Molalla is in a “Non-special Flood Hazard Area” (NSFHA), which means the entire city is in a low-to-moderate risk flood zone. A NSFHA is not in any immediate danger from flooding caused by overflowing rivers or hard rains.

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.

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 Molalla 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.

The extent of flooding hazards in Molalla primarily depends on climate and precipitation levels. Additionally, withdrawals for irrigation and drinking water, as well as stream and wetland modifications or vegetation removal can influence water flow. The only public infrastructure at risk to direct flooding are the City's surface water intake areas. In the past flooding has occurred along Main Street and other roadways due to urban flooding. For a list of facilities and infrastructure vulnerable to this hazard see the Community Assets Section and Table MO-5.

### Natural Hazard Risk Report for Clackamas County

The **Risk Report** (DOGAMI, [2024](#))<sup>18</sup> provides hazard analysis summary tables that identify populations and property countywide that are vulnerable to the flood hazard.

The Risk Report did not identify population or property within the study area that may be impacted by the profiled flood hazard.

### National Flood Insurance Program (NFIP)

FEMA's Flood Insurance Study (FIS), and Flood Insurance Rate Maps (FIRMs) are effective as of June 17, 2008. The City complies with the NFIP through enforcement of their flood damage prevention ordinance and their floodplain management program, although the City does not have a delineated Special Flood Hazard Area (SFHA). Molalla has not had a Community Assistance Visit (CAV) and does not participate in the Community Rating System (CRS). The Community Repetitive Loss record does not identify any Repetitive Loss Properties<sup>19</sup> or Severe Repetitive Loss Properties<sup>20</sup>.

## Landslide

The HMAC determined that the City's probability for landslide is **low** and that their vulnerability to landslide is **moderate**. *The probability rating did not change and the vulnerability rating increased since the previous version of this NHMP.*

Volume I, Section 2 describes the characteristics of landslide hazards, history, as well as the location, extent, and probability of a potential event within the region. Molalla does not have a history of landslides. This is due to the relatively flat topography within the UGB as well as the City's requirements of geological analysis on slopes of 25% or greater, usually located along stream embankments, before extensive tree removal, excavation, or construction occurs.

Although landslides have not occurred in Molalla, in 1996 a landslide upstream of Molalla dammed the Molalla River for about 6 or 7 hours and destroyed the City's intake valves. A dammed river is the City's biggest vulnerability to landslide hazards, which could also damage Highway 211 and 213 bridges.

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<sup>18</sup> DOGAMI, *Multi-Hazard Risk Report for Clackamas County, Oregon (2024)*, Table A-28.

<sup>19</sup> 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.

<sup>20</sup> 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.

Landslide susceptibility exposure for Molalla is shown in Figure MO-5. Most of Molalla demonstrates a low landslide susceptibility exposure. There are no areas within Molalla that have very high or high landslide susceptibility exposure, while approximately 4% show moderate landslide susceptibility exposure.<sup>21</sup>

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.

### **Vulnerability Assessment**

DOGAMI completed a statewide landslide susceptibility assessment in 2016 ([O-16-02](#)), general findings from that report are provided above.

Potential landslide-related impacts are adequately described within Volume I, Section 2, and include infrastructure damages, economic impacts (due to isolation, and/or arterial road closures), property damages, and obstruction to evacuation routes. Rain-induced landslides, and debris flows can potentially occur during any winter, and thoroughfares beyond City limits are susceptible to obstruction as well. For a list of facilities and infrastructure vulnerable to this hazard see the Community Assets Section and Table MO-5.

The most common type of landslides are slides caused by erosion. Slides move in contact with the underlying surface, are generally slow moving, and can be deep. Rainfall-initiated landslides tend to be smaller; while earthquake induced landslides may be quite large. All soil types can be affected by natural landslide triggering conditions.

The City currently has little risk to landslides; however, if the urban growth boundary is expanded to the south east, new development could be within or close to areas vulnerable to landslides.

### **Natural Hazard Risk Report for Clackamas County**

The **Risk Report** (DOGAMI, [2024](#))<sup>22</sup> provides hazard analysis summary tables that identify populations and property countywide that are vulnerable to the landslide hazard.

The Risk Report did not identify population or property within the study area that may be impacted by the profiled landslide hazard.

