

# City of Dayton Addendum to the Yamhill County Multi-Jurisdictional Hazard Mitigation Plan



Effective: December 22, 2020 through December 21, 2025



Prepared for:

**City of Dayton**

Prepared by:

**University of Oregon  
Institute for Policy Research and Engagement  
Oregon Partnership for Disaster Resilience**

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**FEMA**

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and

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**FEMA**

January 20, 2021

The Honorable Casey Kulla  
Chair Kulla, Yamhill County Board of Commissioners  
535 NE 5th St.  
McMinnville, Oregon 97128

Dear Chair Kulla:

On December 22, 2020, the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) Region 10, approved the Yamhill County Hazard Mitigation Plan as a multi-jurisdictional local plan as outlined in Code of Federal Regulations Title 44 Part 201. This approval provides the below jurisdictions eligibility to apply for the Robert T. Stafford Disaster Relief and Emergency Assistance Act's, Hazard Mitigation Assistance grants projects through December 21, 2025, through your state:

Yamhill County	City of Amity	City of Carlton	City of Dayton
City of McMinnville	City of Newberg	City of Sheridan	City of Yamhill

FEMA individually evaluates all application requests for funding according to the specific eligibility requirements of the applicable program. Though a specific mitigation activity or project identified in the plan may meet the eligibility requirements, it may not automatically receive approval for FEMA funding under any of the aforementioned programs.

Approved mitigation plans may be eligible for points under the National Flood Insurance Program's Community Rating System (CRS). For additional information regarding the CRS, please visit: [www.fema.gov/national-flood-insurance-program-community-rating-system](http://www.fema.gov/national-flood-insurance-program-community-rating-system) or contact your local floodplain manager. Over the next five years, we encourage your communities to follow the plan's schedule for monitoring and updating, and to develop further mitigation actions. To continue eligibility, jurisdictions must review, revise as appropriate, and resubmit the plan within five years of the original approval date.

If you have questions regarding your plan's approval or FEMA's mitigation grant programs, please contact Joseph Murray, Planner with Oregon Office of Emergency Management, at (503) 378-2911, who locally coordinates and administers these efforts.

Sincerely,

**KRISTEN C  
MEYERS**

Digitally signed by KRISTEN  
C MEYERS  
Date: 2021.01.20 07:19:25  
-08'00'

Kristen Meyers, Director  
Mitigation Division

Enclosure

cc: Amie Bashant, Oregon Office of Emergency Management

EG:vl

**RESOLUTION No. 2020/21-04**  
**City of Dayton, Oregon**

***A Resolution Adopting the City of Dayton Representation in the Updates to the Yamhill County Multi-Jurisdictional Natural Hazards Mitigation Plan***

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

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

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

**WHEREAS**, the City of Dayton has fully participated in the FEMA prescribed mitigation planning process to prepare the Yamhill County, Multi-Jurisdictional Natural Hazard Mitigation Plan, which has established a comprehensive, coordinated planning process to eliminate or minimize these vulnerabilities; and

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

**WHEREAS**, these proposed projects and programs have been incorporated into the Yamhill County, Multi-Jurisdictional Natural Hazard Mitigation Plan that has been prepared and promulgated for consideration and implementation by the cities of Yamhill County; and

**WHEREAS**, the Oregon Office of Emergency Management and Federal Emergency Management Agency, Region X officials have reviewed the City of Dayton addendum to the Yamhill County Multi-Jurisdictional Natural Hazard Mitigation Plan and pre-approved it (dated, July 23, 2020) contingent upon this official adoption of the participating governments and entities;

**WHEREAS**, the NHMP is comprised of comprised of three volumes: Volume I: Basic Plan, Volume II: Jurisdictional 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 its effectiveness; and

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

**Therefore, the City of Dayton resolves as follows:**

- 1) **THAT** the City of Dayton adopts the Yamhill County Multi-Jurisdictional Natural Hazards Mitigation Plan as an official plan; and

- 2) **THAT** the City of Dayton will submit this Adoption Resolution to the Oregon Office of Emergency Management and Federal Emergency Management Agency, Region X officials to enable final approval of the Yamhill County Multi-Jurisdictional Natural Hazards Mitigation Plan.
- 3) **THAT** this resolution shall become effective immediately upon adoption.

**ADOPTED** this 8th day of September 2020.

**In Favor:** Collins, Holbrook, Mackin, Price, Sandoval-Perez, Wytoski

**Opposed:** None

**Absent:** Marquez

**Abstained:** None

  
Elizabeth Wytoski, Mayor

  
Date Signed

**ATTEST:**

  
Patty Ringnalda, City Recorder

  
Date of Enactment

## Purpose

This is an update of the Dayton addendum to the Yamhill 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 Dayton'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.

Dayton adopted their addendum to the Yamhill County Multi-jurisdictional NHMP on **September 8, 2020**. FEMA Region X approved the Yamhill County NHMP and the City's addendum on **December 22, 2020**. 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 **December 21, 2025**.

## Mitigation Plan Mission

The NHMP mission states the purpose and defines the primary functions of the 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 City concurs with the mission statement developed during the Yamhill County planning process (Volume I, Section 3):

***To promote public policy and mitigation activities which will enhance the safety to life and property from natural hazards.***

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 Yamhill County citizens, and public, and private partners can take while working to reduce the City's risk from natural hazards. These statements of direction form a bridge between the broad mission statement, and serve as checkpoints, as agencies, and organizations begin implementing mitigation action items.

The City concurs with the goals developed during the Yamhill County planning process (Volume I, Section 3). All 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.



Below is a list of the NHMP goals:

**GOAL 1: EMERGENCY OPERATIONS**

- Coordinate natural hazard mitigation activities, where appropriate, with emergency operations plans and procedures and with other agencies.

**GOAL 2: EDUCATION AND OUTREACH**

- Develop and implement education and outreach programs to increase public awareness of the risks associated with natural hazards.

**GOAL 3: PARTNERSHIPS**

- Develop effective partnerships with public and private sector organizations and significant agencies and businesses for future natural hazard mitigation efforts.
- Coordinate natural hazard mitigation actions between the County and local jurisdictions to create more cohesive and effective hazard mitigation efforts.

**GOAL 4: PREVENTIVE**

- Develop and implement activities to protect human life, commerce, and property from natural hazards.
- Reduce losses and repetitive damage for chronic hazard events while promoting insurance coverage for catastrophic hazards.

**GOAL 5: NATURAL RESOURCES UTILIZATION**

- Link natural resources management, land use planning, and watershed planning with natural hazard mitigation activities to protect natural systems and allow them to serve natural hazard mitigation functions.

**GOAL 6: IMPLEMENTATION**

- Implement strategies to mitigate the effects of natural hazards and increase the quality of life and resilience of economies in Yamhill County.

**GOAL 7: DEVELOPMENT**

- Communities appropriately apply development standards that consider the potential impacts of natural hazards.

**GOAL 8: DOCUMENTATION**

- Document and evaluate progress in achieving hazard mitigation strategies and action items.

## Process and Participation

This section of the NHMP addendum addresses 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), Yamhill County, and Dayton to update their NHMP. This project is funded through the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Grant Program for DR-4328 (HMGP-DR-4328-OR-5-P). Members of the Dayton NHMP Steering committee also participated in the County NHMP update process (Volume III, Appendix B).

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

### Convener and Committee

The Dayton City Manager serves as the NHMP addendum convener. The convener of the NHMP will take the lead in implementing, maintaining, and updating the addendum to the Yamhill County NHMP in collaboration with the designated convener of the Yamhill County NHMP (Yamhill County Emergency Manager).

Representatives from the City of Dayton Steering Committee met formally, and informally, to discuss updates to their addendum (Volume III, Appendix B). The steering committee 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 Yamhill County Emergency Manager, and 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, action items, and community profile.

The Dayton steering committee was comprised of the following representatives:

- Convener, Rochelle Roaden, City Manager
- Steve Sagmiller, Public Works Director

### Public Participation

Public participation was achieved by posting the NHMP publicly and providing community members the opportunity to make comments and suggestions during the review process. Community members were also provided an opportunity for comment via a survey administered by IPRE (Volume III, Appendix F). During the City public review period (Attachment B) there were no comments provided.

## **Implementation and Maintenance**

The City Council will be responsible for adopting the Dayton addendum to the Yamhill County NHMP. This addendum designates the steering committee, and a convener to oversee the development, and implementation of action items. Because the City addendum is part of the County's multi-jurisdictional NHMP, the City will look for opportunities to partner with the County. The City's steering committee will convene after re-adoption of the Dayton NHMP addendum on an annual schedule. The County is meeting on a semi-annual basis and will provide opportunities for the cities to report on NHMP implementation, and maintenance during their meetings. The City Manager will serve as the convener and will be responsible for assembling the steering committee. The steering committee will be responsible for:

- Reviewing existing action items to determine suitability of funding;
- Reviewing existing, and new risk assessment data to identify issues that may not have been identified at NHMP creation;
- Educating, and training new steering committee members on the NHMP, and mitigation actions in general;
- Assisting in the development of funding proposals for priority action items;
- Discussing methods for continued public involvement; and
- Documenting successes, and lessons learned during the year.

The convener will also remain active in the County's implementation, and maintenance process (Volume I, Section 4).

The City will utilize the same action item prioritization process as the County (Volume I, Section 4).

## **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 Yamhill County NHMP, and the State of Oregon NHMP.

The mitigation actions described herein (and priority actions 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, Dayton 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.

Future development without proper planning may result in worsening problems associated with natural hazards. Dayton's acknowledged comprehensive plan is the City of Dayton Comprehensive Plan. The City implements the plan through the Community Development Code.

Dayton currently has the following plans that relate to natural hazard mitigation. For a complete list visit the City's [website](#):

- Comprehensive Plan
- [Dayton Municipal Code](#)
  - Chapter 4 Building Codes
  - Chapter 6 Public Improvements
  - Chapter 7 Land Use and Development Code
    - Chapter 7.2.113 Flood Plain Overlay District
  - Chapter 8 Utilities
- Building Code, [2017 Oregon State Building Code](#) based on 2015 International Residential Code (IRC), and 2012 International Building Code (*to be updated to the 2020 Oregon State Building Code, anticipated October 2020*)
- [Parks and Recreation Master Plan](#)
- [Wastewater System Facilities Plan](#) (2012)
- [Water System Master Plan](#)

Other plans:

- [Yamhill County Community Wildfire Protection Plan](#) (2009, revised Nov. 2015)

## Government Structure

The Dayton City Charter establishes a Mayor-Council-Manager form of government, which vests policy authority in a volunteer City Council, and administrative authority for day-to-day operations in an appointed, professional City Manager. The Dayton City Council consists of a Mayor and six Councilors who serve four-year terms. The Council meets at least once per month at City Hall. The agenda of each meeting includes time for citizen comment.

The City of Dayton currently has the following departments which have a role in natural hazard mitigation:

**Administration** services are provided by the City Manager and includes strategic planning, budget and finance, and development of public policy recommendations to the City Council.

