

WALLA WALLA COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN (HMP)

September 25, 2018
(Version 2.0 with 2020 Revisions)



Adopted by the Walla Walla County Board of Commissioners
on September 25, 2018

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Foreword

"Hazard mitigation is any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards. Mitigation activities may be implemented prior to, during, or after an incident. However, it has been demonstrated that hazard mitigation is most effective when based on an inclusive, comprehensive, long-term plan that is developed before a disaster occurs."¹

This **Walla Walla County, Washington: Multi-Jurisdictional Hazard Mitigation Plan** (HMP) has been updated from the 2010 version in 2018 by the Walla Walla County HMP Planning Team and satisfies the requirements for a local multi-jurisdictional hazard mitigation plan and flood mitigation plan as described in 44 CFR Part 201.6 and 79.6.

Adopting Jurisdictions:

Walla Walla County Commissioners

Absent

James K. Johnson, Chair District 1

Date

Todd L. Kimball

Todd L. Kimball, Commissioner, District 2

8-20-18

Date

James L. Duncan

James L. Duncan, Commissioner, District 3

8-20-18

Date

Harvey R. Crowder

City of College Place

Mayor
Title

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Signature

8-14-2018

Date

Steven Hummelinger

City of Prescott

Mayor
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08/29/18

Date

Marty Dunn

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Mayor
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9/18/18

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City of Walla Walla

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8/27/18

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Walla Walla Public School District

Superintendent
Title

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8-2-18

Date

1 Federal Emergency Management Agency. "Local Multi-Hazard Mitigation Planning Guidance." July 1, 2008.

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Chapter 1. INTRODUCTION

This plan is an update of the 2010 Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan (HMP). Through the update process details of the plan have been updated and the organization of the document has been adapted for ease of use and to meet the most recent statutory requirements. An overall summary of updates is included at the end of this chapter in section 1.7.

1.1 BACKGROUND AND SCOPE

Each year in the United States, disasters take the lives of hundreds of people and injure thousands more. Nationwide, taxpayers pay billions of dollars annually to help communities, organizations, businesses, and individuals recover from disasters. These monies only partially reflect the true cost of disasters because additional expenses to insurance companies and nongovernmental organizations are not reimbursed by tax dollars. Many disasters are predictable, and much of the damage caused by these events can be alleviated or even eliminated.

Hazard mitigation is defined by FEMA as “any sustained action taken to reduce or eliminate long-term risk to human life and property from a hazard event.” The results of a three-year congressionally mandated independent study to assess future savings from mitigation activities provides evidence that mitigation activities are highly cost-effective. The study found that, on average, each dollar spent on mitigation saves society an average of \$4 in avoided losses (National Institute of Building Science Multi-Hazard Mitigation Council 2005).

Examples of hazard mitigation measures include, but are not limited to:

- Development of mitigation standards, regulations, policies, and programs
- Land use/zoning policies
- Strong building code and floodplain management regulations
- Dam safety program, seawalls, and levee systems
- Acquisition of flood prone and environmentally sensitive lands
- Retrofitting/hardening/elevating structures and critical facilities
- Relocation of structures, infrastructure, and facilities out of vulnerable areas
- Public awareness/education campaigns
- Improvement of warning and evacuation systems

Hazard mitigation planning is the process through which hazards that threaten communities are identified, likely impacts of those hazards are determined, mitigation goals are set, and appropriate strategies to lessen impacts are established, prioritized, and implemented. This plan documents the planning process employed by the Planning Team. The plan identifies relevant hazards and risks as well as sets forth a strategy to decrease vulnerability and increase resilient sustainability.

This plan was prepared pursuant to the requirements of the Disaster Mitigation Action of 2000 (DMA2K) and the implementing regulations set forth by the Interim Final Rule published in the Federal Register in February 2002, (44 CFR §201.6), hereafter, these requirements will be referred to collectively as the DMA2K. While the act emphasizes the need for mitigation plans, more coordinated mitigation planning,

and implementation efforts, they also establish requirements for hazard mitigation funding from the Robert T. Stafford Disaster Relief and Emergency Act.

Information in this plan will be used to help guide and coordinate mitigation activities and decisions for future land use. Proactive mitigation planning will help reduce the cost of disaster response and recovery to the community and its property owners by protecting structures, reducing exposure, and minimizing overall community impacts and disruption. This multi-jurisdictional plan geographically covers the participating communities and separate special jurisdictions identified within the boundaries of Walla Walla County (hereinafter referred to as the planning area).

1.2 PURPOSE

The purpose of the Walla Walla County Multi-jurisdictional Hazard Mitigation Plan (HMP) is to provide guidance for hazard mitigation within Walla Walla County. This plan was prepared to guide the efforts of hazard mitigation to better protect the people, property, community assets, and land in Walla Walla County from the impacts of natural hazards. This plan demonstrates Walla Walla County's commitment to reducing risks from natural hazards and serves as a decision-support tool for the direction of mitigation activities and resources. This plan update was conducted to meet all Disaster Mitigation Act (DMA) requirements for hazard mitigation planning provided in 44 CFR 201.6. Compliance with these requirements ensures that Walla Walla County is eligible for disaster assistance and grants through the Robert T. Stafford Disaster Relief and Emergency Assistance Act, P.L. 93-288, as amended. Because Walla Walla County is vulnerable to many kinds of hazards, access to these programs is vital.

The Walla Walla County Planning Team is committed to mitigating disasters to reduce both vulnerability and damage. When the original HMP planning effort began in 2003, the Planning Team recognized that many issues are better resolved through the inclusion of multi-jurisdictional evaluation and planning processes at a regional level. The 2018 Planning Team reaffirmed this approach through their dedicated efforts throughout the 2018 update.

1.3 PLANNING PARTICIPANTS

The lead entity developing this plan was the Walla Walla County, Emergency Management Department. Invitations for participation were extended to cities, fire districts, schools, flood control districts and other potentially interested jurisdictions throughout the County. During the 2018 HMP update the County Emergency Management Department contacted a wide array of County stakeholders in an effort to conduct the most comprehensive effort possible. The following entities participated by contributing members to the Planning Team meetings.

- Walla Walla County
- City of Prescott
- City of Waitsburg
- City of College Place
- City of Walla Walla
- Mill Creek Flood Control Zone District (Administered by Walla Walla County Public Works)
- Walla Walla Public School District

- Whitman College
- Walla Walla Community College
- Walla Walla County Conservation District

Table 1. Specific Individuals from the Plan’s jurisdictions and other stakeholders and agencies who participated in the development and updates of the 2018 Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan.

Liz Jessee, Walla Walla County EMD	Michael Francis, U.S. Army Corps of Engineers
Patrick Purcell, Walla Walla County EMD	Jeff Stidham, U.S. Army Corps of Engineers
Marilyn Lohmann, National Weather Service	Rich Cannon, U.S. Army Corps of Engineers
William Herrington, American Red Cross	Susan Leathers, Providence St. Mary Medical Center
Dixie Ferguson, American Red Cross	Rob Grandstaff, Washington Old Fellows Home
Barbara Clark, City of Walla Walla Mayor	Mike Rizzitiello, City of College Place
Mori Struve, City of Walla Walla Public Works	David Winter, City of College Place Fire Department
Tony Garcia-Morales, Walla Walla County Public Works	Kate Moon, Regency at the Park
Steve Potter, City of Walla Walla Police Department	Harvey Crowder, College Place Mayor
Mike Kay, Walla Walla Public Schools District	Jim Johnson, Walla Walla County Commissioner
John Turner, Walla Walla County Sheriff	Fred Miller, Whitman College
Mark Corrao, Northwest Management, Inc	Randy Hinchliffe, City of Waitsburg
Jacquelyn Meier, Walla Walla Community College	Lisa Stearns, Walla Walla County Conservation District
Brad Morris, Walla Walla Fire Department	Renee Hadley, Walla Walla County Conservation District
Nabiel Shawa, City of Walla Walla	Jodi Ferguson, Walla Walla County Department of Community Health
Steve Heimbigner, City of Prescott	Mark Higgins, Walla Walla Public Schools
Alex Hammond, U.S. Army Corps of Engineers	Tom Glover, Walla Walla County Comprehensive Planning Dept.