### **Future Projections**

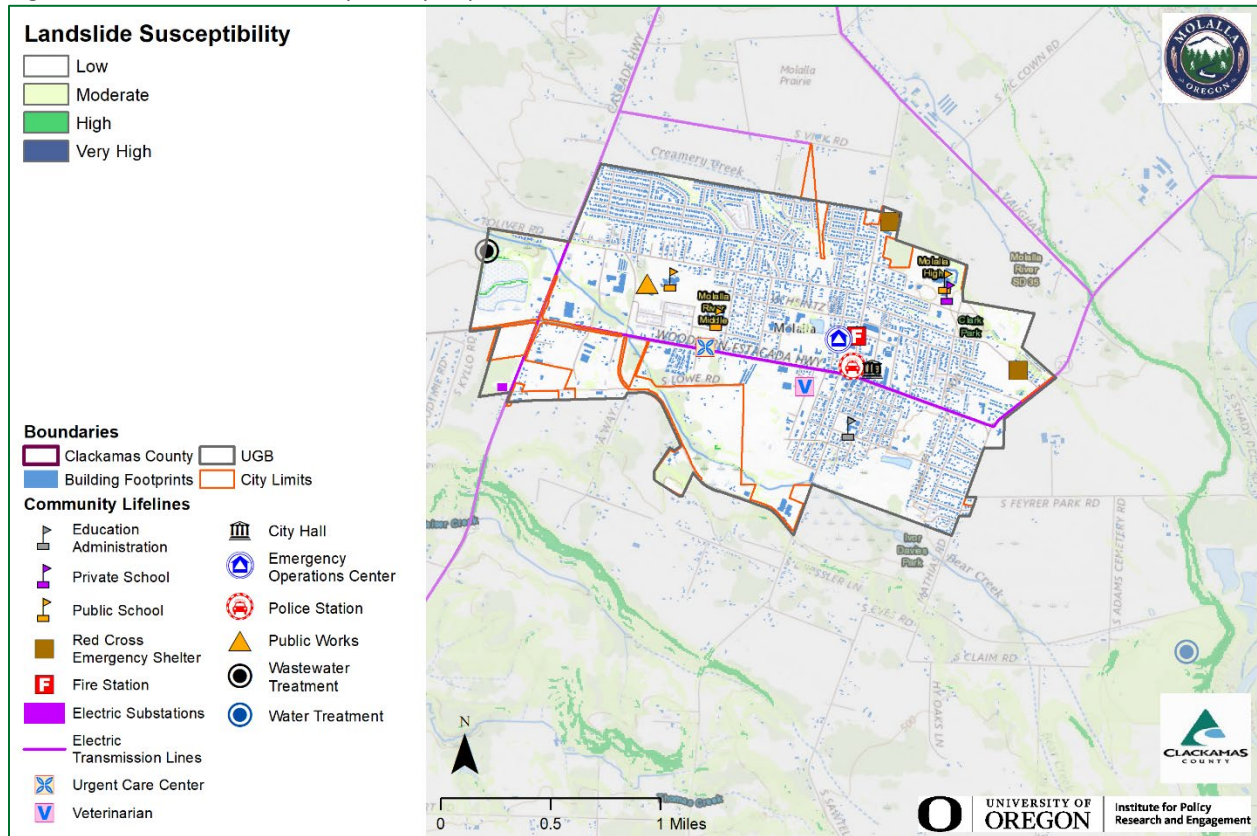
Landslides are often triggered by rainfall when the soil becomes saturated. As a surrogate measure of landslide risk, the Oregon Climate Change Research Institute report presents a threshold based on recent precipitation (cumulative precipitation over the previous 3 days) and antecedent precipitation (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 Clackamas County on which the landslide risk threshold is exceeded is not projected to change substantially. 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.

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<sup>21</sup> DOGAMI. [Open-File Report, O-16-02](#), *Landslide Susceptibility Overview Map of Oregon* (2016)

<sup>22</sup> DOGAMI, *Multi-Hazard Risk Report for Clackamas County, Oregon* (2024), Table A-28.

Figure MO-5 Landslide Susceptibility Exposure



Source: Map created by Oregon Partnership for Disaster Resilience.

Data: Oregon Department of Geology and Mineral Industries. Preparedness Framework Implementation Team (IRIS v3).

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

## Severe Weather

Severe weather can account for a variety of intense, and potentially damaging hazard events. These events include extreme heat, windstorms, and winter storms. The following section describes the unique probability, and vulnerability of each identified weather hazard.