**Public Works** provides many of the basic urban services to the citizens of Dayton, including operating and maintaining the City's buildings, parks, streets, stormwater system, wastewater system, and water system. The City has a public works director and four paid maintenance staff.

**Building** services are provided through a contract with the City of Newberg and include plan review and inspections on commercial, industrial and residential developments. City Engineer services are provided through a contract with Westech Engineering, Inc.

**Planning** services are provided through a contract with the Mid-Willamette Valley Council of Government and includes all long range and current planning for new development, as well as the City's flood plain management zone. Planning is also responsible for implementation of the Comprehensive Plan.

**Police** services are provided through a contract with Yamhill County Sheriff's Office. In addition to law enforcement activities police services include emergency management (emergency preparedness, mitigation, response and recovery efforts for Dayton during emergencies, disasters, or disruptions).

**Fire** protection services are provided through a contract with Dayton Fire District which includes emergency response to more than 5,000 residents (including city residents) over 80 square miles. The main fire station is in Dayton. Emergency services include fire suppression and fire protection, the district has two sub-stations and provide service for Grand Island and Hopewell.

**Emergency Management** coordinates emergency preparedness, mitigation, response and recovery efforts for Dayton during emergencies, disasters, or disruptions through a contract with Yamhill County.

## **Continued Public Participation**

An open public involvement process is essential to the development of an effective NHMP. To develop a comprehensive approach to reducing the effects of natural disasters, the planning process shall include opportunities for the public, neighboring communities, local, and regional agencies, as well as, private, and non-profit entities to comment on the NHMP during review.<sup>1</sup> Keeping the public informed of efforts to reduce its risk to future natural hazard events is important for successful NHMP implementation, and maintenance. As such, the City is committed to involving the public in the NHMP review and update process (Volume I, Section 4). The City posted the plan update for public comment before FEMA approval, and after approval will maintain the plan on the City's website: <https://www.ci.dayton.or.us/page/homepage>

## **NHMP Maintenance**

The Yamhill County NHMP, and City addendum will be updated every five years in accordance with the update schedule outlined in the Disaster Mitigation Act of 2000. During the County NHMP update process, the City will also review, and update its addendum (Volume I, Section 4). The convener will be responsible for convening the steering committee to address the questions outlined below.

- Are there new partners that should be brought to the table?
- Are there new local, regional, state or federal policies influencing natural hazards that should be addressed?

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<sup>1</sup> Code of Federal Regulations, Chapter 44. Section 201.6, subsection (b). 2015

- Has the community successfully implemented any mitigation activities since the NHMP was last updated?
- Have new issues or problems related to hazards been identified in the community?
- Are the actions still appropriate given current resources?
- Have there been any changes in development patterns that could influence the effects of hazards?
- Have there been any significant changes in the community's demographics that could influence the effects of hazards?
- Are there new studies or data available that would enhance the risk assessment?
- Has the community been affected by any disasters? Did the NHMP accurately address the impacts of this event?

These questions will help the steering committee determine what components of the mitigation plan need updating. The steering committee will be responsible for updating any deficiencies found in the NHMP.

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

During the 2019-2020 update process the City re-evaluated their mitigation strategy (action items). During this process action items were updated, noting what accomplishments had been made, and whether the actions were still relevant; any new action items were identified at this time (see Volume III, Appendix B for more information on changes to action items).

### Priority Action Items

Table DA-1 presents a list of mitigation actions. The steering committee decided to modify the prioritization of action items in this update to reflect current conditions (risk assessment), needs, and capacity. High priority actions are shown in **bold** text with grey 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 steering committee in terms of implementation, the steering committee 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 detailed information for each high priority action. Full text of the plan goals referenced in Table DA-1 is located on page DA-2.

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Table DA-1 Dayton Action Items

Natural Hazard Action ID	Action Item	Coordinating Organization (Lead)	Partners	Potential Funding	Cost	Timing	Plan Goals Addressed												
							Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8					
<b>Multi-Hazard Actions</b>																			
Multi-Hazard #1	Develop, enhance, and implement public education and information materials concerning mitigation, preparedness and safety procedures for identified natural hazards.	Administration, Fire District	City Council	General fund, grants	L	Ongoing	✓	✓	✓										
Multi-Hazard #2	Incorporate Natural Hazard Mitigation Plan actions and goals into regulatory documents, e.g., Comprehensive Plan and the zoning code, and in existing plans, policies, or programs in the county that address natural hazards.	Planning	Administration	General funds, DLCD TA	L	Medium	✓		✓										
Multi-Hazard #3	Identify critical facilities, especially fire and police departments, without emergency power and encourage these facilities to secure emergency power to mitigate power outage events due to natural hazard events. Consider solar battery options due to PGE policy changes during fire risk. Consider outreach to private property owners.	Administration, Fire District	School District	General fund, utility rates, grants	H	Short	✓		✓										
Multi-Hazard #4	Plan for solar + battery storage systems, which can serve as mini power-supply stations or provide residents the ability to shelter in place after any electricity supply-disrupting event, at varying scales (project, neighborhood and district) and locations (critical City facilities, low-	Public Works	Administration, School District	General fund, grants, private investment	H	Long	✓		✓										



Natural Hazard Action ID	Action Item	Coordinating Organization (Lead)	Partners	Potential Funding	Cost	Timing	Plan Goals Addressed												
							Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8					
	income housing, community gathering spots).																		
Multi-Hazard #5	Replace Footbridge (utility bridge with pedestrian access) that carries water/sewer lines across the Yamhill River.	Community Development	Public Works	General fund, HMA, utility rates	H	Long	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Drought Actions</b>																			
No actions identified at this time																			
<b>Earthquake Actions</b>																			
Earthquake #1	Conduct seismic strength evaluations of critical facilities and infrastructure to identify vulnerabilities and seismically retrofit (structural and nonstructural) identified critical facilities and infrastructure in order to continue operations post-earthquake.	Administration	School District, Fire District, Planning, Public Works	General funds, utility fees, grants, SRGP	H	Long	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Flood Actions</b>																			
Flood #1	Ensure continued compliance in the National Flood Insurance Program (NFIP) through enforcement of local floodplain management ordinances.	Planning	Administration, Public Works	General fund	L	Ongoing	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Flood #2	Install new streamflow and rainfall measuring gauges to better inform community and emergency responders of flood risks.	Public Works	Administration	General fund	L	Medium	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Natural Hazard Action ID	Action Item	Coordinating Organization (Lead)	Partners	Potential Funding	Cost	Timing	Plan Goals Addressed									
							Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8		
Flood #3	Inventory culverts in need of modification to increase culvert size to increase its drainage efficiency.	Public Works	Administration	General fund, HMA	L	Short	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Flood #4	Develop and maintain GIS mapped critical facility inventory for all structures and residential and commercial buildings located within 100-year and 500-year floodplains.	Planning	Public Works, Administration	General fund	L	Short	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Flood #5	Establish flood mitigation priorities for critical facilities and residential and commercial buildings located within the 100-year floodplain using survey elevation data.	Public Works	Planning, Administration	General fund	L	Long	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b> Landslide Actions </b>																
Landslide #1	Use DOGAMI landslide risk maps to improve public knowledge of landslide hazard areas and understanding of vulnerability and risk to life and property in hazard-prone areas in the city.	Planning	DOGAMI, Administration, Emergency Management	General fund	L	Short	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Landslide #2	Regulate development in erosion prone areas through the comprehensive plan and zoning ordinances	Planning	Administration	General fund	L	Ongoing	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Landslide #3	Continue outreach program to educate the public concerning planting processes and materials used to stabilize hill slopes or stream banks. This is known as bio-engineering; which uses logs, root wads, or wood debris or other vegetation to reduce	Administration	Watershed Council	General fund	L	Ongoing	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Natural Hazard Action ID	Action Item	Coordinating Organization (Lead)	Partners	Potential Funding	Cost	Timing	Plan Goals Addressed												
							Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8					
	scour and erosion. (Partnership with watershed council)																		
Landslide #4	Maintain erosion protection by city park at city sewer outfall header	Public Works	Administration	General fund	L	Ongoing			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Landslide #5	Coordinate with county to protect county park boat landing	Public Works	Administration	General fund	L	Medium			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Severe Weather Actions (Windstorm and Winter Storms – Snow/Ice)</b>																			
Severe Weather #1	Develop and implement programs to coordinate maintenance and mitigation activities to reduce risk to public infrastructure from severe winter storms.	Public Works	Administration, Planning	General fund, grants, utility rates	M	Ongoing			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Severe Weather #2	Review critical facilities and government building energy efficiency, winter readiness, and electrical protection capability. Identify, prioritize, and implement infrastructure upgrade or rehabilitation project prioritization and development.	Public Works	Administration	General fund	L	Medium			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Severe Weather #3	Coordinate with County debris management plans.	Public Works	Administration	General fund	L	Ongoing			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Severe Weather #4	Continue tree clearing mitigation programs to keep trees from threatening lives, property, and public infrastructure from severe weather events.	Public Works	Administration	General fund	M	Ongoing			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Severe Weather #5	Maintain partnership program with electrical utilities to use underground utility placement methods where possible to reduce or eliminate power outages in new development from severe winter storms. Consider developing incentive programs.	Public Works	Administration, Planning	General fund	L	Ongoing			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Natural Hazard Action ID	Action Item	Coordinating Organization (Lead)	Partners	Potential Funding	Cost	Timing	Plan Goals Addressed										
							Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8			
<b>Volcanic Event Actions</b>																	
Volcanic Event #1	Update public emergency notification procedures and develop an outreach program for ash fall events.	Public Works	Administration	General fund	L	Long						✓	✓	✓	✓	✓	✓
<b>Wildfire Actions</b>																	
Wildfire #1	Coordinate wildfire mitigation action items through the Yamhill County Community Wildfire Protection Plan. Develop, adopt, and enforce burn ordinances that require burn permits, restricts campfires, and controls outdoor burning.	Fire District	Community Development	General fund, ODF, grants	M	Ongoing	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wildfire #2	Conduct regular fuel-reduction projects throughout wildfire hazard-prone areas in the city.	Planning, Fire District	Administration	General fund	L	Long											
Wildfire #3		Fire District, Administration	Planning, Public Works	General fund	M	Short	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Source: City of Dayton steering committee, 2020.

Note: Full text of the plan goals referenced in this table is located on page DA-2.