Throughout the Plan update the Planning Team also reached out to state and federal agencies, private utility companies, and local citizen groups through two public presentations, paper and digital copies of the draft document at three local libraries and multiple social media posts through the Emergency Management Facebook page. These opportunities were designed to gather input from residents within each jurisdiction and the general public. They also worked to inform stakeholders of the website location for review and comment on the document as it progressed and presented the progress and meeting locations/times that could be attended. This helped ensure the County had the most current information regarding hazard risk and vulnerability as well as input for mitigation projects. A full list of coordination meetings with participants is included in Sections 3.1 and 3.2.

Recognizing there may be additional local agencies who would like to join the regional plan at a later date, the Planning Team worked with Washington State Military Department Emergency Management Division to develop a mechanism in the plan to allow a qualified agency to join the plan at any time. As an example, many Planning Team members contributed in the following ways:

- Providing facilities for meetings
- Attending and participating in planning meetings
- Collecting and providing requested data
- Managing administrative details

- Making decisions on plan process and content
- Identifying mitigation actions for the plan
- Reviewing and providing comments on plan drafts
- Informing the public, local officials, and interested parties about the planning processes and providing opportunity for them to comment on the plan
- Coordinating the final adoption of the plan

1.4 ASSURANCES

This plan was prepared to comply with the local Multi - Hazard Mitigation Plan requirements for Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation (PDM) eligibility is based on the Disaster Mitigation Act of 2000, which amended the Stafford Disaster Relief Act to promote an integrated, cost effective approach to mitigation. Local Multi - Hazard Mitigation Plans must meet the minimum requirements of the Stafford Act-Section 322, as outlined in the criteria contained in 44 CFR Part 201. The plan criteria cover the planning process, risk assessment, mitigation strategy, plan maintenance, and adoption requirements.

In order to be eligible for project funds under the Flood Mitigation Assistance (FMA) program, communities are required under 44 CFR Part 79.6(d)(1) to have a mitigation plan that addresses flood hazards. On October 31st, 2007, FEMA published amendments to the 44 Code of Federal Regulations (CFR) Part 201 at 72 Federal Reg. 61720 to incorporate mitigation planning requirements for the FMA program (44 CFR Part 201.6). The revised Local Mitigation Plan Review Crosswalk (October 2011) used by FEMA to evaluate local hazard mitigation plans is consistent with the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended by Section 322 of the Disaster Mitigation Act of 2000, the National Flood Insurance Act of 1968, as amended by the National Flood Insurance Reform Act of 2004 and 44 Code of Federal Regulations (CFR) Part 201 – Mitigation planning, inclusive of all amendments through July 1, 2008². These documents were used as the official guidelines during development of this FEMA-compatible Walla Walla County HMP.

The adopting jurisdictions described in this update of the Walla Walla HMP assure they will continue to comply with all applicable Federal statutes and regulations in effect with respect to the periods for which it receives grant funding, in compliance with 44 CFR 13.11(c). This plan will be amended by the County's Planning Team whenever necessary to reflect changes in Federal laws and statutes as required in 44 CFR 133.11(d).

1.5 HAZARD ASSESSMENTS

A risk assessment was conducted during the 2010 plan update in the form of the Walla Walla County Hazard Identification and Vulnerability Analysis (HIVA). The HIVA provides an elementary review of available published material and relevant information needed for an evaluation of the risks posed by certain included hazards. It is not, nor is it intended to be, a rigorous or scientific analysis. Based on a review of the 2010 HIVA, the Planning Team focused their efforts on the following hazards: wildfire,

2 Federal Emergency Management Agency. "Local Multi-Hazard Mitigation Planning Guidance." July 1, 2008.

flooding, earthquakes, and severe storms. Volcanic Ash Fall was excluded because additional mitigation is not feasible or necessary, the probability of occurrence is very low, and the vulnerability is very low for Walla Walla County.

This regional HMP is the result of analyses, cooperation, collaboration, and assessment of hazard risks to reduce the potential threat to people, structures, infrastructure, and unique ecosystems in Walla Walla County, Washington. This document serves as the 5-year update of the 2010 Multi-Hazard Mitigation Plan under the Pre-Disaster Mitigation program and will be in effect until 2023. This update also includes the County's 2017 Mill Creek and Walla Walla County Community Wildfire Protection Plan update as a chapter within the main document.

The Planning Team responsible for implementing this project was led by the Walla Walla County Emergency Management Department Director and Coordinator with support and assistance from Northwest Management, Inc. of Moscow, Idaho and more than 40 individuals from throughout the County as jurisdictional representatives, agency representatives and state and federal bodies. A summary of the Phase I risk assessment used for the 2018 HMP update is described in the following Section while a list of the overarching agencies and organizations that participated in the planning process is included below. A specific list of all individuals who participated in the development of this HMP update are included in Table 1 on Page 3 of this document.

Walla Walla County Emergency Management Department

The National Weather Service

American Red Cross

City of Walla Walla

Walla Walla County Public Works

City of Walla Walla Police Department

Walla Walla County Sheriff's Office

Walla Walla Public School District

Walla Walla County Conservation District

U.S. Army Corps of Engineers

City of College Place

City of Waitsburg

Walla Walla Community College

Whitman College

PHASE I HAZARD ASSESSMENT

This HMP was developed in accordance with the requirements of the Federal Emergency Management Agency (FEMA) and Washington Bureau of Homeland Security for a county level pre-disaster mitigation plan. The State of Washington Hazard Mitigation Plan identifies numerous natural hazards affecting the State. In an effort to be consistent, the multi-jurisdictional Planning Team and members of the participating jurisdictions, agencies, and residents worked together to select four (4) natural hazards from the FEMA-endorsed list most applicable to Walla Walla County and also maintained the seven (7) anthropogenic hazards listed in the 2010 HMP that FEMA does not currently support within guidelines of the current HMP rules. The natural hazards addressed in this plan are:

- ✱ Flood
- ✱ Earthquake
- ✱ Severe Weather
- ✱ Wildland Fire

Additional hazards identified in the existing 2010 HMP and HIVA analysis are:

- ✱ Radiological Incident
- ✱ Dam Failure
- ✱ Civil Disturbance
- ✱ Hazardous Materials
- ✱ School Violence
- ✱ Terrorism
- ✱ Urban Fire

A Phase I Assessment was completed by the Planning Team with input from their stakeholders to determine the relative frequency of a hazard’s occurrence and the potential impact a hazard event could have on people, property, infrastructure, and the economy throughout the jurisdictions of Walla Walla County. A matrix system with hazard magnitude on the x-axis and frequency on the y-axis was used to visualize the ranking of each hazard. A scoring system was used to categorize the relative magnitude each hazard may have on the community. Frequency was rated as “High” for hazards occurring multiple times per year during a 5-year period, “Medium” for hazards occurring every 5 to 25 years, or “Low” for hazards occurring more than 25 years apart.³

This matrix was completed by all Planning Committee Team members and then circulated to any many residents and interested people within their jurisdiction as could be contacted via email, and jurisdictional meetings. Agencies and other interested stakeholders were also encouraged to participate in the matrix ranking of natural hazards by jurisdiction during the committee meetings and public outreach periods. The collective results from all assessments by jurisdiction were then aggregated by jurisdiction and presented in the specific chapters of this document. The Walla Walla County-wide matrix was an aggregation of all results and additional input from jurisdictional representatives during Planning Team meetings with regard to county-wide frequency and magnitude as shown in the following table.

³ Walla Walla County, Washington rankings. Scoring system partially adapted from the Custer County, Idaho Multi-Jurisdiction Hazard Mitigation Plan. 2008. Pp 165-168.