## Extreme Heat

The HMAC determined that the City's probability for extreme heat events is **moderate** and that their vulnerability is **low**. *The probability rating did not change and the vulnerability rating increased since the previous version of this NHMP.*

Volume I, Section 2 describes the characteristics of extreme heat, 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.

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 upper 90s to around 100. Severe heat hazard in the Portland metro region can be described as the average number of days with temperatures greater than or equal to 90-degrees, or 100-degrees, Fahrenheit. On average the region experiences 13.6 days with temperatures above 90-degrees Fahrenheit, and 1.4 days above 100-degrees Fahrenheit, based on new 30-year climate averages (1981-2010) from the National Weather Service – Portland Weather Forecast Office.

The City of Molalla has not experienced any life-threatening consequences from the few historical extreme heat events, although changes in climate indicate that the area should expect to see more extreme heat events. resulting from hazards.

### Future Projections

According to the Oregon Climate Change Research Institute “Future Climate Projections, Clackamas County,”<sup>23</sup> the number, duration, and intensity of extreme heat events will increase as temperatures continue to warm. In Clackamas 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 under both the lower (RCP 4.5) and higher (RCP 8.5) emissions scenarios. The number of days per year with temperatures 90°F or higher is projected to increase by an average of 12 (range 3–21) by the 2050s, relative to the 1971–2000 historical baselines, under the higher emissions scenario. The temperature on the hottest day of the year is projected to increase by an average of about 7°F (range 2–11°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.

## Windstorm

The HMAC determined that the City’s probability for windstorm is **moderate** and that their vulnerability to windstorm is **moderate**. *The probability rating decreased and the vulnerability rating did not change since the previous version of this NHMP.*

Volume I, Section 2 describes the characteristics of windstorm hazards, history, 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 flooding and winter storms (ice, freezing rain, and very rarely, snow). Other severe weather events that may accompany windstorms, including thunderstorms, hail, lightning strikes, and tornadoes are generally negligible for Molalla.

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 usually limited to several localized areas. 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 may cause 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 insulation or older construction, heavy tree canopies, or poor storm drainage, will continue to be impacted by windstorms in the future.

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<sup>23</sup> Oregon Climate Change Research Institute, *Future Climate Projections, Clackamas County, Oregon*. February 2023.



## Winter Storm (Snow/Ice)

The HMAC determined that the City’s probability for winter storm is **moderate** and that their vulnerability to winter storm is **moderate**. *The probability rating decreased and the vulnerability rating did not change since the previous version of this NHMP.*

Volume I, Section 2 describes the characteristics of winter storm hazards, history, 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.

The biggest impact of winter storms is congestion on roadways. In January 2007 the City experienced freezing temperatures and high winds caused a tree to fall on the main fire station and blocked some of the roads.

Most winter storms 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 an uncommon occurrence but can interrupt commuter, and commercial traffic as noted above.

### Future Projections

According to the Oregon Climate Change Research Institute “Future Climate Projections, Clackamas County,”<sup>24</sup> cold extremes will become less frequent and intense as the climate warms. In Clackamas County, the number of cold days (maximum temperature 32°F or lower) per year is projected to decrease by an average of 6 (range -3– -8) 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 0– 11°F) by the 2050s.

The intensity of extreme precipitation is expected to increase as the atmosphere warms and holds more water vapor. In Clackamas 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 0–31%) and 10% (range -1–26%), respectively, relative to the 1971–2000 historical baselines, under the higher emissions scenario.

Vulnerable populations will be more likely to experience the negative impacts of winter storms in the future, particularly the unhoused and the elderly.

### Vulnerability Assessment

Due to insufficient data and resources, Molalla is currently unable to perform a quantitative risk assessment, or exposure analysis, for the extreme heat, windstorm, and winter storm hazards. For a list of facilities and infrastructure vulnerable to these hazards see the Community Assets Section and Table MO-5.

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<sup>24</sup> Oregon Climate Change Research Institute, *Future Climate Projections, Clackamas County, Oregon*. February 2023.

## Volcanic Event

The HMAC determined that the City’s probability for a volcanic event is **low** and that their vulnerability to a volcanic event is **moderate**. *The probability rating did not change and the vulnerability rating increased since the previous version of this NHMP.*

Volcanoes are located near Molalla, the closest of which are Mount Hood, Mount Adams, Mount Saint Helens, Mount Rainier, and the Three Sisters.