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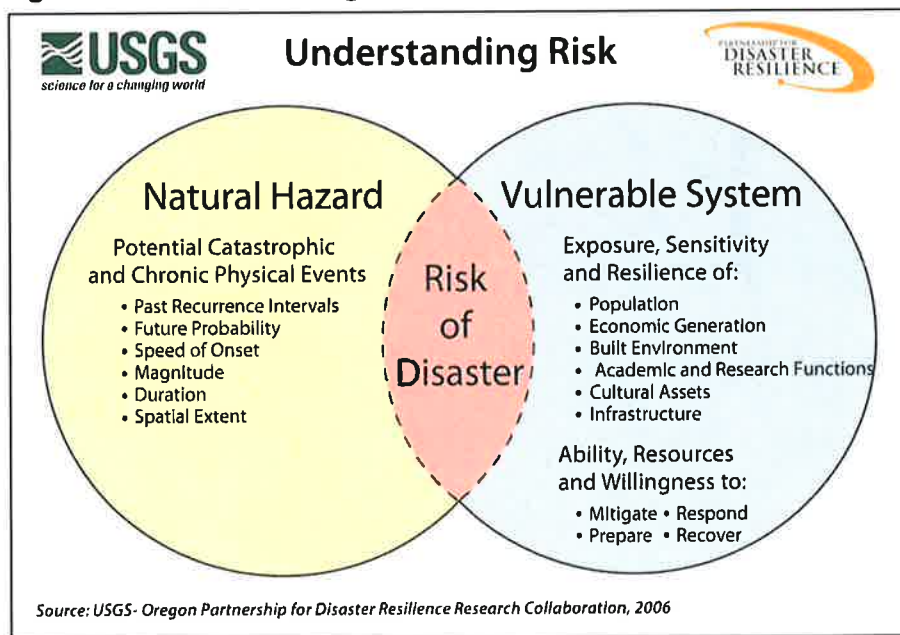
## Risk Assessment

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

**Figure DA-1 Understanding Risk**



## Hazard Analysis

The Dayton steering committee 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 Dayton, which are discussed throughout this addendum.

Table DA-2 shows the HVA matrix for Dayton 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 sense of hazard priorities but does not predict the occurrence of a hazard.

One catastrophic hazard (Cascadia Subduction Zone earthquake) and two chronic hazards (winter storm and windstorm) rank as the top hazard threats to the City (Top Tier). The flood, drought, and crustal earthquake hazards comprise the next highest ranked hazards (Middle Tier), while the wildfire, landslide, and volcanic event hazards comprise the lowest ranked hazards (Bottom Tier).

**Table DA-2 Hazard Analysis Matrix**

Hazard	History	Maximum		Total Threat Score	Hazard Rank	Hazard Tiers	
		Vulnerability	Threat Probability				
Winter Storm	16	40	80	56	192	#1	Top Tier
Earthquake - Cascadia	6	45	100	35	186	#2	
Windstorm	16	25	70	56	167	#3	
Flood	18	25	50	63	156	#4	Middle Tier
Drought	10	25	50	56	141	#5	
Earthquake - Crustal	6	20	60	21	107	#6	
Wildfire	8	15	50	21	94	#7	Bottom Tier
Landslide	6	15	30	21	72	#8	
Volcanic Event	4	10	30	7	51	#9	

Source: Dayton steering committee, 2019-2020.

Table DA-3 categorizes the probability, and vulnerability scores from the hazard analysis for the City and compares the results to the assessment completed by the Yamhill County steering committee. Variations between the City, and County are noted in **bold** text within the city ratings.

**Table DA-3 Probability and Vulnerability Comparison**

Hazard	Dayton		Yamhill County	
	Probability	Vulnerability	Probability	Vulnerability
Drought	High	<b>Moderate</b>	High	Moderate
Earthquake - Cascadia	Moderate	High	Moderate	High
Earthquake - Crustal	Low	Moderate	Low	Moderate
Flood	High	<b>Moderate</b>	High	High
Landslide	<b>Low</b>	Low	High	Low
Volcanic Event	Low	Low	Low	Low
Wildfire	Low	Low	Low	Low
Windstorm	High	Moderate	High	Moderate
Winter Storm	High	High	High	High

Source: Dayton and Yamhill County steering committee, 2019-2020.

## Community Characteristics

Table DA-4 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. Between 2012 and 2019 the City grew by 205 people (8%).<sup>2</sup> According to the State's official coordinated population forecast, between 2019 and 2040 the City's population is forecast to grow by 20% to 3,290.<sup>3</sup> *Note: the State is currently updating the official forecast and the proposed 2040 population is 3,364 which represents a 23% increase from 2019 population.*<sup>4</sup> Median household income increased by 13% between 2012 and 2017.<sup>5</sup>

There have been three housing developments since the previous plan that are either completed or underway: a nine (9) home subdivision in 2017, a 16-home subdivision (currently in development on Ferry St between 8<sup>th</sup> and 9<sup>th</sup>), and a proposed 12 lot affordable housing development. New development has complied with the standards of the Oregon Building Code, and the city's development code including their floodplain ordinance.

## Economy

The City of Dayton is in the eastern portion of Yamhill County, its northeastern city limit is the Yamhill River. Dayton's commercial areas developed along primary routes (Ferry St and 3<sup>rd</sup> St), and residential development followed nearby (see Figure DA-2).

Most workers residing in the city (95%, 1,217 people) travel outside of the city for work primarily to McMinnville, Newberg, Portland Metro area, and Salem.<sup>6</sup>

Dayton residents are employed in a variety of occupations including professional (17%), management, business, and financial operations (11%), office and administrative support (11%), production (10%), construction, extraction, and maintenance (10%), and transportation and material moving (9%) occupations.<sup>7</sup>

The largest employers in the city are the Dayton School District, Baker Rock, C&D Landscaping and Gray & Company.

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<sup>2</sup> Portland State University, Population Research Center, "Annual Population Estimates", 2019.

<sup>3</sup> Portland State University, Population Research Center, "Oregon Population Forecast Program Cycle 1 (2014-2017)". 2017.

<sup>4</sup> Portland State University, Population Research Center, "Oregon Population Forecast Program Cycle 2 (2018-2020)". 2020 (proposed).

<sup>5</sup> Social Explorer, Table T57, U.S. Census Bureau, 2013-2017 and 2008-2012 American Community Survey Estimates.

<sup>6</sup> U.S. Census Bureau. LEHD Origin-Destination Employment Statistics (2002-2017). Longitudinal-Employer Household Dynamics Program, accessed on April 25, 2020 at <https://onthemap.ces.census.gov>.

<sup>7</sup> Social Explorer, Table A17008, U.S. Census Bureau, 2013-2017 American Community Survey Estimates.



**Table DA-4 Community Characteristics**

Population Characteristics		
<b>2012 Population</b>	2,535	
<b>2019 Population</b>	2,740	
<b>2040 Forecasted Pop. [Proposed]*</b>	3,290 [3,364]	
<b>Race (non-hispanic) and Ethnicity (Hispanic)</b>		
White	55%	
Black/ African American	< 1%	
American Indian and Alaska Native	< 1%	
Asian	1%	
Native Hawaiian and Other Pacific Islander	0%	
Some Other Race	0%	
Two or More Races	4%	
Hispanic or Latino	40%	
<b>Limited or No English Spoken</b>	7%	
<b>Vulnerable Age Groups</b>		
Less than 15 Years	798	31%
65 Years and Over	282	11%
<b>Disability Status</b>		
Total Population	329	13%
Children	57	6%
Seniors	116	41%

Income Characteristics		
<b>Households by Income Category</b>		
Less than \$15,000	76	10%
\$15,000-\$29,999	98	13%
\$30,000-\$44,999	122	16%
\$45,000-\$59,999	134	18%
\$60,000-\$74,999	71	10%
\$75,000-\$99,999	128	17%
\$100,000-\$199,999	103	14%
\$200,000 or more	16	2%
<b>Median Household Income</b>	\$54,265	
<b>Poverty Rates</b>		
Total Population	411	16%
Children	218	24%
Seniors	162	12%
<b>Housing Cost Burden</b>		
Owners with Mortgage	130	24%
Renters	106	51%

Source: U.S. Census Bureau, 2013-2017 American Community Survey; Portland State University, Population Research Center, "Annual Population Estimates", 2019. Portland State University, Population Research Center, "Oregon Population Forecast Program Cycle 1 (2014-2017)". 2017. and "Oregon Population Forecast Program Cycle 2 (2018-2020)". 2020 (proposed).

Housing Characteristics		
<b>Housing Units</b>		
Single-Family	656	82%
Multi-Family	61	8%
Mobile Homes	84	10%
<b>Year Structure Built</b>		
Pre-1970	216	27%
1970-1989	194	24%
1990-2009	384	48%
2010 or later	7	1%
<b>Housing Tenure and Vacancy</b>		
Owner-occupied	541	68%
Renter-occupied	207	26%
Seasonal	0	0%
Vacant	53	7%

Dayton is in eastern portion of Yamhill County, approximately seven (7) miles east of McMinnville. The Willamette River is to the east of the city and there are three drainage basins within the city: Yamhill River, Palmer Creek, and an unnamed creek in the northwestern portion of the city that becomes an overflow side channel of the Yamhill River during flood events. Dayton is generally flat and its soils are moderately well-drained silt loams primarily of the Amity and Dayton series. The area that is not urbanized is cultivated or comprised of grass, scattered Oak, and Douglas Fir.

Dayton's temperatures range from a monthly average low of 34-38°F in the winter months to average highs of 75-83°F in the summer months. The coolest months are December-February and the warmest months are July and August. The average annual precipitation is about 42 inches and approximately 80% falls between November and April.

The City has an educated population with 79% of residents 25 years, and older holding a high school degree, 18% have a bachelor's degree or higher. The Dayton School District has a 94% graduation rate as of 2019. Dayton includes industrial and commercial development but is zoned primarily residential.

**Figure DA-2 Oregon Transportation Map: City of Dayton**



Source: Oregon Department of Transportation

## Community Assets

This section outlines the resources, facilities, and infrastructure that, if damaged, could significantly impact the public safety, economic conditions, and environmental integrity of Dayton.

**Critical facilities and infrastructure** are those that support government and first responders' ability to act in an emergency. They are a top priority in any comprehensive hazard mitigation plan. These include locally designated shelters and other essential assets, such as fire stations, and water and wastewater treatment facilities (see Table DA-5). **Essential facilities and infrastructure** are those that support the continued delivery of key government services, and/or that may significantly impact the public's ability to recover from the emergency. These facilities may include: City buildings and other public facilities such as schools.

It is important to note that the facilities identified as "critical" and "essential" are characterized differently than the structural code that identifies buildings as "essential" and "non-essential." The structural code uses different language and criteria and therefore have completely different meanings than the buildings identified in this addendum.

**Table DA-5 Critical and Essential Facilities**

Facility Name	Address	
<b>Government</b>		
<i>See Table DA-6 for information on seismic vulnerability.</i>		
City Hall/Library	416 Ferry St	Critical
Community Center (City Hall Annex) / Palmer Creek Lodge	606 4 <sup>th</sup> St	Essential
Public Works Shop	416 Ferry St	Essential
US Post Office	530 Ferry St	Essential
Water Treatment Facility	1209 Ferry St	Critical
Sewer Lagoons #1-5	SE Kreder Rd & Yamhill River	Essential
<b>Emergency Response</b>		
Dayton Fire District Station	500 7 <sup>th</sup> St	Critical
Sheriff Sub-Station (City Hall Annex)	606 4 <sup>th</sup> St	
<b>Educational (Public)</b>		
Dayton SD 8 (Admin Office)	780 Ferry St	Essential
Dayton Grade School	526 Ferry St	Essential
Dayton Junior High School	801 Ferry St	Essential
Dayton High School	801 Ferry St	Essential
<b>Educational (Private/Charter/Montessori, etc.)</b>		
Dayton Head Start	528 Ferry St	Essential

## Transportation/Infrastructure

Mobility plays an important role in Dayton, and the daily experience of its residents, and businesses. Motor vehicles represent the dominant mode of travel through, and within Dayton. Dayton is served by Yamhill County Transit, Oregon POINT, among other transit providers.