		Magnitude		
		Low	Medium	High
Frequency	Low	Volcanic Ash Fall Civil Disturbance	Terrorism Radiological Incident	Dam Failure
	Medium	School violence	Urban Fire	Earthquake Wildfire
	High		Severe Weather Flooding	

Figure 1. Magnitude and Frequency composite ranking of the Hazards in Walla Walla County from the 2010 HMP and the updated natural Hazards of the 2018 HMP.

Table 2. Value guidance table for estimating natural hazard impacts based on magnitude and frequency.

Magnitude of Hazards						
Value	Reconstruction Assistance From	Geography (Area) Affected	Expected Bodily Harm	Loss Estimate Range	Population Sheltering Required	Warning Lead Times
1	Family	Parcel	Little to No Injury / No Death	\$1000s	No Sheltering	Months
2	City	Block or Group of Parcels	Multiple Injuries with Little to No Medical Care / No Death	\$10,000s	Little Sheltering	Weeks
2	County	Section or Numerous Parcels	Major Medical Care Required / Minimal Death	\$100,000s	Sheltering Required Neighboring Counties Help	Days
4	State	Multiple Sections	Major Injuries / Requires Help from Outside County / A Few Deaths	\$1,000,000s	Long Term Sheltering Effort	Hours
8	Federal	Countywide	Massive Casualties / Catastrophic	\$10,000,000s	Relocation Required	Minutes

1.6 GOALS AND GUIDING PRINCIPLES

UPDATE AND REVIEW GUIDELINES⁴

- Deadlines and Requirements for Regular Plan Reviews and Updates: In order to apply for a FEMA Pre-Disaster Mitigation project grant, Tribal and local governments must have a FEMA-approved mitigation plan. Tribal and local governments must have a FEMA-approved mitigation plan in order to receive HMGP project funding for disasters declared on or after November 1, 2004. States and Tribes must have a FEMA-approved Standard or Enhanced Mitigation Plan in order to receive non-emergency Stafford Act assistance (i.e., Public Assistance Categories C-G, HMGP, and Fire Management Assistance Grants) for disasters declared on or after November 1, 2004. State mitigation plans must be reviewed and reapproved by FEMA every three (3) years. Local Mitigation Plans must be reviewed and reapproved by FEMA every five (5) years.
- Plan updates. In addition to the timelines referenced above, the Rule includes the following paragraphs that pertain directly to the update of State and local plans,
 - ✓ §201.3(b)(5) [FEMA Responsibilities] Conduct reviews, at least once every three (3) years, of State mitigation activities, plans, and programs to ensure that mitigation commitments are fulfilled....
 - ✓ §201.4(d) Review and updates. [State] Plan must be reviewed and revised to reflect changes in development, progress in statewide mitigation efforts, and changes in priorities and resubmitted for approval...every three (3) years.
 - ✓ §201.6(d) [Local] plans must be reviewed, revised if appropriate, and resubmitted for approval within five (5) years in order to continue to be eligible for project grant funding.

Plan updates must demonstrate that progress has been made in the past three years (for State plans), or in the past five years (for local plans), to fulfill commitments outlined in the previously approved plan. This involves a comprehensive review and evaluation of each section of the plan and a discussion of the results of evaluation and monitoring activities detailed in the Plan Maintenance section of the previously approved plan. FEMA will leave to State discretion, consistent with this plan update guidance, the documentation of progress made. Plan updates may validate the information in the previously approved plan or may involve a major plan rewrite. In any case, a plan update is NOT an annex to the previously approved plan; it must stand on its own as a complete and current plan.

The objective of combining these complementary guidelines is to facilitate an integrated wildland fire risk assessment, identify pre-hazard mitigation activities, and prioritize activities and efforts to achieve the protection of people, structures, the environment, and significant infrastructure in Walla Walla County while facilitating new opportunities for pre-disaster mitigation funding and cooperation.

⁴ Federal Emergency Management Agency. Multi-Hazard Mitigation planning Guidance Under the Disaster Mitigation Act of 2000. Original Release March, 2004 With revisions November, 2006, June, 2007 & January 2008.

WALLA WALLA COUNTY PLANNING PHILOSOPHY

This effort will utilize the best and most appropriate science from all partners and will integrate local and regional knowledge about natural hazards while meeting the needs of local citizens and the regional economy.

MISSION STATEMENT

To make Walla Walla County residents, communities, state agencies, local governments, and businesses less vulnerable to the effects of natural hazards through the effective administration of hazard mitigation grant programs, hazard risk assessments, wise and efficient infrastructure hardening, and a coordinated approach to mitigation through federal, state, regional, and local planning efforts. Our combined prioritization will be the protection of people, structures, infrastructure, and unique ecosystems that contribute to our way of life and the sustainability of the local and regional economy.

JURISDICTIONAL PLANNING AND MITIGATION GOALS

As part of the 2018 revision process, each participating jurisdiction in Walla Walla County was asked to develop its own set of planning and mitigation goals to help reflect and keep track of individual priorities and changes in hazard vulnerability over time. The following section outlines the goals submitted by each jurisdiction.

Walla Walla County County-Wide Hazard Mitigation Goals:

1. This planning process will involve planning for natural hazards of Flood, Earthquake, Wildland Fire (excerpted from existing Mill Creek and Walla Walla County Community Wildfire Protection Plan (CWPP)), and Severe Weather;
2. Additional non-natural hazards will be added to this plan from the 2010 HMP and HIVA and as pre-mitigation planning is completed in the future;
3. Prioritize the protection of people, structures, infrastructure, and unique ecosystems that contribute to our way of life and the sustainability of the local and regional economy;
4. Educate communities about the unique challenges of natural hazard preparedness in the county;
5. Reduce the impact of hazard events and potential losses incurred by both public and private residents and entities;
6. Consider land use policies to alleviate potential hazard risks and impacts for future development;
7. Improve enrollment in the National Flood Insurance Program within communities that are at risk to floods through increased outreach and education;
8. Establish mitigation priorities and develop mitigation strategies in Walla Walla County;
9. Strategically locate and plan infrastructure and fuels reduction projects that take into consideration the impacts of natural hazards;
10. Reduce the area of wildland-urban interface (WUI) land burned and losses experienced because of wildland fires where these fires threaten communities in the wildland-urban interface;

11. Provide recommendations for alternative treatment methods, such as brush density, herbicide treatments, fuel reduction techniques, and disposal or removal of treated fuels; and
12. Meet or exceed the requirements of the National Fire Plan, FEMA Multi-Jurisdictional Hazard Mitigation Plan and Community Wildfire Protection Plan.

INTEGRATION WITH OTHER LOCAL PLANNING MECHANISMS

During the development of this HMP several planning and management documents were reviewed in order to avoid conflicting goals and objectives. Existing programs and policies were reviewed in order to identify those that may weaken or enhance the hazard mitigation objectives outlined in this document. The following narratives help identify and briefly describe some of the existing planning documents and ordinances considered and list other planning resources that may be of additional interest to residents. This list does not necessarily reflect every plan, ordinance, or other guidance document within each jurisdiction; but rather a summary of guidance documents available and recommended for review, by members of the Planning Team. Many of these documents are available on the Walla Walla County Emergency Management webpage located at https://www.co.walla-walla.wa.us/residents/emergency_management/index.php and other locations online.

WALLA WALLA COUNTY HAZARD IDENTIFICATION AND VULNERABILITY ANALYSIS (HIVA) 2010

The Walla Walla County Hazard Identification and Vulnerability Assessment (HIVA) provides analysis of a variety of biological, geological, and man-made hazards. The HIVA represents an overarching review of available published material. It is a summary of the relevant information needed to allow a subjective evaluation of the risk posed by certain hazards. It is not, nor is it intended to be, a rigorous or scientific analysis.