### Vulnerability Assessment

Due to Molalla’s relative distance from volcanoes, the city is unlikely to experience the immediate effects that eruptions have on surrounding areas (i.e., mud and debris flows, or lahars). Depending on wind patterns and which volcano erupts, however, the city may experience ashfall. The eruption of Mount St. Helens in 1980, for example, coated the Willamette Valley with a fine layer of ash. If Mount Hood erupts, however, the city could experience a heavier coating of ash.

### Natural Hazard Risk Report for Clackamas County

The **Risk Report** (DOGAMI, [2024](#))<sup>25</sup> provides hazard analysis summary tables that identify populations and property countywide that are vulnerable to the volcanic event (lahar) hazard.

The Risk Report did not identify population or property within the study area that may be impacted by the profiled volcanic event (lahar) hazard.

### 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).

## Wildfire

The HMAC determined that the City’s probability for wildfire is **high**, and that their vulnerability to wildfire is **high**. *The probability rating increased and the vulnerability rating did not change since the previous version of this NHMP.*

The [Clackamas County Community Wildfire Protection Plan](#) (CWPP) is hereby incorporated into this NHMP addendum by reference, and it will serve as the wildfire section for this addendum. The following presents a summary of key information; refer to the full CWPP for a complete description, and evaluation of the wildfire hazard. Information specific to Molalla is found in the following chapter: Chapter 9.9: Molalla Rural Fire Protection District #73.

Volume I, Section 2 describes the characteristics of wildland fire hazards, history, 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.

Weather and urbanization conditions are primarily at cause for the hazard level. Molalla has not experienced a wildfire within City limits, but the city has abundant wooded areas that are a concern in the case of a wildfire event. Figure MO-6 shows overall wildfire risk in Molalla per the state’s evaluation. However, as the community had to be evacuated during the wildfire season of 2020 due to the proximity

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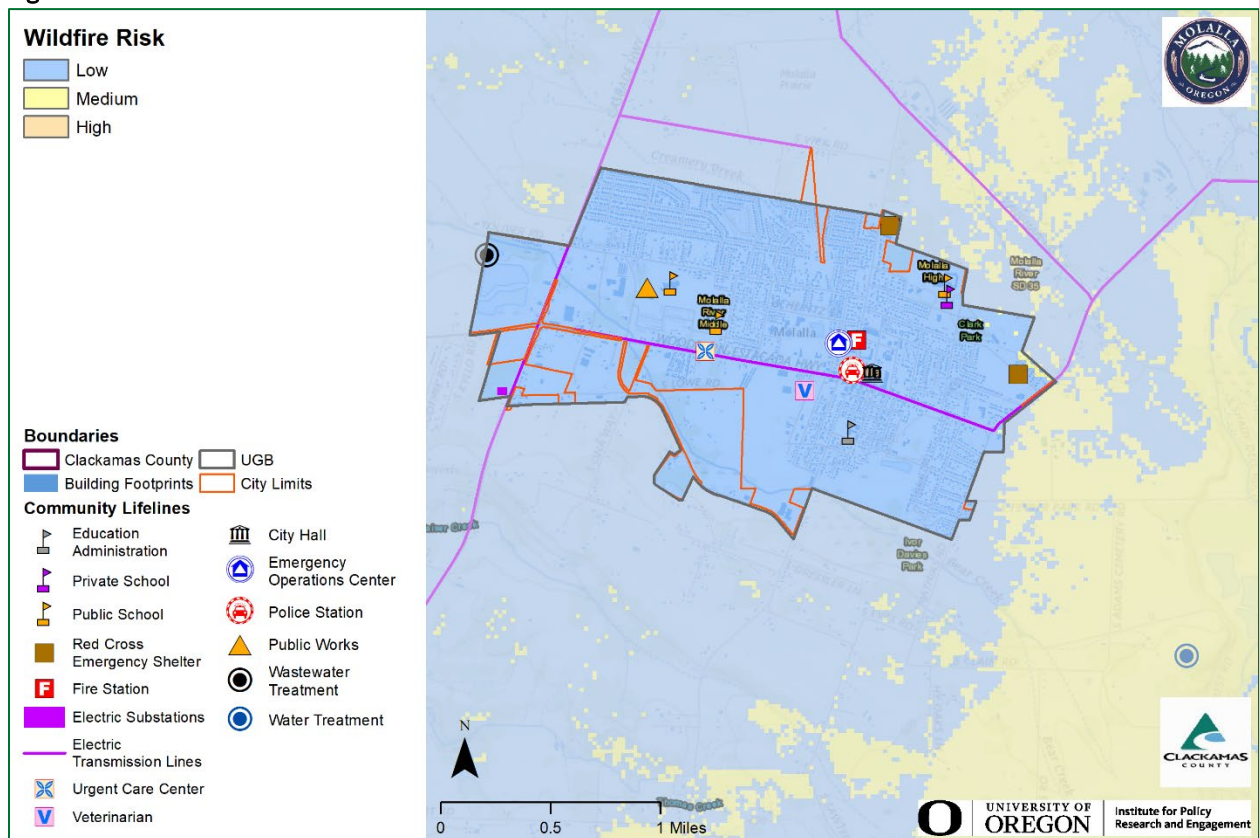
<sup>25</sup> DOGAMI, *Multi-Hazard Risk Report for Clackamas County, Oregon* (2024), Table A-28.