Infrastructure that provides critical and essential services include:

### Railroads

There is no freight or passenger rail service in the city.

### Airports

The city has no commercial service airport, however, the McMinnville Municipal Airport is 3.5 miles west of the city along the Salmon River Hwy (OR 18)/SE Dayton Bypass. The Portland International Airport (PDX), the largest and busiest airport in the state, is in nearby Multnomah County.

### Roads/Seismic lifelines

Oregon 18 (Salmon River Highway) is the major east-west transportation route through the city. The Amity-Dayton Hwy (OR 233), and the Salem-Dayton Highway (OR 221) are also major transit routes (see Figure DA-2).

Seismic lifeline routes help maintain transportation facilities for public safety and resilience in the case of natural disasters. Following a major earthquake, it is important for response and recovery agencies to know which roadways are most prepared for a major seismic event. The Oregon Department of Transportation has identified lifeline routes to provide a secure lifeline network of streets, highways, and bridges to facilitate emergency services response after a disaster.<sup>8</sup>

System connectivity and key geographical features were used to identify a three-tiered seismic lifeline system. Routes identified as Tier 1 are considered the most significant and necessary to ensure a functioning statewide transportation network. The Tier 2 system provides additional connectivity to the Tier 1 system, it allows for direct access to more locations and increased traffic volume capacity. The Tier 3 lifeline routes provide additional connectivity to the systems provided by Tiers 1 and 2.

The Lifeline Routes in Dayton:

- Tier I: None
- Tier II: None
- Tier III: None

### Bridges

Because of earthquake risk, the seismic vulnerability of the city's bridges is an important issue. Non-functional bridges can disrupt emergency operations, sever lifelines, and disrupt

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<sup>8</sup> Oregon Department of Transportation. Oregon Seismic Lifeline Evaluation, Vulnerability Synthesis, and Identification, *Oregon Seismic Lifeline Routes*, May 15 2012. Page 6-4 figure 6-1. Accessed September 12, 2019.

local and freight traffic. These disruptions may exacerbate local economic losses if industries are unable to transport goods. Bridges within the city that are critical or essential include:

- Ferry St Footbridge (over the Yamhill River; water and sewer lines run underneath)
- Yamhill River, Hwy 39 (OR 18) bridge (ODOT 08003)
- Hwy 39 (OR 18) over Hwy 150 (OR 221) (ODOT 08013)
- Palmer Creek, Hwy 150 (OR 221) bridge (ODOT 01470A)

### Utility Lifelines

Utility lifelines are the resources that the public relies on daily such as, electricity, fuel and communication lines. If these lines fail or are disrupted, the essential functions of the community can become severely impaired. Utility lifelines are closely related to physical infrastructures, like dams and power plants, as they transmit the power generated from these facilities.

Generally, the network of electricity transmission lines running throughout the city is operated by Portland General Electric. The Williams Gas Pipeline provides natural gas that is delivered to customers in the city by Northwest Natural Gas. These lines may be vulnerable as infrequent natural hazards, like earthquakes, could disrupt service to natural gas consumers across the region.

The city water and wastewater systems include the following:

- Breyman Watershed
- Water Reservoirs:
  - Concrete Reservoir (165,000 gallons)
  - Steel Reservoir (600,000 gallons)
  - Enclosed water tank (1.5 million gallons)
- Lift Station #1 (4<sup>th</sup> and 9<sup>th</sup> St)
- Lift station #2 (Hwy 221 and Wall St)
- Lift station #3 (Footbridge and Ferry St)(rebuilt September 2019)
- Lift station #4 (Palmer Creek and Sweeney St)
- 8 Community potable water wells
- Sewer treatment lagoons (SE Kreder Rd & Yamhill River)
- Water treatment plant (1209 Ferry St)

### **Environmental Assets/Parks:**

Environmental assets are those parks, green spaces, wetlands, and rivers that provide an aesthetic, and functional ecosystem services for the community include:

Alderman Park & Off-Leash Area  
Courthouse Square Park  
Legion Field

Andrew Smith Park  
Palmer Creek Trail  
Dayton Landing (County Park)

### **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:

### **Child Care Facilities**

None registered.

### **Adult Care Facilities**

None registered.

## **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 make Dayton 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. The following historic resources can be found in the City:

Community Center/Palmer Creek Lodge	Gabriel – Filer Residence (525 Church St)
Court House Square Park	Curtis W Powell Residence (524 Ash St)
Fort Yamhill Blockhouse	Rippey Residence (523 Ash Street)
Gabriel-Will Residence (401 3 <sup>rd</sup> St)	Morse House (101 5th Street)
Baptist Church (301 Main St)	Monahan Residence (120 5th Street)
Nichols Residence (303 Main St)	Free Methodist Church (411 Oak Street)
Londershausen (Paul) Residence (309 Main St)	Robert Morris Residence (409 Oak St)
Fisher Butcher Shop (400 Ferry Street)	Fletcher-Stretch Residence (401 Oak St)
Dayton Common School (506 4th Street)	Methodist Episcopal Parsonage (202 4th St)
Brookside Cemetery (3rd & Mill Streets)	Avery Residence (403 Church Street)
Cain House (208 Alder Street)	Methodist Episcopal Church (302 4th St)
Foster Oil Company (216 Ferry Street)	Gottlieb Londershausen Residence (402 Main St)
Harris Building (302 Ferry Street)	Samuel Sigler Residence (521 Ferry St)
Commercial Club SC Stuckey Building (304 Ferry Street)	Lewis – Shippy Residence (421 6th St)
Dayton Post Office (308 Ferry Street)	Jessen–Goodrich Residence (324 6th St)
William Hibbert Residence (426 5th St)	Bonome Residence (700 Church Street)
James Mellinger Residence (414 5th St)	Mabee–Mayberry Residence (309 7th St)
Smith - Jones Residence (308 5th Street)	Dayton High School (801 Ferry Street)
Evangelical United Brethren Church (302 5th Street)	Hole Residence (623 Ferry Street)
John Baxter Residence (407 Church St)	Joel Palmer House (600 Ferry Street)
Carter - Goodrich Residence (521 Church Street)	Mellinger - Ponnay House (102 Tribbett Court)

## Hazard Characteristics

### Drought

The steering committee determined that the City's probability for drought is **high**, and that their vulnerability to drought is **moderate**.

Volume I, Section 2 describes the characteristics of drought hazards, history, as well as the location, extent, and probability of a potential event. The spring/summer of 2018 was particularly dry period for the City. Due to the climate of Yamhill County, past, and present weather conditions have shown an increasing potential for drought.

The City of Dayton owns and operates a water treatment facility and a well field (jointly used by Dayton and Lafayette through an intergovernmental agreement) that support 26% of the water supply for the City. The existing water capacity allows for a minimum of 216 million gallons per day (MGD) to a maximum of 888 MGD via two (2) water transmission mains (one 8-inch diameter main is suspended from a city owned decommissioned footbridge over the Yamhill River to the east of the city).

The city has three reservoirs with a combined capacity of about 2.265 million gallons (MG):

- Main Reservoir (1.5 MG) Ferry Street
- Steel Reservoir (.600 MG) Breyman Watershed
- Concrete Reservoir (.165 MG) Breyman Watershed

For more information on Dayton's water supply visit their website:

[https://www.ci.dayton.or.us/page/water\\_home](https://www.ci.dayton.or.us/page/water_home)

#### Vulnerability Assessment

Due to insufficient data and resources, Dayton is currently unable to perform a quantitative risk assessment, or exposure analysis, for this hazard. State-wide droughts have historically occurred in Oregon, and as it is a region-wide phenomenon, all residents are equally at risk. Structural damage from drought is not expected; rather the risks apply to humans and resources. Industries important to the City of Dayton's local economy such as agriculture, fishing, and timber have historically been affected, and any future droughts would have tangible economic and potentially human impacts.

The city's existing water supply is vulnerable to flooding during the winter wet season. The city's water mains are vulnerable to seismic activity that could cause them to crack or impact the pedestrian footbridge over the Yamhill River.

#### Mitigation Activities

The City provides information on water conservation to Dayton water customers. The city also offers a \$50 utility credit (per household) for customers who show proof of water saving devices (dishwashers, clothes washers, and 1.28 gallons per flush toilets). The City engages in other water conservation measures including water line leak detection and repair, replacement of deteriorating pipe, and replacement/repair of older and under-registering water meters and reducing dead end lines in order to increase water circulation throughout the system.

### Dayton Codes Pertaining to Droughts

The following Dayton codes, plans, and policies pertain to droughts:

1. Dayton Comprehensive Plan
2. Dayton Municipal Code Chapter 8.2, *Water Curtailment*

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

## Earthquake (Cascadia Subduction Zone)

The steering committee 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**.

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 Dayton as well. The causes, and characteristics of an earthquake event are appropriately described within the 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 Dayton as well.

Within the Northern Willamette Valley are that includes Yamhill County, two potential faults and/or zones can generate high-magnitude earthquakes. These include the Cascadia Subduction Zone and the Gales Creek-Newberg-Mt. Angel Structural Zone (including the Newberg Fault).

### 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>9</sup>

Figure DA-3 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 (orange) shaking in a CSZ event.