The HIVA helps serve as the basis for emergency management planning efforts in Walla Walla County, including the Comprehensive Emergency Management Plan (CEMP) and the current update of the HMP. Not all conceivable hazards are addressed because some pose little threat to Walla Walla County (such as an avalanche), while others have such a low probability of occurrence they do not need special consideration (such as a meteor impact). Having an overarching review of the hazards and the risks they pose to the County helps prepare planners and communities alike to better deal with any disaster.

WALLA WALLA COUNTY COMPREHENSIVE EMERGENCY MANAGEMENT PLAN (CEMP) 2017

The CEMP has been promulgated by the Walla Walla County Board of Commissioners and City Mayors of Walla Walla, College Place, Prescott and Waitsburg. The plan establishes the framework for an effective system to ensure that Walla Walla County and its municipalities will be adequately prepared to respond to the occurrence of natural, manmade and/or technological related emergencies or disasters. The plan outlines the roles and responsibilities of local government, State and Federal agencies and volunteer organizations.

The intention of this plan is to unite the efforts of these groups under each of the Emergency Support Function (ESF) and Annex formats listed throughout the document. Each of these ESFs have a designated lead agency for a comprehensive approach to mitigation, planning, response and recovery activities set forth in the “State of Washington Comprehensive Emergency Management Plan” and the “National

Response Framework”. The plan helps to guide interested parties in how State, Federal and other outside resources will be coordinated to supplement county resources and response. There are 20 ESF sections and two Annex in the CEMP, and all are available online at https://www.co.walla-walla.wa.us/residents/emergency_management/index.php.

WALLA WALLA COUNTY FLOOD RESPONSE PLAN 2009, UPDATED APPENDICES IN 2017

The purpose of this flood response plan is to prepare Walla Walla County to respond to the numerous flooding hazards that exist locally and provide officials with procedures for managing and implementing flood response and recovery in accordance with the Walla Walla County Flood Response Policy and the Walla Walla County Mutual Aid Agreements.

This plan defines what, when, where, how, and who will implement flood response actions and activities in accordance with current policies. It is divided into two major components – the General Plan and the more specific, Implementing Procedures. The General Plan addresses assumptions, responsibilities, and relationships while the Implementing Procedures consist of checklists, procedures, and maps. The checklists are intended to help users remember specific items that may be applicable to the situation at hand. By training on, and following this plan, emergency responders can reduce the danger to themselves and the general public and lessen the likelihood and extent of damage to property and the environment. This plan follows the principles of the Incident Command System and is compliant with the National Incident Management System, as required by Homeland Security Presidential Directive 5. Homeland Security Presidential Directive 5 (HSPD-5) established a single, comprehensive approach to incident management, with the objective of ensuring that all levels of government across the nation have the capability to work together efficiently and effectively.

WALLA WALLA COUNTY PUBLIC HEALTH EMERGENCY PREPAREDNESS AND RESPONSE PLAN – 2018

WALLA WALLA COUNTY CONTINUITY OF OPERATIONS PLAN – 2018

CITY OF COLLEGE PLACE CONTINUITY OF OPERATION PLAN AND EVACUATION MAP – 2018

CITY OF WALLA WALLA EVACUATION PLAN – 2004; CURRENTLY UNDER REVIEW/REVISION

CITY OF WALLA WALLA CONTINUITY OF OPERATIONS PLAN – 2017

CITY OF WAITSBURG FLOOD RESPONSE PLAN – 2008

WALLA WALLA REGIONAL AIRPORT EMERGENCY PLAN – 2017

1.7 PLAN UPDATES, MITIGATION, AND PRIORITIZATION

There has been a general increase in the level of detail regarding policy and statutory regulation criteria as well as hazard occurrence, frequency and planning-effort details throughout the document.

Chapter 1 Updates - Additional goals, objectives and actionable criteria have been developed along with a number of narratives and a list of other planning resources available to participating jurisdictions as well as other interested parties.

Chapter 2 Updates – There has been an increase in detail regarding the planning process and multi-jurisdictional collaborative participation. There has been a modification of the 2010 plan language for incorporation of a new jurisdiction through inclusion of five (5) broader-reaching methods of multi-jurisdictional participation as outlined in the Chapter.

Chapter 3 Updates - This chapter has been expanded to include a summary of meetings and public participation as a result of the 2018 process and updates. Additionally, the mitigation measures contained in the 2018 plan have been significantly re-organized, re-worded and re-focused based on changes in priorities and information within jurisdictions and through progress toward previous mitigation goals (presented for each jurisdiction in Chapters 8-13 and summarized in the following).

Chapter 4 Updates – This chapter has been expanded significantly from the 2010 HMP to include building and development trends, hazard management capabilities, and regional hazard-profiles section to offer additional insights into the capacity and history of the County and its jurisdictions with regard to natural hazards.

Chapter 5 Updates – General updates were completed that enhanced the definitions and explanations of hazard risk classification rankings that have been maintained from the 2010 plan, in the 2018 update, as their use and detail were still relevant.

Chapter 6 Updates – This section includes the results of the 2010 Hazard Identification and Vulnerability Analysis (HIVA) and highlights of the 2017 Mill Creek and Walla Walla County Community Wildfire Protection Plan and new assessment of the Mill Creek Municipal Watershed fire risk analysis and fire mitigation recommendations. Additionally, updates on the occurrence of natural-hazard events within the County and an analysis of damaging events from 1960 to 2016 have been incorporated. Lastly, additional detail regarding flooding and flood frequency throughout the County has been updated and included.

Chapter 7 Updates – This chapter has been updated to outline mitigation goals and objectives as well as assemble information in a more easily-accessible single location within the document for aspects covering, in general, the County and the participating jurisdictions. It also incorporates the shared mitigation strategy and prioritization methods that were identified by the Planning Team throughout the process. These include updates on information and priorities brought forth by participating entities to the Planning Team throughout the development of the 2018 Plan update.

Chapter 8 Updates – This chapter covers the unincorporated portion of Walla Walla County and has been updated to include progress made on previous mitigation goals and shifts in priority of goals since the last HMP update. Some of the highlights for unincorporated Walla Walla County are:

- Several years ago, the Emergency Management Department and Walla Walla Emergency Services Communications Center (WESCOM/911 dispatch) were brought together and successfully relocated to a shared space within a more central location in order to provide expanded services. A new goal is to now increase the facility space to accommodate identified needs and future growth for the County.
- Reaffirmed the need to assess and address public roadways and bridges for structural integrity.
- Completion of the Walla Walla County Comprehensive Plan is anticipated in late 2018-early 2019.
- Locations along Mill Creek were added as a priority for bank stability and enhancement against flooding.
- A culvert maintenance and identification program is now available through the State of Washington so the new priority is to increase public awareness of this tool and facilitate faster and less costly maintenance of these roadways.

- The County completed the Mill Creek and Walla Walla County Community Wildfire Protection Plan (CWPP) that includes the County and all jurisdictions as well as a reassessment of the Mill Creek Municipal Watershed and provides recommendations for reducing fire risk in the future. The County has now shifted its mitigation priority in this area to applying the recommendations of the 2017 CWPP for all jurisdictions.

Chapter 9 Updates – This chapter covers the City of College Place and has been updated to include progress made on previous mitigation goals and shifts in priority of goals since the last HMP update. Some of the highlights for the City of College Place are:

- A reaffirmation of the need to install emergency power for municipal water well #1.
- New goal of the jurisdiction to support and apply the recommendations of the 2017 CWPP within their jurisdiction.
- A reaffirmation of the earthquake and severe storm mitigation goals from the 2010 plan for the 2018-2022 planning period.

Chapter 10 Updates – This chapter covers the City of Prescott and has been updated to include progress made on previous mitigation goals and shifts in priority of goals since the last HMP update. Some of the highlights for the City of Prescott are:

- The City of Prescott added additional specifics to their goal of culvert replacement work throughout the City.
- There was a reaffirmation of the need for vegetative windbreaks around the City's outward extents as potential shelter against future wind events.