of adjacent wildfires and their unpredictable nature, wildfire has been elevated in the priority ranking for this NHMP.

Clackamas County has two major physiographic regions: the Willamette River Valley in western Clackamas County and the Cascade Range Mountains in eastern and southern Clackamas County. The Willamette River Valley, which includes Molalla, is the most heavily populated portion of the county and is characterized by flat or gently hilly topography. The Cascade Range has a relatively small population and is characterized by heavily forested slopes. Eastern Clackamas County is at higher risk to wildfire than western portions of the county due to its dense forest land. Human caused fires are responsible for most fires in Clackamas County.

The City of Molalla, Oregon, is working to update its Emergency Operations Plan (EOP) the current plan was completed in 2011. However, after experiencing devastating wildfires in both 2020 and 2022, as well as severe ice storms, the city's proactive management recognized the need for a comprehensive and up-to-date plan. The city is committed to ensuring its residents' safety and well-being in an emergency, and Phase 1 of the EOP update is a crucial step toward achieving that goal.

**Figure MO-6 Wildfire Risk**



Molalla is surrounded mostly by farmlands which creates a buffer from the forested areas. There are some areas of heavy tree coverage in the northeast and southern portions of the City. Identified High and

Medium Priority Communities at Risk (CARs) are all located outside of the City limits.<sup>26</sup> Wildfires are not a frequent occurrence within the city, but regional wildfires occasionally introduce pollutants within the city. Molalla sits in the bottom of a valley, and pollution from regional fires settles in the area, causing health concerns for residents.

Most of the city has less severe (moderate or less) wildfire burn probability that includes expected flame lengths less than four feet under normal weather conditions.<sup>27</sup> However, conditions vary widely and with local topography, fuels, and local weather (including wind) conditions. Under warm, dry, windy, and drought conditions expect higher likelihood of fire starts, higher intensity, more ember activity, and a more difficult to control wildfire that will include more fire effects and impacts.

### **Vulnerability Assessment**

The potential community impacts, and vulnerabilities described in Volume I, Section 2 are generally accurate for the City as well. Molalla's fire response is addressed within the CWPP which assesses wildfire risk, maps wildland urban interface areas, and includes actions to mitigate wildfire risk. The City will update the City's wildfire risk assessment if the fire plan presents better data during future updates (an action item is included to participate in future updates to the CWPP).

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).

### **Natural Hazard Risk Reports for Clackamas County**

The **Risk Report** (DOGAMI, [2024](#))<sup>28</sup> provides hazard analysis summary tables that identify populations and property countywide that are vulnerable to the wildfire hazard.

According to the Risk Report 147 buildings (no critical facilities) are exposed to the *high and (or) moderate (medium) risk wildfire* hazard for a total exposure of \$34.6 million (a building exposure ratio of about 3%). About 505 residents may be displaced by wildfires (about 5% of the population).

### **Future Projections**

According to the Oregon Climate Change Research Institute "Future Climate Projections, Clackamas County,"<sup>29</sup> 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 Clackamas County by 14 (range -6– 34) 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 (range 10–44) by the 2050s. Communities at risk to wildfire include those within the urban wildfire interface or along river or creek corridors, 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.

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<sup>26</sup> Clackamas County Community Wildfire Protection Plan, *Molalla Fire Department* (2018), Table 10.13-1.

<sup>27</sup> [Oregon Wildfire Risk Explorer](#), date accessed November 9, 2018.

<sup>28</sup> DOGAMI, *Multi-Hazard Risk Report for Clackamas County, Oregon* (2024), Table A-28.