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 Dayton 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

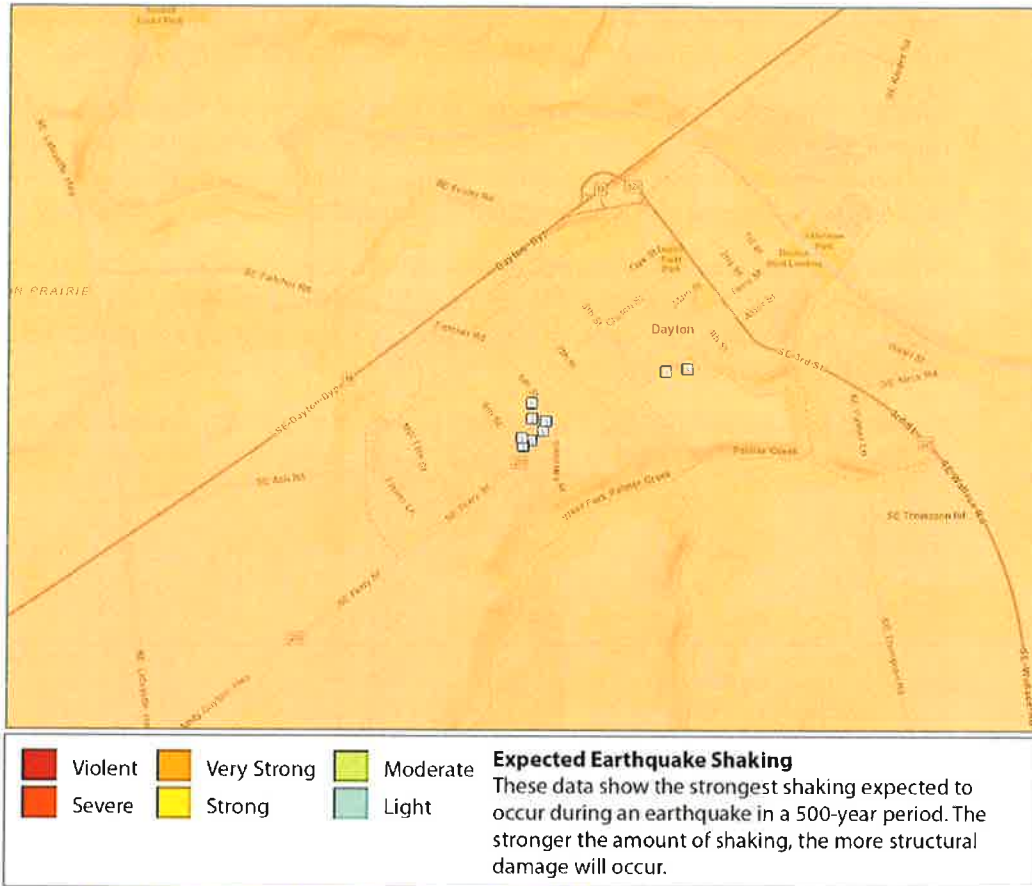
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<sup>9</sup> The Cascadia Region Earthquake Workgroup, 2005. Cascadia Subduction Zone Earthquakes: A magnitude 9.0 earthquake scenario. <http://www.crew.org/PDFs/CREWSubductionZoneSmall.pdf>



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.

**Figure DA-3 Cascadia Subduction Zone Expected Shaking**



Source: [Oregon HazVu: Statewide Geohazards Viewer \(DOGAMI\)](#)

Note: To view detail click the link above to access Oregon HazVu.

### Earthquake (Crustal)

The steering committee determined that the City's probability for a crustal earthquake is **low** and that their vulnerability to crustal earthquake is **moderate**.

Volume I, Section 2 describes the characteristics of earthquake hazards, history (see below), as well as the location, extent, and probability of a potential event. Generally, an event that affects the County is likely to affect Dayton 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 Dayton as well.

Figure DA-4 shows a generalized geologic map of the Dayton 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 and shows the Newberg Fault.

### Vulnerability Assessment (subduction zone and crustal)

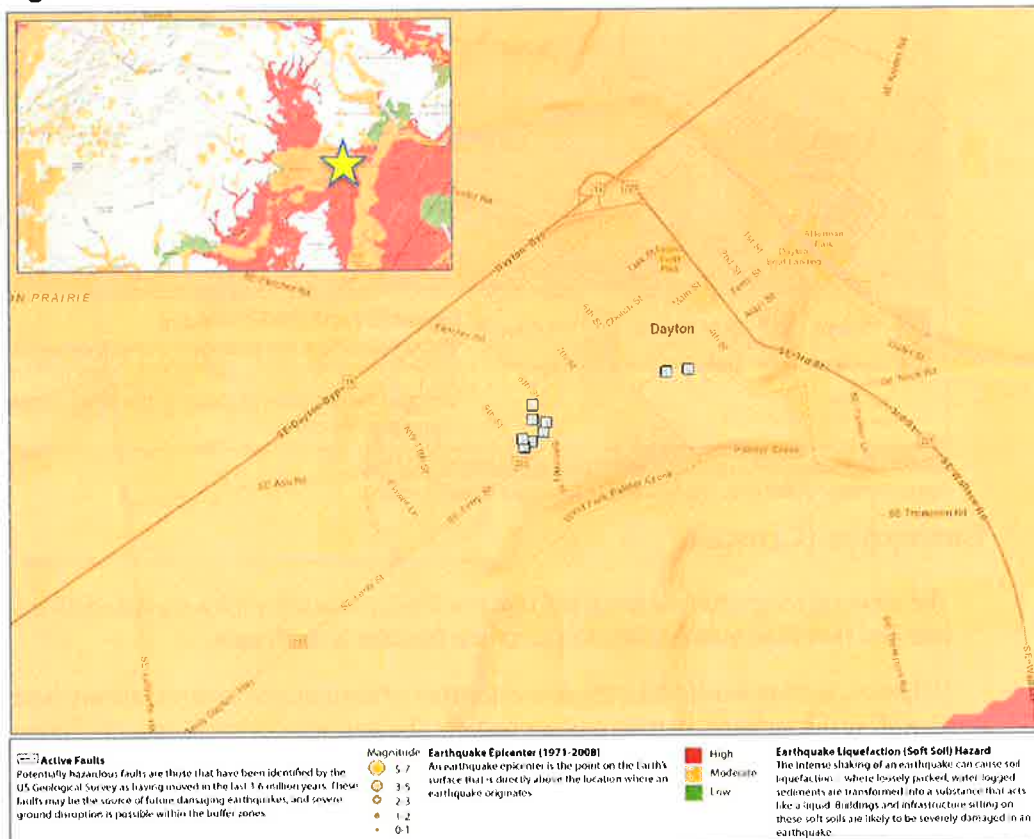
Due to insufficient data and resources, Dayton is currently unable to perform a quantitative risk assessment for this hazard.

The western portion of Yamhill County is likely to experience higher levels of shaking than the eastern portion, as a result of its proximity to the Cascadia Subduction Zone.

The City of Dayton is in the eastern portion of Yamhill County, in a region likely to experience strong shaking should a subduction zone or significant crustal earthquake occur. This rating represents the peak acceleration of the ground caused by the earthquake, and for a strong designation corresponds to 9-20 percent of the acceleration of gravity.

Ground movement in both areas, however, is likely to cause damage to weak, unreinforced masonry buildings, and to induce small landslides along unstable slopes. As well as landslide, earthquakes can trigger other hazards such as dam failure and disruption of transportation and utility systems.

**Figure DA-4 Active Crustal Faults, Epicenters (1971-2008), and Soft Soils**



Source: [Oregon HazVu: Statewide Geohazards Viewer \(DOGAMI\)](#)

Note: To view detail click the link above to access Oregon HazVu.

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. 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.

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 characteristics section (Table DA-4), approximately 51% 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 DA-6; each “X” represents one building within that ranking category. Of the facilities evaluated by DOGAMI using their Rapid Visual Survey (RVS), none have a very high (100% chance) collapse potential, however, four (4) school buildings have a high (greater than 10% chance) collapse potential.

**Table DA-6 Rapid Visual Survey Scores**

Facility	Site ID*	Level of Collapse Potential			
		Low (<1%)	Moderate (>1%)	High (>10%)	Very High (100%)
<b>Schools</b>					
Dayton Grade School (526 Ferry St)	Yamh_sc301	SRGP 2017-19 Phase II: \$2,499,570			
Dayton Junior High School (801 Ferry St)	Yamh_sch25	X,X			
Dayton High School (801 Ferry St)	Yamh_sch01	X	X	X,X,X	

Source: [DOGAMI 2007. Open File Report 0-07-02. Statewide Seismic Needs Assessment Using Rapid Visual Assessment.](#) “\*” – Site ID is referenced on the [RVS Yamhill County Map](#)

**Mitigation Activities**

Earthquake mitigation activities listed here include current mitigation programs and activities that are being implemented by Dayton agencies or organizations.

A primary mitigation objective is to construct or upgrade critical and essential facilities and infrastructure to withstand future earthquake events. Seismic retrofit grant awards per the [Seismic Rehabilitation Grant Program](#)<sup>10</sup> have been funded to retrofit the Dayton Grade School (2017-19, Phase II, grant award, \$2,499,570).

The City of Dayton website refers to the Yamhill County [Community Emergency Response Team](#) (CERT) program that trains members in mitigation as well as preparedness and response. The City’s Emergency Management Program works with community groups, businesses, residential facilities, and public and private schools in promoting earthquake preparedness and mitigation.

<sup>10</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.

### Dayton Codes Pertaining to Earthquakes

The following Dayton codes, plans, and policies pertain to earthquakes:

1. Dayton Comprehensive Plan.
2. The City of Dayton enforces the [Oregon Building Code](#) which includes provisions for earthquakes.

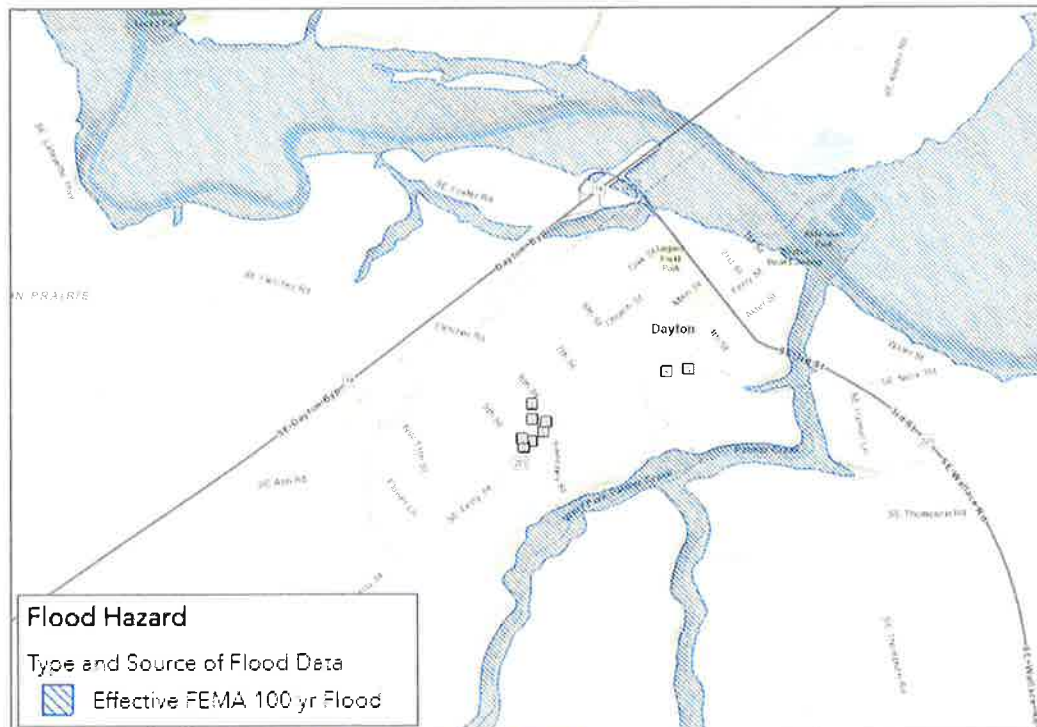
*Please review Volume I, Section 2 for additional information on this hazard.*

## Flood

The steering committee determined that the City's probability for flood is **high** and that their vulnerability to flood is **moderate**.