Chapter 11 Updates – This chapter covers the City of Waitsburg and has been updated to include progress made on previous mitigation goals and shifts in priority of goals since the last HMP update. Some of the highlights for the City of Waitsburg are:

- Reaffirmation of the need for a digital file back-up system for City documents and files.
- New goal of participation in the 2018-2022 planning period update of the 2009 Flood Response Plan to be undertaken by the County.
- Reaffirmation of road improvements, wildfire and earthquake mitigation projects as outlined in the 2010 plan, with a focus on gaining funding and collaboration.
- Reaffirmation of the need for a stream gauge for flood prediction and warning. Increased detail in their plan specifying a specific location and need for prioritizing install during the 2018-2022 planning period.
- New goal of removal of flood prone structures in the floodway related to the 100-year flood plain associated with the Touchet River. The structure locations vary, but for the greater part they are located along U.S. Hwy 12 and Harmon Street as well as some trailer park properties along Murphy Street. (2020 Revision)

Chapter 12 Updates – This chapter covers the City of Walla Walla and has been updated to include progress made on previous mitigation goals and shifts in priority of goals since the last HMP update. Some of the highlights for the City of Walla Walla are:

- Confirmation of the need for emergency power to critical infrastructure within the City.
- Detailed information regarding the collaborative ownership and management of the Mill Creek flood control structures has been provided to assist in new mitigation planning efforts.
- New goal of completing the Phase II 2009 Flood Response Plan so it includes other jurisdictions within the County has been added as well as the completion of an update to the Phase I plan as it stands.
- New goal of applying the recommendations from the 2017 CWPP for the County and the Mill Creek Municipal Watershed was added to prioritize the City's water supply structure.
- New goal of assessing the parking structures in and around the concrete Mill Creek diversion structure that runs under the City.
- New goal of completing seismic upgrades to the above ground water storage tank connections (3) to create earthquake resistance. (2020 revision)
- New goal of replacing 10,700 feet of 24" water main due to age (1924) and material (steel riveted) that is highly susceptible to earthquake damage. (2020 Revision)

Chapter 13 Updates – This chapter covers the Walla Walla City Public School District and has been updated to include progress made on previous mitigation goals and shifts in priority of goals since the last HMP update. Some of the highlights for the Walla Walla City Public School District are:

- The School District completed their earthquake building-risk assessment and anticipates having the completed report shortly after the approval of this plan in 2018-2019.
- New goal of using the findings of the assessment to bring current buildings up to seismic standards during the 2018-2022 planning period.

Appendix A Updates – Appendix A is a list of the Critical Infrastructure throughout the County as identified by all participating jurisdictions. This list was updated throughout the process to include many new facilities as well as the removal of some that have been retired or modified for other purposes.

Statement of Plan Approval

The Walla Walla Board of County Commissioners and each of the city councils will be responsible for adopting the plan. These governing bodies have the authority to promote sound public policy regarding natural hazards. Once the plan has been adopted, the County Emergency Management Director will be responsible for submitting it to the State Hazard Mitigation Officer and the Federal Emergency Management Agency (FEMA) for review. This review will address the federal criteria outlined in FEMA Interim Final Rule 44 CFR Part 201. Upon approval by FEMA, Walla Walla County and the other participating jurisdictions will have maintained eligibility for Hazard Mitigation Grant Program, have a clear understanding of hazard vulnerability and an outlined direction for how to more effectively mitigate the hazards identified as their greatest vulnerabilities.

Chapter 2. PLANNING AND PROCESSES

Documentation of the planning process, including public involvement, is required to meet FEMA's DMA 2000 (44CFR§201.6(b) and §201.6(c)(1)) for an updated local mitigation plan. This section includes a description of the planning process used to update this plan, including how it was prepared, who was involved in the process, and how all of the involved agencies participated.

2.1 THE PLANNING TEAM

Walla Walla County Emergency Management Director, Liz Jessee, led the Planning Team efforts. The Northwest Management, Inc. Project Manager was Mark Corrao. These individuals led a Team of 11-15 professionals that included county and city elected officials and staff, fire protection districts, law enforcement, conservation districts and school districts (Table 1) throughout the document development and planning process.

The Planning Team met with 12 residents and 32 individuals from agencies, departments, schools, businesses, and county services during the community risk assessments, planning committee meetings, and public outreach meetings. Additionally, two newspaper press releases and numerous social media posts (EM website) were used to encourage residents to contact their county Emergency Management coordinator, attend Planning Team meetings, and provide document review and input to ensure that all issues, potential solutions, and ongoing efforts were thoroughly discussed and considered in the update. When the public meetings were held, we had 13 total residents from multiple jurisdictions attend as well as many of the Team members who shared their experiences and provided input to the planning process.

The planning philosophy employed in this project included open and free sharing of information with all interested parties using social media, the EMD website and hard copies for interested individuals. Information from the federal and state agencies listed in Table 1 was integrated into the database of knowledge used throughout the update process. Additionally, regular monthly and occasionally bi-monthly meetings with the Planning Team were held throughout the process to facilitate information sharing, encourage smooth communication and to enable review of document pieces in smaller sets of pages.

2.2 THE PLANNING PROCESS

This update to the Walla Walla County HMP was developed through a collaborative process involving all of the organizations and agencies detailed in Table 1 of this document. The planning effort began by organizing and convening a countywide Planning Team. Walla Walla County Emergency Management Director utilized the Planning Team to begin the update process. Once the meetings began in February 2018, the Team identified other individuals/agencies that should be invited to participate within the first two weeks and continually worked to keep them and others engaged throughout the process through social media, phone calls, direct emails, newspaper articles and meeting announcements.

The planning process included seven distinct phases which were in some cases sequential (step 1 then step 2) and in some cases intermixed (step 5 completed throughout the process):

1. **Organization of Resources** – Walla Walla County Emergency Management and Northwest Management, Inc. (NMI) worked together with 16 participants at the February planning kickoff meeting to develop a comprehensive list of potential participants as well as a project timeline and work plan. The 2017 CWPP Planning Team served as the initial basis for identifying stakeholders; however, that list was expanded in order to provide a comprehensive review and update of the risk assessments and mitigation strategies as well as include additional jurisdictions during the 2018 HMP update process.
2. **Collection of Data** – Walla Walla County EM and NMI coordinated with the Planning Team to gather new data and information about the extent and periodicity of hazards throughout Walla Walla County to ensure a robust update of information on hazards within the County. This occurred through seven formal Team meetings, two public meetings and dozens of emails and digital correspondence with jurisdictions and residents of Walla Walla County.
3. **Field Observations and Estimations** – NMI and the Planning Team developed risk models and identified problem areas in order to better understand risks, juxtaposition of structures and infrastructure to risk areas, access, and potential mitigation projects. Many of the analyses used in the 2010 HMP and HIVA plans were reviewed for update in hazard vulnerabilities and/or changes in development. Additionally, several new risk models and analyses were included in the 2018 update process to better represent current conditions in Walla Walla County given new information.
4. **Public Involvement** – Walla Walla EM, NMI and the Planning Team scheduled monthly and bi-monthly meetings in order to involve the public from the kickoff meeting in February where only 16 members participated to the final input list of participating stakeholders and agencies of 44. This was accomplished through formation of the Planning Team to news releases, public meetings, public review of draft documents, and acknowledgement of the final updated plan by the signatory representatives.
5. **Strategies and Prioritization** – Walla Walla EM, NMI, and the Planning Team representatives worked together to review the risk analyses and develop realistic mitigation strategies and goals which are presented for the County as a whole in Chapter 7 and by individual jurisdiction in Chapters 8-13.
6. **Drafting of the Report** – NMI drafted multiple sections for review as well as a final update report and worked with members of the Planning Team, agencies, and County residents to review each section, incorporate all comments, present the plan in two public forums for feedback and prepare the document for the state and federal review processes.