<sup>29</sup> Oregon Climate Change Research Institute, *Future Climate Projections, Clackamas County, Oregon*. February 2023.

# Attachment A: Action Item Changes

Table MO-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. All actions marked not complete are ongoing, are still relevant, and are included in the updated action plan (Table MO-1).

### Previous NHMP Actions that are Complete:

Flood #2, “Minimize overall impervious cover and disconnect impervious areas.” Complete. Stormwater management plan adopted.

Wildfire #1, “Promote fire-resistant strategies for new and existing developments.” Complete. Part of existing code.

### Previous NHMP Actions that are Not Complete and No Longer Relevant:

None identified.

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

2018 Action Item	2024 Action Item	Status	Still Relevant? (Yes/No)
Multi-Hazard #1	#1	Not Complete	Yes
Multi-Hazard #2	#2	Not Complete	Yes
Multi-Hazard #3	#3	Not Complete	Yes
Multi-Hazard #4	#4	Not Complete	Yes
Severe Weather #1	#5	Not Complete, revised	Yes
-	#6	New	-
Earthquake #1	#7	Not Complete, revised	Yes
Flood #1	#2, #8	Not Complete, revised	Yes
Flood #2	-	Complete	No
-	#8	New	-
-	#9	New	-
Severe Weather #1	#9, #10	Not Complete, revised	Yes
Landslide #1	#11	Not Complete, revised	Yes
Wildfire #1	-	Complete	No
Wildfire #2	#12	Not Complete	Yes

# Attachment B: Public Involvement Summary

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Members of the steering committee provided edits and updates to the NHMP prior to the public review period as reflected in the final document.

To provide the public information regarding the draft NHMP addendum, and provide an opportunity for comment, an announcement (see below) was provided from January 17 through February 2 on the City's website. The plan was also posted and announced on the County's website. There were no comments provided. 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 III, Appendix B.

## Summary of Public Participation and Outreach

The Technical Advisory Committee (TAC) is comprised of members from Molalla Public Works, Molalla Police Department, Molalla Fire District, Molalla River School District, South Clackamas Transit District, Molalla Buckeroo Association, and Clackamas County Emergency Management. The TAC met on the following dates:

- 3/6/23
- 4/10/23
- 5/1/23
- 6/12/23
- 7/31/23

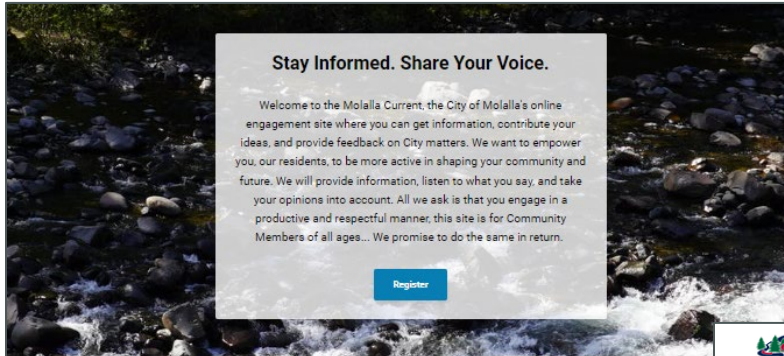
The Molalla Planning Commission reviewed the NHMP Draft on 1/4/2024 and Molalla City Council reviewed the NHMP Draft on 1/10/2024. On 1/17/2024 the City sent a press release was sent to Pamplin Media, posted the NHMP to their [website](#) (to be removed on 2/2/2024), posted on City of Molalla Facebook Page, and sent an email blast to 1,363 recipients via Molalla's E-Newsletter Mailing List.

Additionally, on 1/17/2027 the following individuals and agencies that work directly with and/or provide support to **underserved communities and socially vulnerable populations** were provided an opportunity to be involved:

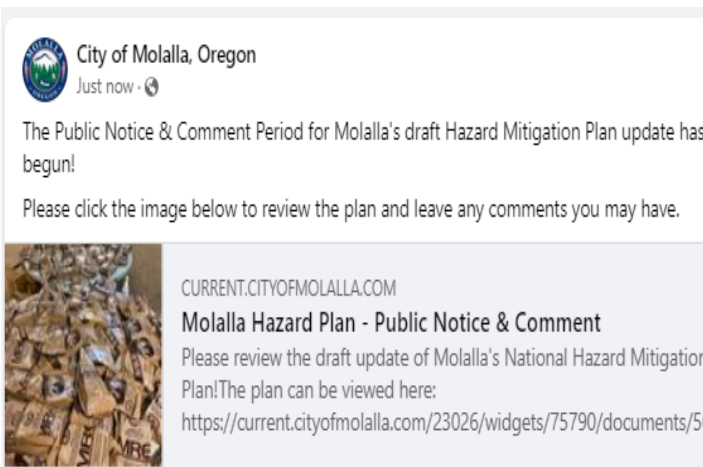
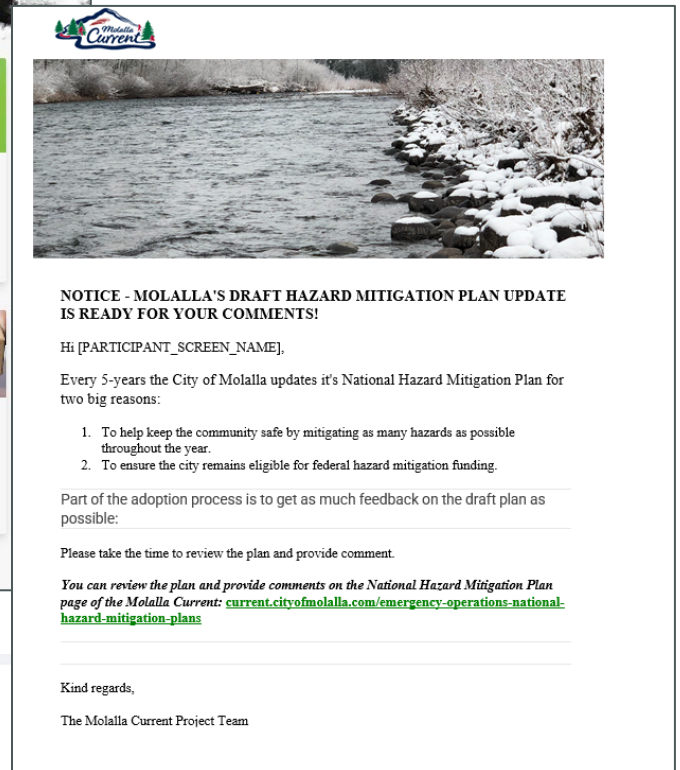
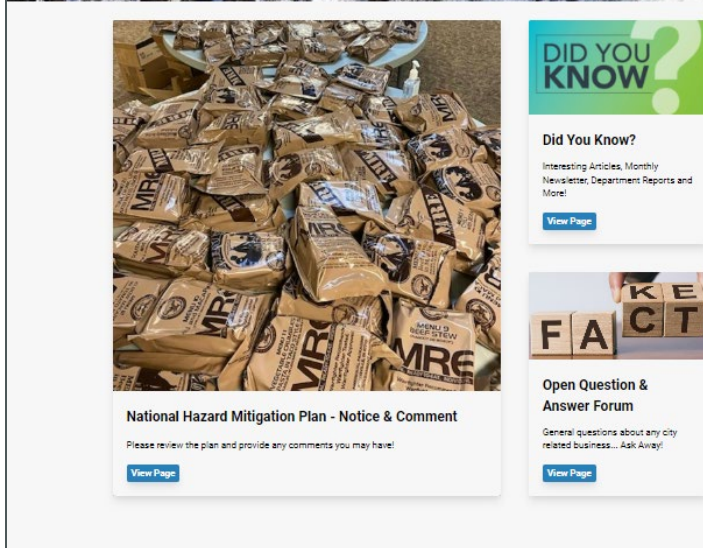
- MRSD Superintendent, Tony Mann;
- Ant Farm Youth services Director, Neal Hatley;
- Molalla Communications Company, Lance Eves and Daphne Lisac;
- Portland General Electric Local Government Affairs Manager, Julie Hernandez;
- Molalla Area Chamber of Commerce Office Coordinator, Jill Gates;

- Plaza Los Robles Property Manager ([plazalosrobles@cascade-management.com](mailto:plazalosrobles@cascade-management.com));
- Todos Juntos Molalla Site Contact, Albert Garcia
- Molalla Police
- Molalla Public Works
- Molalla Fire District

## Website & Social Media Posting, and Email Blast



*Left: Posting on the Molalla Current  
Below: Email Blast  
Both Posted 1/17/24*



*Left: Facebook Post  
(1/17/24)*

## HMAC

The Hazard Mitigation Advisory Committee (HMAC) members possessed familiarity with the community and how it is affected by natural hazard events. The HMAC 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:** May 30, 2023

During this meeting, the HMAC:

- Reviewed the previous NHMP, and were provided updates on hazard mitigation planning, the NHMP update process, and project timeline.
- Updated recent history of hazard events in the city.
- Reviewed and confirmed the County NHMP's mission and goals.
- 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.
- Discussed the NHMP public outreach strategy.