Volume I, Section 2 describes the characteristics of flood hazards, history, as well as the location, extent, and probability of a potential event. Portions of Dayton have areas of floodplains (special flood hazard areas, SFHA). These include areas include along the Yamhill River, Palmer Creek, and an unnamed creek that becomes an overflow side channel for the Yamhill River during some flood events (Figure DA-5). The Willamette River is approximately one mile southeast of the city limits.

**Figure DA-5 Special Flood Hazard Area- update**



Source: [Oregon HazVu: Statewide Geohazards Viewer \(DOGAMI\)](#)

Note: To view detail click the link above to access Oregon HazVu.

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 Dayton

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.

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 City has been proactive in mitigating flood hazards by purchasing floodplain property.

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.

#### Vulnerability Assessment

Due to insufficient data and resources, Dayton is currently unable to perform a quantitative risk assessment for this hazard. FEMA FIRMs were used to outline the 100-year and 500-year floodplains for the City of Dayton. The 100-year floodplain delineates an area of high risk, while the 500-year floodplain delineates an area of moderate risk. Commercial, industrial, and residential development is largely on higher ground outside of the special flood hazard area (SFHS). At the eastern edge of the city several residential properties, two city sewer lagoons, and a commercial rock operation are within the mapped special flood hazard area of the Yamhill River. Localized flooding can occur due to various factors including blocked stream channels or storm drains.

#### National Flood Insurance Program (NFIP)

FEMA's Flood Insurance Study (FIS), and Flood Insurance Rate Maps (FIRMs) are effective as of March 2, 2010. Table DA-7 shows that as of August 2019, Dayton has three (3) National Flood Insurance Program (NFIP) policies in force. Of those, none are for property that was constructed before the initial FIRMs. Dayton has not had a Community Assistance Visit (CAV) and does not participate in the Community Rating System (CRS). The table shows that all flood insurance policies are for residential structures, all single-family homes. There have been no paid flood insurance claims. The City complies with the NFIP through enforcement of their flood damage prevention ordinance and their floodplain management program.

The Community Repetitive Loss record for Dayton identifies no Repetitive Loss Properties<sup>11</sup> or Severe Repetitive Loss Properties<sup>12</sup>.

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<sup>11</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>12</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.

**Table DA-7 Flood Insurance Detail**

	Yamhill County	Dayton
Effective FIRM and FIS	3/2/2010	3/2/2010
Initial FIRM Date	-	6/1/1982
Total Policies	446	3
Pre-FIRM Policies	153	0
<b>Policies by Building Type</b>		
Single Family	401	3
2 to 4 Family	14	0
Other Residential	10	0
Non-Residential	21	0
Minus Rated A Zone	72	0
Insurance in Force	\$100,617,300	\$613,900
Total Paid Claims	81	0
Pre-FIRM Claims Paid	68	0
Substantial Damage Claims	3	0
Total Paid Amount	\$1,166,076	\$0
Repetitive Loss Structures	4	0
Severe Repetitive Loss Properties	1	0
CRS Class Rating	-	NP
Last Community Assistance Visit	-	NA

Source: Department of Land Conservation and Development, August 2019. Repetitive Flood Loss information provided by FEMA correspondence on September 10, 2020.  
 NP = Not Participating, NA = Not Available

**Mitigation Activities**

Flood mitigation activities listed here include current mitigation programs and activities that are being implemented by Dayton agencies or organizations.

**Dayton Codes Pertaining to Flooding**

The following Dayton codes, plans, and policies pertain to flooding:

1. Dayton Comprehensive Plan.
2. Dayton Municipal Code Chapter 7.2.113 *Flood Plain Overlay District*. This portion of the Community Development Code implements the Goal 7 policies of the Comprehensive Plan and regulates development within the floodplain.

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

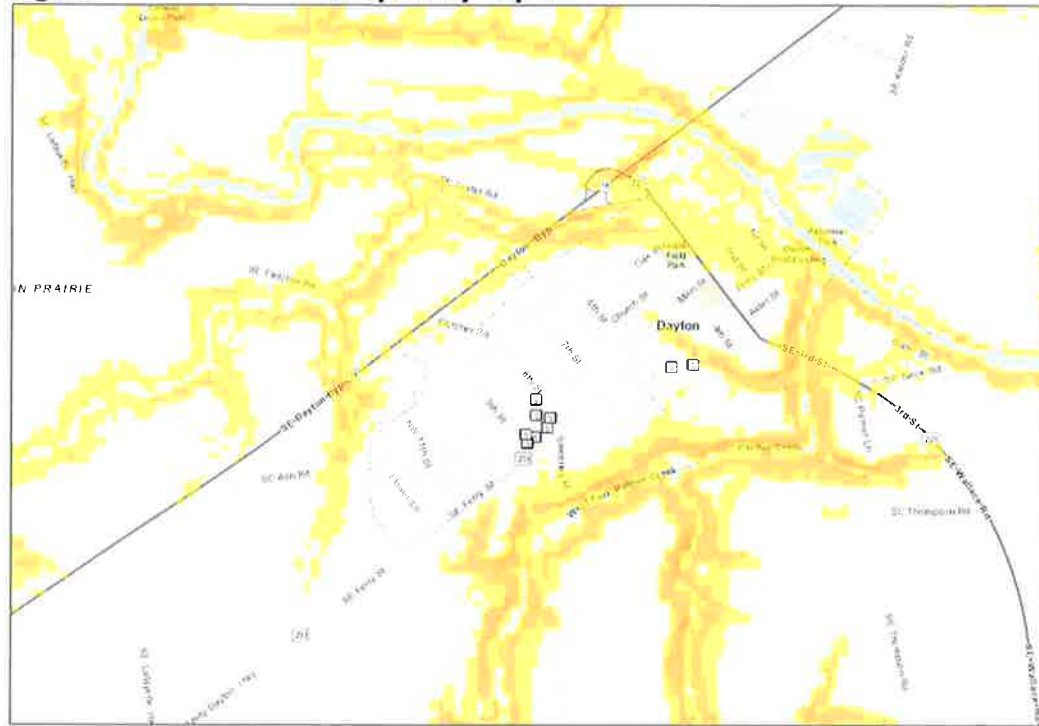
**Landslide**

The steering committee determined that the City’s probability for landslide is **low** and that their vulnerability to landslide is **low**.

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.

Landslide susceptibility exposure for Dayton is shown in Figure DA-6. Approximately 10% of Dayton has very high or high, and approximately 19% moderate, landslide susceptibility exposure.<sup>13</sup> In general, the areas of greater risk are located adjacent to rivers and creeks and indicate potential areas of erosions. *Note that even if a jurisdiction has a high percentage of area in a high or very high landslide exposure susceptibility zone, this does not mean there is a high risk, because risk is the intersection of hazard, and assets.*

**Figure DA-6 Landslide Susceptibility Exposure**



<b>Low</b>	<b>Landsliding unlikely.</b> Areas classified as Landslide Density = Low (less than 7%) and areas classified as Slopes Prone to Landsliding = Low.
<b>Moderate</b>	<b>Landsliding possible.</b> Areas classified as Landslide Density = Low to Moderate (less than 17%) and areas classified as Slopes Prone to Landsliding = Moderate OR areas classified as Landslide Density = Moderate (7%-17%) and areas classified as Slopes Prone to Landsliding = Low.
<b>High</b>	<b>Landsliding likely.</b> Areas classified as Landslide Density = High (greater than 17%) and areas classified as Slopes Prone to Landsliding = Low and Moderate OR areas classified as Landslide Density = Low and Moderate (less than 17%) and areas classified as Slopes Prone to Landsliding = High.
<b>Very High</b>	<b>Existing landslides</b> Landslide Density and Slopes Prone to Landsliding data were not considered in this category. Note: the quality of landslide inventory (existing landslides) mapping varies across the state.

Source: [Oregon HazVu: Statewide Geohazards Viewer \(DOGAMI\)](#)

Note: To view detail click the link above to access Oregon HazVu

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,

<sup>13</sup> DOGAMI. [Open-File Report, O-16-02, Landslide Susceptibility Overview Map of Oregon](#) (2016)

and debris flows can potentially occur during any winter, and thoroughfares beyond City limits are susceptible to obstruction as well.

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.

#### Vulnerability Assessment

Due to insufficient data and resources, Dayton is currently unable to perform a quantitative risk assessment for this hazard. DOGAMI completed a statewide landslide susceptibility assessment in 2016 ([O-16-02](#)), general findings from that report are provided above and within Figure DA-6. Response and recovery efforts will likely vary from minor cleanup to more extensive utility system rebuilding. Utility disruptions are usually local and terrain dependent. Damages may require reestablishing electrical, communication, and gas pipeline connections occurring from specific breakage points. Initial debris clearing from emergency routes and high traffic areas may be required. Water and wastewater utilities may need treatment to quickly improve water quality by reducing excessive water turbidity and reestablishing waste disposal capability.

#### Mitigation Activities

Landslide mitigation activities listed here include current mitigation programs and activities that are being implemented by the City of Dayton agencies or organizations.

#### City of Dayton Codes Pertaining to Landslides

The following Dayton codes, plans, and policies pertain to landslides:

1. Dayton Comprehensive Plan.
3. The City of Dayton enforces the [Oregon Building Code](#) which includes provisions that address the potential for geologic hazards including landslides.

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

## Severe Weather

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

### **Windstorm**

The steering committee determined that the City's probability for windstorm is **high** and that their vulnerability to windstorm is **moderate**.

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 Dayton.



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.

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

### **Winter Storm (Snow/Ice)**

The steering committee determined that the City's probability for winter storm is **high** and that their vulnerability to winter storm is **high**.

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.

#### Vulnerability Assessment

Due to insufficient data and resources, Dayton is currently unable to perform a quantitative risk assessment, or exposure analysis, for the windstorm and winter storm hazards. All areas within the City of Dayton are equally at risk of a windstorm or winter storm event.

#### Mitigation Activities

The City works to mitigate problems regarding windstorm and winter storm issues when they arise. Mitigation activities listed here include current mitigation programs and activities that are being implemented by Dayton agencies or organizations.

- ODOT is responsible for sanding and de-icing state managed roads including: OR 99W within city limits.
- The City requires that all new utility lines, cables or wires, on new development be placed underground.
- The City provides education on winter weather preparedness
- The City encourages property owners to trim hazard trees, and to maintain trees within public rights-of-way. Utility companies maintain trees along their utility easements.

#### City of Dayton Codes Pertaining to Windstorms and Winter Storms

The following Dayton codes, plans, and policies pertain to windstorms and winter storms:

1. The City of Dayton Municipal Code Chapter 8 provides standards for public infrastructure and utilities.
2. The City of Dayton enforces the Oregon Building Code which regulates building material requirements and includes provisions for windstorms and winter storms.

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

## Volcanic Event

The steering committee determined that the City's probability for a volcanic event is **low** and that their vulnerability to a volcanic event is **low**.