2.3 MULTI-JURISDICTIONAL PARTICIPATION

44 CFR §201.6(a)(4) allows for multi-jurisdictional planning in the development of Hazard Mitigation Plans that impact multiple jurisdictions. To be included as an adopting jurisdiction in the Walla Walla County HMP jurisdictions were required to participate in at least one Planning Team meeting or meet with the Planning Team leadership individually, provide a goals statement, submit at least one mitigation strategy, as well as adopt the final plan by resolution.

The following is a list of jurisdictions that have met the requirements for an adopting jurisdiction and are thereby included in this update of the 2018 Walla Walla HMP. The individuals from these jurisdictions as well as a number of participating agencies and organizations are specifically listed in Table 1 on Page 3.

- Walla Walla County
- City of Prescott
- City of Waitsburg
- City of College Place
- Mill Creek Flood Control Zone District
- Walla Walla Public Schools
- Walla Walla County Conservation District
- City of Walla Walla

The monthly and bi-monthly Planning Team meetings were the primary venue for authenticating the planning record. However, additional input was gathered from each jurisdiction through a combination of the following methods:

- Planning Team leadership attended local government meetings where planning updates were provided, and information was exchanged. Additionally, representatives on the Planning Team periodically attended city council meetings to provide municipality leadership with updates on the project and to request reviews of draft material. All of the adopting jurisdictions maintained active participation in the monthly Planning Team meetings.
- One-on-one correspondence and discussions between the Planning Team leadership and the representatives of the municipalities and special districts, with facilitation as needed, to ensure understanding of the process, collect data and other information, and develop specific mitigation strategies. NMI representatives met with, emailed, and/or called each jurisdiction individually during the planning process to answer questions and request additional information.
- Three public meetings were hosted in Walla Walla at Fire District #4 Station 41 and downtown in the Walla Walla Public Health and Legislative Training Room, May 31st and June 1st, 2018. Each meeting invited elected officials, county and municipality representatives, volunteers, and local citizens to gain additional insights and answer questions regarding the HMP document and/or the process.
- Written correspondence was provided at least monthly between the Planning Team leadership and each participating jurisdiction in order to update the cooperators on progress, solicit additional information, and provide feedback for all parties involved. NMI representatives worked directly with the Walla Walla EM director and Coordinator through an email distribution list to reach stakeholders for announcing meetings, distributing meeting minutes, providing draft document sections for review, and to request additional information. All of the participating jurisdictions provided comments to the draft document during the data gathering phase as well as during the various Team and public outreach/review processes.
- At the request of Planning Team leadership Walla Walla EM and several participating jurisdictions hosted digital and paper copies of the drafted 2018 Walla Walla HMP for public access and review.

Chapter 3. THE 2018 UPDATE

This plan is an update of the 2010 Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan (HMP). Although it is only an update, the plan has been redesigned and reorganized so it is easier to use. This chapter has been expanded on since its inclusion in the 2010 plan and contains information regarding the 2018 update process. This section provides a summary of meetings, public participation, a list of mitigation measures removed from the plan as a result of the 2018 update, and a list of potential funding sources.

3.1 MEETINGS

Walla Walla County Emergency Management sent a formal invitation to prospective Team members inviting them to the initial project kickoff meeting. Additionally, other announcements regarding the kickoff meeting the HMP process and the need for participation in the 2018 HMP update process and plan development were made via email to a broad list of stakeholders throughout, and agencies operating within, the County.

Members were invited individually and by agency/organization as they were identified by the Planning Team and all meetings were open to the public. The following list provides documentation of meetings that held regarding the 2018 update. There were two primary types of meetings/forums for exchange of information and participation; planning team meetings and public outreach meetings. Planning Team meetings made up the greatest number. Not all meetings involved all members of the planning Team; however, these meetings were well attended with 8 to 16 members and critical throughout the update process to ensure that plan developed on track and feedback and input were addressed comprehensively. Secondly, community coordination and public outreach meetings were held to focus on the details of particular jurisdictions, special issues of concern, and as opportunities for the Planning Team to meet with any and all interested residents and stakeholders for input. Planning Team meetings were held from February to August 2018. The minutes, attendance records, and a representative number of email inputs/conversations across all participating entities, throughout the update process, are included in Appendix B. The list below provides a summary of each meeting throughout the update process.

2/21/2018 Initial Planning Team meeting consisting of the 2017 CWPP steering committee and others. This was a Kickoff meeting to review 2010 HMP and HIVA outline the process of an HMP update for new members and generate a list of additional stakeholders to reach out to for the Planning Committee to represent broader jurisdictional group. Outline timeline steps for progression through the planning process.

3/21/2018 Planning Team meeting to review 2010 HMP aspects and identify main sections of the document for update; Begin the natural hazard risk assessment process and discuss the changes in FEMA guidelines since completion of the 2010 plan. Also collect and review other relevant planning documents within the County that will contribute to and be referenced within the 2018 HMP update.

5/03/2018 Planning Team meeting to review drafted aspects of the 2018 HMP, provide feedback from jurisdictional groups regarding the risk assessments, discuss the level of detail for inclusion of the 2017 CWPP and solicit additional state and federal agency input into the update.

5/31/2018 10AM Planning Team meeting (Location City of Walla Walla Fire District #4) public notice of meeting locations and times printed in the local Walla Walla Newspaper and released County-wide on social media for public attendance and comment. Review of the draft 2018 HMP and notification of the public review and comment period open during the Month of June.

5/31/2018 6PM Public Outreach meeting – Location City of Walla Walla County Public Health and Legislative training Room. PowerPoint overview of the HMP planning process, the updates to the document and solicitation of feedback and questions over the next 30 days.

6/01/2018 12PM Public Outreach meeting – Location City of Walla Walla County Public Health and Legislative training Room. PowerPoint overview of the HMP planning process, the updates to the document and solicitation of feedback and questions over the next 30 days.

6/01/2018 Planning Team meeting, Public Comment Period and Feedback Began

6/29/2018 Planning Team meeting, Public Comment Period and Feedback Closed

7/25/2018 Planning Team meeting to review and incorporate public comments, jurisdictional comments and agency comments received through the past 30-day public comment period and the preceding 25-day Planning Committee and jurisdictional entity review period.

8/22/2018 Planning Team meeting to finalize document comments, gain jurisdictional approval and signatures as well as prepare the updated final plan for FEMA review following state review and comment.

3.2 PUBLIC PARTICIPATION

Walla Walla County and the 2018 plan participants sought public involvement through multiple means during the public process including public presentations, Q&A sessions in central locations, email and phone Q&A sessions throughout the public comment period and posting of document information on various online portals available to the public. The following is a repeat of the Table 1 list who participated in at least one of the Planning Team meetings, volunteered time for edits and feedback, and/or helped to develop elements of the HMP as it was being updated. Some participants served on the Team as dual representatives of more than one jurisdiction. A record of sign-in sheets of meeting participation is included in Appendix B.

Specific Individuals Who Participated in the Walla Walla County HMP Update:

Liz Jessee, Walla Walla County EMD	Michael Francis, U.S. Army Corps of Engineers
Patrick Purcell, Walla Walla County EMD	Jeff Stidham, U.S. Army Corps of Engineers
Marilyn Lohmann, National Weather Service	Rich Cannon, U.S. Army Corps of Engineers
William Herrington, American Red Cross	Susan Leathers, Providence St. Mary Medical Center
Dixie Ferguson, American Red Cross	Rob Grandstaff, Washington Old Fellows Home
Barbara Clark, City of Walla Walla Mayor	Mike Rizzitiello, City of College Place
Mori Struve, City of Walla Walla Public Works	David Winter, City of College Place Fire Department
Tony Garcia-Morales, Walla Walla County Public Works	Kate Moon, Regency at the Park
Steve Potter, City of Walla Walla Police Department	Harvey Crowder, College Place Mayor
Mike Kay, Walla Walla Public Schools District	Jim Johnson, Walla Walla County Commissioner
John Turner, Walla Walla County Sheriff	Fred Miller, Whitman College

Mark Corrao, Northwest Management, Inc
Jacquelyn Meier, Walla Walla Community College
Brad Morris, Walla Walla Fire Department
Nabiel Shawa, City of Walla Walla
Steve Heimbigner, City of Prescott
Alex Hammond, U.S. Army Corps of Engineers

Randy Hinchliffe, City of Waitsburg
Lisa Stearns, Walla Walla County Conservation District
Renee Hadley, Walla Walla County Conservation District
Jodi Ferguson, Walla Walla County Department of Community Health
Mark Higgins, Walla Walla Public Schools
Tom Glover, Walla Walla County Comprehensive Planning Dept.