### **Meeting #2:** November 20, 2023 (via remote conference)

During this meeting, the HMAC:

- Confirmed and provided feedback on the final draft risk assessment update including community vulnerabilities and hazard information provided by DOGAMI (Risk Report).
- Reviewed and confirmed the city's capabilities assessment.
- Reviewed, confirmed, and prioritized the city's mitigation strategies.





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As we strive to bring you the best services possible, we must periodically review our prices and update them in response to increases in expenses impacting our services. Effective on your August billing statement, the price for your current monthly services will be increasing, excluding applicable taxes, fees, and surcharges.

Below please find a summary of rate adjustments for specific fees and/or costs. Unless otherwise noted, the listed fees and/or costs are neither government mandated nor a tax imposed on you by the government; they are either a fee and/or cost Astound Broadband assesses and retains.

- Basic TV will increase by \$2.00. This fee applies to TV packages to help offset the costs of programming content and delivery of local and regional broadcast television signals.
- Preferred TV will increase by \$6.81. This fee helps offset the costs of programming and delivery of sports and entertainment networks such as Warner Bros. Discovery, Comcast/NBC Universal, ABC/Disney/ESPN, Fox, CBS and others.
- Premiere TV tiers such as Entertainment, Variety, and/or Sports will increase by \$1.00 each. This is to help offset the costs of programming and delivery of these networks.
- The Local Broadcast TV Surcharge will increase by \$1.30. This fee applies to all TV packages to help offset the costs of programming content and delivery of the local and regional broadcast television signals.
- Premium channels such as HBO, Cinemax, Showtime/TMC, and/or Starz will increase by \$1.00 each, MAX will increase by \$2.00, to help offset increased costs associated with programming and delivery of these networks.
- TV equipment will increase by \$3.00.
- Modems and/or routers used for internet service will increase by \$2.00.
- Enhanced Whole Home WiFi will increase by \$2.00.
- The Network Access and Maintenance Fee/Internet Infrastructure Fee will increase by \$3.96. This fee helps defray costs associated with building and maintaining our fiber-rich broadband network, as well as the costs of expanding network capacity to support the continued increase in customers' average broadband consumption.
- Landline telephone service will increase by \$1.00/month.

Periodically, franchise, utility, PEG fees and other government mandated fees and taxes are also adjusted in keeping with regulatory requirements. These fees and taxes are government mandated and we are required to comply.

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- **Mobile:** Experience fast reliable 5G connections with friendly, award-winning service on one of America's largest 5G networks. Customers are saving with simple pricing for Internet + mobile.
- **Faster Downloads:** We've increased speeds on most of our Internet packages, providing the best value for your services.
- **Ultra-fast Speed Plus Wi-Fi:** Our top download speeds, up to 5 Gig\* in some locations, power more devices in the connected home. Wi-Fi 7 technology is smart enough to route Wi-Fi traffic between devices and reliably blanket your home.
- **Enhanced TV:** Just one device combines live TV, streaming apps, music, games, 4K, DVR, On Demand and voice control with Astound's latest TV technology. Plus, use your own device or take TV on the go with the Astound TV+ app.
- **Award-Winning:** Customers ranked Astound Broadband the Best Cable Internet Provider ten years in a row, in the PC Mag's Reader's Choice survey.
- **Affordable Internet:** We're dedicated to helping our communities stay connected affordably. Through our Internet First program, qualified households may be eligible to receive reduced cost Internet service. **For more information please visit [www.InternetFirst.com](http://www.InternetFirst.com).**
- **Community Involvement:** Astound and Habitat for Humanity are collaborating to help families in need achieve stability and self-reliance through safe, decent, and affordable housing. Visit [www.astound.com/habitat](http://www.astound.com/habitat).

We endeavor to deliver high-quality services at a great value, always aiming to put our customers first. All of us at Astound Broadband thank you for choosing us for your internet, mobile, TV and landline needs.

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