Volume I, Section 2 describes the characteristics of volcanic hazards, history, as well as the location, extent, and probability of a potential event within the region. Generally, an event that affects the Eastern portion of the County is likely to affect Dayton as well. Several volcanoes are located near Dayton, the closest of which are Mount Hood, Mount Adams, Mount Saint Helens, Mount Rainier, and the Three Sisters.

Due to Dayton'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). Although the City of Dayton is unlikely to experience lahars or lava flows, tephra (sand- sized or finer particles of volcanic rock that is ejected rapidly into the air from volcanic vents) drifts downwind from the explosions and can form a blanket-like deposit of ash. 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. Tephra is a public health threat, and can damage agriculture and transportation systems (i.e., aircraft and on- the-ground vehicles). Tephra can also clog drainage systems and create major debris management problems. Within Dayton, public health would be a primary concern, and keeping transportation routes open/accessible would be important as well.

### Vulnerability Assessment

Due to insufficient data and resources, Dayton is currently unable to perform a quantitative risk assessment, or exposure analysis, for this hazard.

### Mitigation Activities

The existing volcanic event hazard mitigation activities are conducted at the county, regional, state, and federal levels and are described in the Yamhill County NHMP.

### City of Dayton Codes Pertaining to Volcanic Events

The City does not have specific codes, plans, or policies that pertain to volcanic events:

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

## Wildfire

The steering committee determined that the City's probability for wildfire is **low** and that their vulnerability to wildfire is **low**.

The Yamhill County Community Wildfire Protection Plan (CWPP) was completed in August 2009 and revised in 2015. The CWPP is hereby incorporated into this NHMP addendum by reference, and it will serve as the wildfire section for this addendum.

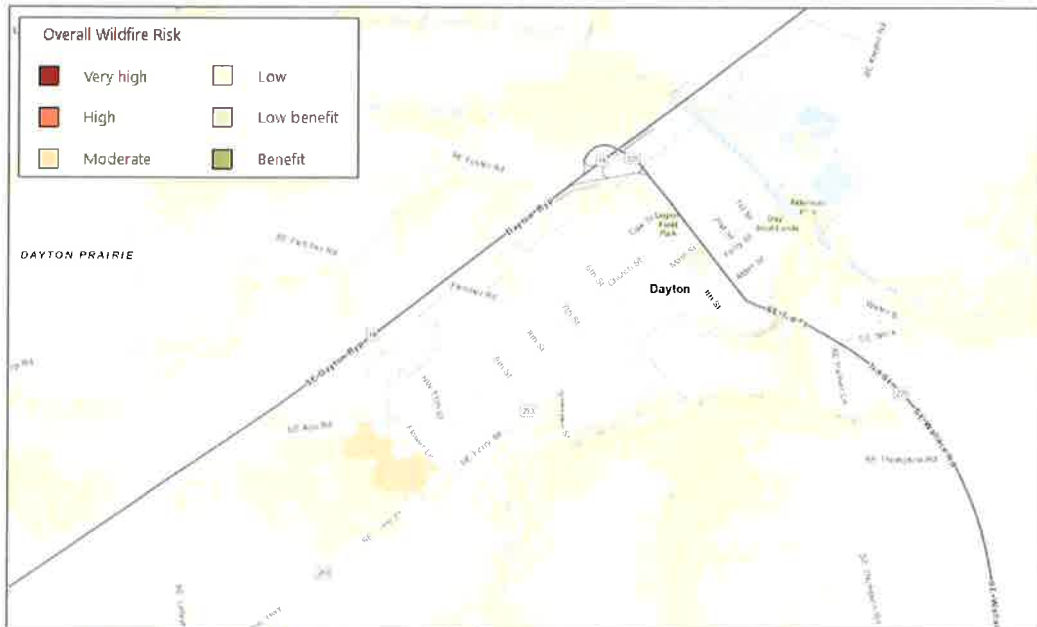
Volume I, Section 2 describes the characteristics of wildland fire hazards, history, as well as the location, extent, and probability of a potential event within the region. The location, and extent of a wildland fire vary depending on fuel, topography, and weather conditions. Weather, and urbanization conditions are primarily at cause for the hazard level. Dayton has not experienced a wildfire within City limits. The city is surrounded by developed land,

rivers, and/or irrigated agricultural land. However, some wooded areas are a concern in the case of a wildfire event. Figure DA-7 shows overall wildfire risk in Dayton.

The forested areas within, and surrounding Dayton are interface areas. These areas are characterized by varying housing structures (often large houses on small lots, some with shake roofs), natural, and ornamental vegetation, and topography that may increase the risk for wildfire spreading (particularly to the north and northeast).

Most of the city has less severe (low) wildfire burn probability that includes expected flame lengths less than four feet under normal weather conditions.<sup>14</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. The potential community impacts, and vulnerabilities described in Volume I, Section 2 are generally accurate for the City as well. Dayton's fire response is provided by the Dayton Fire District. The CWPP assesses wildfire risk, maps wildland urban interface areas, and includes actions to mitigate wildfire risk (all identified actions are outside the city limits). The City will update the City's wildfire risk assessment if the CWPP presents better data during future updates (an action item is included to participate in future updates to the CWPP).

**Figure DA-7 Overall Wildfire Risk**



Source: [Oregon Wildfire Risk Explorer](#), date accessed April 25, 2020.

**Vulnerability Assessment**

Due to insufficient data and resources, Dayton is currently unable to perform a quantitative risk assessment for this hazard.

<sup>14</sup> [Oregon Wildfire Risk Explorer](#).

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).

Exposed infrastructure including wastewater main lines, major water lines, natural gas pipeline and fiber optic lines are buried, decreasing their vulnerability to damage from wildfire hazards. However, wildfire conditions could potentially limit or delay access for the purposes of operation or repair.

#### Mitigation Activities

The Dayton Fire District works to mitigate problems regarding wildfire issues when they arise. Wildfire mitigation activities listed here include current mitigation programs and activities that are being implemented by Dayton agencies or organizations.

#### City of Dayton Codes Pertaining to Wildfires

The following Dayton codes, plans, and policies pertain to wildfires:

1. The City of Dayton Municipal Code Chapter 8 provides standards for public infrastructure and utilities.
2. The City of Dayton enforces the Oregon Building Code which regulates building material requirements and includes provisions for fires.

*Please review the Yamhill County Community Wildfire Protection Plan (CWPP) and Volume 1, Section 2 for additional information on this hazard.*

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## ATTACHMENT A: ACTION ITEM FORMS

In the previous plan the City identified three high priority action items. These actions are those the city considered during the 2015-2020 Implementation and Maintenance period and they are listed in Table DA-8 along with their status.

**Table DA-8 2015 High Priority Action Item Status**

2014 Priority Action ID	Status (2020 Action ID) (Complete, Deferred, Deleted, Ongoing)	Comment	Description
Action #1	Ongoing (Multi-hazard #5)/ (Earthquake #1)	Lack of funding and capacity	Evaluate and harden public infrastructure crossing bridges or rivers
Action #2	Ongoing (Multi-hazard #3)	Description modified.	Develop and maintain severe winter storm public outreach program defining mitigation activity benefits through educational outreach aimed at households and businesses while targeting special needs populations.
Action #3	Ongoing (Multi-hazard #3)	Critical facilities identified. Some generators still needed.	Identify and prioritize all "jurisdiction-owned" and "non-jurisdiction owned" critical facilities that have backup power and emergency operations plans.

Table DA-1 provides a summary list of 2020 NHMP Actions for the city. Each high priority action item has a corresponding action item worksheet describing the activity, identifying the rationale for the project, identifying potential ideas for implementation, and assigning coordinating and partner organizations. The action item worksheets can assist the community in pre-packaging potential projects for grant funding. The worksheet components are described below.

### ALIGNMENT WITH EXISTING PLANS/POLICIES

The City NHMP includes a range of action items that, when implemented, will reduce loss from hazard events in the City. Within the plan, FEMA requires the identification of existing programs that might be used to implement these action items. The City addresses statewide planning goals and legislative requirements through its comprehensive land use plan, capital improvements plan, mandated standards and building codes. To the extent possible, the City will work to incorporate the recommended mitigation action items into existing programs and procedures. Each action item identifies related existing plans and policies.

## **STATUS/RATIONALE FOR PROPOSED ACTION ITEM**

Action items should be fact-based and tied directly to issues or needs identified throughout the planning process. Action items can be developed at any time during the planning process and can come from several sources, including participants in the planning process, noted deficiencies in local capability, or issues identified through the risk assessment. The rationale for proposed action items is based on the information documented in this addendum and within Volume I, Section 2. The worksheet provides information on the activities that have occurred since the previous plan for each action item.

## **IDEAS FOR IMPLEMENTATION**

The ideas for implementation offer a transition from theory to practice and serve as a starting point for this plan. This component of the action item is dynamic, since some ideas may prove to not be feasible, and new ideas may be added during the plan maintenance process. Ideas for implementation include such things as collaboration with relevant organizations, grant programs, tax incentives, human resources, education and outreach, research, and physical manipulation of buildings and infrastructure.

## **COORDINATING (LEAD) ORGANIZATION:**

The coordinating organization is the public agency with the regulatory responsibility to address natural hazards, or that is willing and able to organize resources, find appropriate funding, or oversee activity implementation, monitoring and evaluation.

## **INTERNAL AND EXTERNAL PARTNERS:**

The internal and external partner organizations listed in the Action Item Worksheets are potential partners recommended by the project steering committee but not necessarily contacted during the development of the plan. The coordinating organization should contact the identified partner organizations to see if they are capable of and interested in participation. This initial contact is also to gain a commitment of time and/or resources toward completion of the action items.

Internal partner organizations are departments within the City or other participating jurisdiction that may be able to assist in the implementation of action items by providing relevant resources to the coordinating organization.

External partner organizations can assist the coordinating organization in implementing the action items in various functions and may include local, regional, state, or federal agencies, as well as local and regional public and private sector organizations.

## **PLAN GOALS ADDRESSED:**

The plan goals addressed by each action item are identified as a means for monitoring and evaluating how well the mitigation plan is achieving its goals, following implementation.

## **TIMELINE:**

All broad scale action items have been determined to be ongoing, as opposed to short (0 to 2 years), medium (2-5 years), or long (6 or more years). This is because the action items are broad ideas, and although actions may be implemented to address the broad ideas, the efforts should be ongoing.

## **POTENTIAL FUNDING SOURCE**

Where possible potential funding sources have been identified. Example funding sources may include: Federal Hazard Mitigation Assistance programs, state funding sources such as the Oregon Seismic Rehabilitation Grant Program, or local funding sources such as capital improvement or general funds. An action item may include several potential funding sources.