3.3 PUBLIC INVOLVEMENT

Public involvement in this plan was made a priority from the inception of the project. There were a number of ways that public involvement was sought and facilitated. In some cases, this led to members of the public providing information and seeking an active role in protecting their own homes and businesses, while in other cases it led to the public becoming more aware of the process without becoming directly involved in the planning.

NEWS RELEASES

Through the Walla Walla County Emergency Management Department, periodic email blasts and press releases were used to inform the public of the HMP planning process, who was involved, why it was important to Walla Walla County residents, and who to contact for more information. A focused press release in the form of a flyer announcing the public meeting dates and venues was used to gain targeted input and participation in the HMP process after initial document outlining and information gathering, which was distributed by Emergency Management and Team members as broadly as possible. A second focused press release provided information regarding the public comment period including where hardcopies of the draft could be viewed, the availability of the draft on the Walla Walla County Emergency Management website, and instructions on how to submit comments. A record of published articles regarding the notifications for stakeholder participation in the update of this HMP are included in Appendix B.

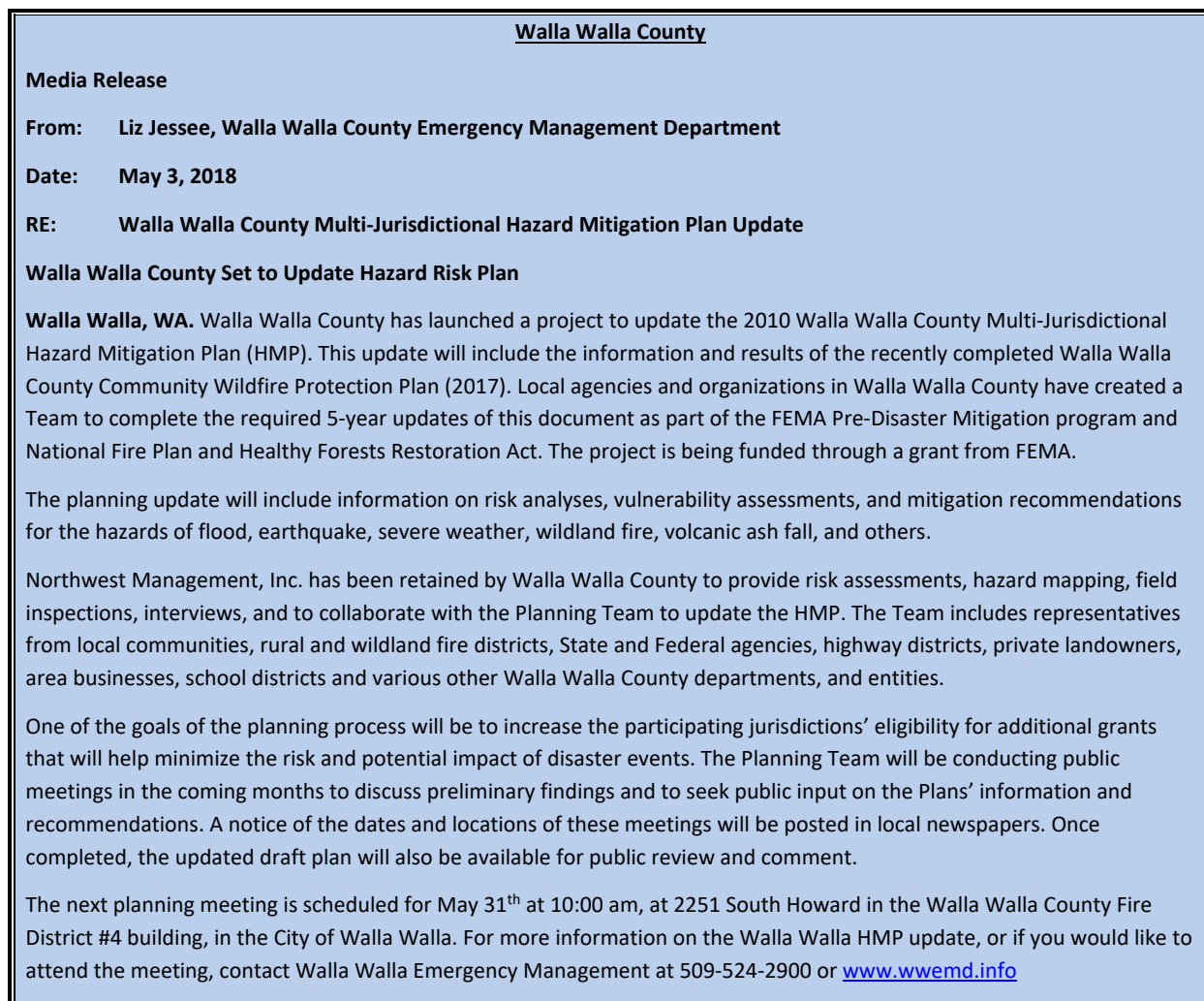



Figure 2. Press Release #1 – Planning Process Announcement.

PUBLIC MEETINGS

Public meetings were scheduled in strategic community locations during the hazard assessment phase of the planning process to reach the widest possible audience. Venues for meetings were chosen by the Planning Team to provide an adequate opportunity for members of every community to attend without considerable travel. Public meetings focused on sharing information regarding the planning process, presenting details of the hazard assessments, and discussing potential mitigation treatments. Attendees at the public meetings were asked to give their impressions of the accuracy of the information generated and provide their opinions of potential treatments.

Public meetings were held in May and June, 2018. These meetings were attended by a number of individuals on the Team and the general public. A record of attendance at public meetings are included in Appendix B.

The public following public meeting announcement was distributed to each community by Team members in the form of an email and printable flyer. A sample of the flyer is included below.



Walla Walla County – Public Comment & Review Requested

Walla Walla County Hazard Plan DRAFT Initial Public Review

The Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan (HMP) update, has been completed in draft form and is available to the public for review and comment at the locations listed below. Comments from opportunities below will be incorporated into the plan, as appropriate, and a month-long review process will begin for review of the revised plan. Details for the month-long review will be distributed later.

Walla Walla County Fire District 4 May 31, 10:00 AM to 11:30	2251 South Howard, Walla Walla, WA
Walla Walla County Public Health and Legislative Training Room May 31, 2018 7:00 PM June 1, 2018 at 12 PM (noon)	314 West Main St. Walla Walla, WA 99362

The purpose of the Walla Walla County HMP is to reduce the impact of hazards such as flooding, severe weather, wildfire, earthquake and volcanic ash fall on County residents, landowners, businesses, communities, local governments, and state and federal agencies while maintaining appropriate emergency response capabilities and sustainable natural resource management policies. The HMP identifies high risk areas as well as structures and infrastructure that may have an increased potential for loss due to a hazard event. The document also recommends specific projects that may help prevent disasters from occurring altogether or, at the least, lessen their impact on residents and property. The HMP is being developed by a committee of city and county elected officials, departments, local and state emergency response representatives, land managers, highway district representatives, and others.

The Walla Walla County HMP includes risk analysis at the community level with predictive models for where disaster risks are likely to occur. This plan will continue to enable the County and its communities to be eligible for grant dollars to implement the projects and mitigation actions identified by the committee. Although not regulatory, the HMP will provide valuable information as we plan for the future.

Comments on the HMP should be submitted to the attention of Liz Jessee, Walla Walla Emergency Management Director at ljesssee@co.walla-walla.wa.us or mailed to 27 N. 2nd Ave., Walla Walla, WA 99362.