## **ESTIMATED COST**

A rough estimate of the cost for implementing each action item is included. Costs are shown in general categories showing low, medium, or high cost. The estimated cost for each category is outlined below:

Low - Less than \$50,000

Medium - \$50,000 – \$100,000

High - More than \$100,000



**Multi-Hazard #1**

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Develop, enhance, and implement public education and information materials concerning mitigation, preparedness and safety procedures for identified natural hazards.		Gopal 1, Goal 2, Goal 3, Goal 6, Goal 8	
<b>Alignment with Existing Plans/Policies:</b>			
Community Wildfire Protection Plan			
<b>2020 Status/Rationale for Proposed Action Item:</b>			
<p>The natural hazard sections of the City’s addendum (Volume II) to the Yamhill Co. NHMP and Yamhill County’s risk assessment (Volume I, Section 2 and Volume III, Appendix C) identify vulnerable populations and property within the various identified hazard areas. Increasing public outreach to educate residents about their risk to natural hazards affecting their community as well as what to do in the event of a natural hazard will help decrease their vulnerability to natural hazards.</p> <p>The Disaster Mitigation Act of 2000 requires communities to identify how the community will continue to involve the public in the plan maintenance process [201.6(c)(4)(iii)]. Educating landowners on how to mitigate the effects of natural hazards helps keep the public informed of what is being done with the plan, how the City is working to mitigate its risk to natural hazards, and allows for feedback and suggestions from the public for improving, updating, and maintaining the plan.</p>			
<b>Ideas for Implementation:</b>			
<p>Distribution of natural hazard information describing dangers and evacuation routes for visitors to the City and continued educational outreach for residents and business owners.</p> <p>Update brochures with new information provided as part of reports provided by DOGAMI, ODF, DLCD, and FEMA (among others).</p> <p>Identify and use existing mechanisms for public outreach (e.g., SWCD, NRCS, watershed councils, OSU Extension, etc.).</p>			
<b>Coordinating Organization:</b>		Administration, Fire District	
<b>Internal Partners:</b>		<b>External Partners:</b>	
City Council, School District		DOGAMI, DLCD, FEMA, ODF	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
General fund, grants		Low	<input type="checkbox"/> Short (0-2 years) <input type="checkbox"/> Medium (2-5 years) <input type="checkbox"/> Long (6+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	2019-20 NHMP Steering Committee		
<b>Priority:</b>	High		

**Multi-Hazard #4**

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Plan for solar + battery storage systems, which can serve as mini power-supply stations or provide residents the ability to shelter in place after any electricity supply-disrupting event, at varying scales (project, neighborhood and district) and locations (critical City facilities, low-income housing, community gathering spots).		Goal 1, Goal 3, Goal 4, Goal 6, Goal 8	
<b>Alignment with Existing Plans/Policies:</b>			
Comprehensive Plan, Development Code, Building Code			
<b>2020 Status/Rationale for Proposed Action Item:</b>			
<p>Power outages are possible during hazard events including wildfire, wind, and winter storms (snow/ice). If severe weather threatens a portion of the electric system, it may be necessary for PG&amp;E to turn off electricity in the interest of public safety. No single factor drives a Public Safety Power Shutoff (PSPS), as each situation is unique. PG&amp;E carefully reviews a combination of many criteria when determining if power should be turned off for safety. These factors generally include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• A Red Flag Warning declared by the National Weather Service</li> <li>• Low humidity levels, generally 20 percent and below</li> <li>• Forecasted sustained winds generally above 25 mph and wind gusts in excess of approximately 45 mph, depending on location and site-specific conditions such as temperature, terrain and local climate</li> <li>• Condition of dry material on the ground and live vegetation (moisture content)</li> <li>• On-the-ground, real-time observations from PG&amp;E's Wildfire Safety Operations Center and field crews</li> </ul> <p>PGE monitors and takes into consideration Red Flag Warnings issued from the National Weather Service, the issuance of a Red Flag Warning does not automatically trigger a PSPS if local conditions do not warrant activation.</p> <p>When you combine solar with battery storage you can power your home or business with solar and save any extra solar power in the battery to use later when you really need it.</p>			
<b>Ideas for Implementation:</b>			
Coordinate with utility provider (PG&E) and Energy Trust of Oregon and residents/business owners to develop and pilot solar + batter storage systems in private residences, businesses, and critical/essential facilities.			
<b>Coordinating Organization:</b>		Public Works	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Administration, School District		Portland General Electric, Energy Trust of Oregon	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
General fund, grants, private investment		High	<input type="checkbox"/> Short (0-2 years) <input type="checkbox"/> Medium (2-5 years) <input checked="" type="checkbox"/> Long (6+ years) <input type="checkbox"/> Ongoing
<b>Form Submitted by:</b>		2019-20 NHMP Steering Committee	
<b>Priority:</b>		High	

**Multi-Hazard #5**

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Replace Footbridge (utility bridge with pedestrian access) that carries water/sewer lines across the Yamhill River.		Goal 2, Goal 3, Goal 4, Goal 6, Goal 7, Goal 8	
<b>Alignment with Existing Plans/Policies:</b>			
Comprehensive Plan, Development Code, Building Code, Water System Master Plan, Wastewater System Facilities Plan			
<b>2020 Status/Rationale for Proposed Action Item:</b>			
The City has two (2) water transmission mains. One 8-inch diameter main is suspended from the city owned decommissioned Ferry St footbridge over the Yamhill River to the east of the city. The city's sewer main is also located under the Ferry St footbridge. These mains are vulnerable to seismic activity that could cause them to crack or impact the pedestrian footbridge over the Yamhill River.			
<b>Ideas for Implementation:</b>			
Retrofit or replace the Ferry Street footbridge to provide greater resilience to seismic activity.			
<b>Coordinating Organization:</b>		Community Development	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Public Works		DLCD, DSL	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
General fund, HMA, utility rates		High	<input type="checkbox"/> Short (0-2 years) <input type="checkbox"/> Medium (2-5 years) <input checked="" type="checkbox"/> Long (6+ years) <input type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	2019-20 NHMP Steering Committee		
<b>Priority:</b>	High		

## Earthquake #1

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Conduct seismic strength evaluations of critical facilities and infrastructure to identify vulnerabilities and seismically retrofit (structural and nonstructural) identified critical facilities and infrastructure to meet life safety standards in order to continue operations post-earthquake.		Goal 2, Goal 3, Goal 4, Goal 6, Goal 7, Goal 8	
<b>Alignment with Existing Plans/Policies:</b>			
<b>2020 Status/Rationale for Proposed Action Item:</b>			
<p>Currently, all new facilities must comply with and meet seismic standards. If someone moves into an old building, they must upgrade to current standards.</p> <p>DOGAMI did a windshield survey of schools, fire stations, police, and city halls (2007 RVS). The focus was on action of existing buildings and information was shared with participants.</p>			
<b>Ideas for Implementation:</b>			
<p>Provide information to government building and school facility managers and teachers on nonstructural mitigation techniques including: securing bookcases, filing cabinets, light fixtures, and other objects that can cause injuries and block exits;</p> <p>Encourage facility managers, business owners, and teachers to refer to FEMA's practical guidebook: Reducing the Risks of Nonstructural Earthquake Damage;</p> <p>Encourage homeowners and renters to use Is Your Home Protected from Earthquake Disaster? A Homeowner's Guide to Earthquake Retrofit (IBHS) for economic and efficient mitigation techniques;</p> <p>Use the FEMA 154 seismic evaluations generated by DOGAMI to prioritize critical and essential buildings for upgrades;</p> <p>Explore partnerships to provide retrofitting classes for homeowners, renters, building professionals, and contractors; and</p> <p>Target development located in potential fault zones or in unstable soils for intensive education and retrofitting resources.</p>			
<b>Coordinating Organization:</b>		Administration	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Public Works, Planning		DOGAMI, School District, Fire District	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
General funds, utility fees, grants (SRGP, HMA)		High	<input type="checkbox"/> Short (0-2 years) <input type="checkbox"/> Medium (2-5 years) <input checked="" type="checkbox"/> Long (6+ years) <input type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	2019-20 NHMP Steering Committee		
<b>Priority:</b>	High		

**Wildfire #1**

<b>Proposed Action Item:</b>		<b>Alignment with Plan Goals:</b>	
Coordinate wildfire mitigation action items through the Yamhill County Community Wildfire Protection Plan.		Goal 1, Goal 2, Goal 3, Goal 4, Goal 5, Goal 6, Goal 7, Goal 8	
<b>Alignment with Existing Plans/Policies:</b>			
Yamhill County Community Wildfire Protection Plan			
<b>2020 Status/Rationale for Proposed Action Item:</b>			
The wildfire mitigation action items provide direction on specific activities that organizations and residents in Dayton can take to reduce wildfire hazards.			
<b>Ideas for Implementation:</b>			
Implement high and medium priority projects including defensible space and fuels reduction projects identified in the CWPP.			
<b>Coordinating Organization:</b>		Dayton Fire District	
<b>Internal Partners:</b>		<b>External Partners:</b>	
Community Development		ODF	
<b>Potential Funding Sources:</b>		<b>Estimated cost:</b>	<b>Timeline:</b>
General fund, ODF grants		Medium	<input type="checkbox"/> Short (0-2 years) <input type="checkbox"/> Medium (2-5 years) <input type="checkbox"/> Long (6+ years) <input checked="" type="checkbox"/> Ongoing
<b>Form Submitted by:</b>	2019-20 NHMP Steering Committee		
<b>Priority:</b>	High		

# ATTACHMENT B: PUBLIC INVOLVEMENT SUMMARY

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

To provide the public information regarding the draft NHMP addendum, and provide an opportunity for comment, an announcement (see text below) was announced on the city's website and an email contact was provided for public comment.

During the public review period there were no comments provided.

## City of Dayton Public Comment

### Dayton seeks additional public input on update to Natural Hazard Mitigation Plan

(Dayton, OR) – Dayton is in the process of updating their existing Natural Hazard Mitigation Plan (NHMP). This work is being performed in cooperation with the University of Oregon's Institute for Policy Research and Engagement - Oregon Partnership for Disaster Resilience and the Oregon Military Department's Office of Emergency Management utilizing funds obtained from the Federal Emergency Management Agency's (FEMA) Pre-Disaster Mitigation Grant Program. With re-adoption of the plan, Dayton will regain its eligibility to apply for federal funding towards natural hazard mitigation projects. This local planning process includes a wide range of representatives from city and county government, emergency management personnel, and outreach to members of the public in the form of an electronic survey.

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

An electronic version of the updated draft Dayton NHMP addendum will be available for formal public comment beginning **August 14, 2020**. To view the draft please visit: [www.ci.dayton.or.us/admin\\_comments](http://www.ci.dayton.or.us/admin_comments).

If you have any questions regarding the Dayton NHMP addendum or the update process in general, please contact: Rochelle Roaden, City Manager, at (503) 864-2221 or [rroaden@ci.dayton.or.us](mailto:rroaden@ci.dayton.or.us); or Michael Howard, Assistant Program Director for the Oregon Partnership for Disaster Resilience at [mhoward@uoregon.edu](mailto:mhoward@uoregon.edu).

 Dayton\_Addendum\_REVIEW DRAFT.pdf

The City invites your comments on this plan below.

Name

Physical Address

Mailing Address

If different than your physical address

Email

What would you like us to know about the Dayton Addendum to the Yamhill County Multi-Jurisdictional Hazard Mitigation Plan?