Figure 3. Press Release #2 - Public Meeting and Comment Period Release.

PUBLIC COMMENT PERIOD

A public comment period was conducted from June 1st to June 29th, 2018 to allow members of the general public an opportunity to view the full draft plan and submit comments and any other input to the Team for consideration. A press release was published May 6th, 2018 in the local paper (Walla Walla Union Bulletin) announcing the public meeting times and locations, the comment period duration, the location of plans for review and instructions on how to submit comments. An emailed .PDF and hardcopy drafts were made available for any interested participant. Each hardcopy was accompanied by a letter of

instruction for submitting comments to the Planning Team. The draft plan was also posted for public review on the Walla Walla County Emergency Management Department's website.

3.4 DOCUMENTED REVIEW, PUBLIC INPUT AND THE FUTURE UPDATE PROCESS

Review and comment on this 2018 HMP plan update have been gained through nine stakeholder meetings, three public announcements and multiple outreach efforts on social media and email. This record of outreach and the document's review process has been established through email correspondence, press releases, published articles, meeting minutes, and meeting sign-in sheets and is available in Appendix B.

Throughout the nine Walla Walla County meetings in 2018, the Planning Team members met with their constituents and the general public to discuss findings, review analysis, and provide written comments on draft sections of the document update. During the public meetings attendees observed map analyses, historic photograph collections, discussed general findings from the community assessments, and made recommendations on mitigation measures by jurisdiction and across the County as a whole.

Sections of the draft plan were circulated to the Planning Team members and passed to the residents and agency personnel of each jurisdiction at the Planning Team meetings. Each Planning Team member disseminated these sections to stakeholders to gain additional information and comment. The completed first draft of the total document was presented to the Planning Team during the month of May for full review. The Team spent the month of May and the public comment period of June reviewing the document in detail for edits and feedback. Public outreach meetings were completed the 31st of May and 1st of June following initial document review by the Planning Team. The public comment period was then announced and opened to any interested stakeholder from June 1 – June 29th, 2018. Some jurisdictions met individually to review and revise their specific risk assessments and mitigation strategies including the prioritization of some action items. Once the Planning Team and public review/comment periods were completed, Northwest Management, Inc. worked with the Planning Team to address questions and incorporate comments and edits into a revised draft of the HMP through the months of July and August 2018.

The Emergency Management Department (Director and Coordinator) will maintain a record of the hazard mitigation document resources available to the County and notify the jurisdictions included in this HMP of any updates made to this plan during the 5-year period it is active. The EM department will additionally reach out to other stakeholders and communities as funding is available to complete proposed mitigation measures and to complete projects that are successfully funded. A list of the Planning Team members, and/or the positions of those members assembled for this update, will be maintained for subsequent additions to this document and mitigation project updates to maintain an updated document into the future. This team will review the plan on an as-needed basis during the next 5 years and initiate the revision process in year 2022 to maintain the County's pre-mitigation planning efforts, County-wide awareness of natural hazards, and to maintain eligibility for hazard mitigation funding assistance.

3.5 LIST OF POTENTIAL FUNDING SOURCES

LOCAL FUNDING SOURCES

Local implementation resources vary based on each entity's scope of function, authorities, and operational capability and capacity. They may include:

- Use of development standards and building codes
- Enforcement of floodplain management ordinance(s)
- Participation in the NFIP Community Rating System
- Incorporation into local emergency response plan(s)
- Incorporation into local economic development plan(s)
- Use and support of existing local personnel (planners, floodplain managers, city engineers, GIS specialists, emergency managers)
- Capital improvement project funding
- Authority to levy taxes, special bonds
- Fees for services
- Other sources yet to be identified

The current economic condition and funding level of the participating local entities drastically limits the use of local resources. State or federal funding would be needed to accomplish many of the action items and mitigation measures referenced in this plan.

STATE FUNDING SOURCES

- Growth Management Act requirements
- State administered Hazard Mitigation Grant Program
- Flood Mitigation Act
- Pre-Disaster Mitigation Program
- Department of Ecology Flood Control Assistance Account Program (FCAAP)
- Department of Transportation Emergency Relief Program
- Office of Community Development Community Development Block Grants
- Programs administered by the Washington State Transportation Improvement Board
- Programs administered by the Washington State County Road Administration Board
- Other sources as yet to be identified

FEDERAL FUNDING SOURCES

- Stafford Act, Section 406 – Public Assistance Program Mitigation Grants
- Stafford Act, Section 404 – Hazard Mitigation Grant Program
- Disaster Mitigation Act of 2000– Pre-Disaster Mitigation Program Competitive Grants
- United States Fire Administration – Assistance to Firefighters Grants
- Homeland Security Program Funding
- United States Small Business Administration Pre and Post Disaster Mitigation Loans
- United States Department of Economic Development Administration grants
- United States Department of Housing and Urban Development Grants
- Community Development Block Grant Program

United States Army Corps of Engineers

United States Department of the Interior, Bureau of Land Management

Federal Highway Administration

Other sources as yet to be identified

Chapter 4. COMMUNITY PROFILE

This section includes an overview of the County setting regarding both anthropogenic and natural resource conditions. It has been expanded significantly from the 2010 HMP to include development trends, hazard management capabilities, and regional hazard profile sections to provide additional insights into the capacity and history of the County with regard to natural hazards.

4.1 WALLA WALLA COUNTY CHARACTERISTICS

Walla Walla County is located on the Columbia Plateau and has been included as part of the Palouse ecoregion, which has loess covered basalt plains, modified by glacial action and scoured by repeated floods during the Miocene and Pliocene eras. This includes features such as plateaus, buttes, and channels. Channels are made up of outwash terraces, bars, loess islands and basins. The plateaus contain circular mounds of loess (biscuits) surrounded by cobble- size fragments of basalt. Soils generally consist of Palouse loess with varying amounts of rock or gravel, and basaltic rock outcroppings. Generally, the soils along on the Southeastern most portion of the County are derived from the local parent material, which includes granite and basalt. Located on the western edge of the Blue Mountains, the highest peak in Walla Walla County is Lewis Peak at 4,888 ft above sea level. The lowest point in the County lies along the Columbia River at 340 ft elevation⁵.

4.2 POPULATION

The 2017 Census established the Walla Walla County population at 60,567, which shows an increase from a population of 55,180 in 2000. There are four incorporated cities within Walla Walla County, and since 1890, the population of Walla Walla County has been steadily increasing with the only decrease in population occurring between 1910 and 1920. The U.S. Census Bureau estimates that Walla Walla County has experienced a 3.0% increase in population since 2010 compared to a 6.6% increase statewide. Walla Walla County's increase in population is largely within the urban areas, such as the City of Walla Walla, and other outlying communities, with minor changes in the amount of wildland urban interface. The Census Bureau also reported 21,851 households with an owner-occupied rate of 64.8% in 2016. The median income for a household in Walla Walla County is \$48,705, which is less than the statewide median of \$61,062 ⁶.

⁵ Carson et al. 2008, Where the Great River Bends.

⁶ U.S. Census Bureau. State & Quick Facts:

<https://www.census.gov/quickfacts/fact/table/wallawallacountywashington,WA,US/PST045217>

Table 3. Population in Walla Walla County in 2016 and the percent-change from 2000 to 2016 according to the U.S. Census.

City	Population	Percentage
Walla Walla	31,731	54%
College Place	8,765	15%
Burbank	3,291	5%
Waitsburg	1,217	2%
Touchet	421	<1 %
Prescott	318	<1 %
Dixie	197	<1 %
Wallula	179	<1 %

4.3 DEVELOPMENT TREND

The chart below shows the development trend in Walla Walla County through the number of single-family residence building permits for in each incorporated city as well as the surrounding County areas. There has been an average County-wide increase of 130 permits per year between since 2007 and the trend suggests continued growth into the future for Walla Walla County and its incorporated cities.

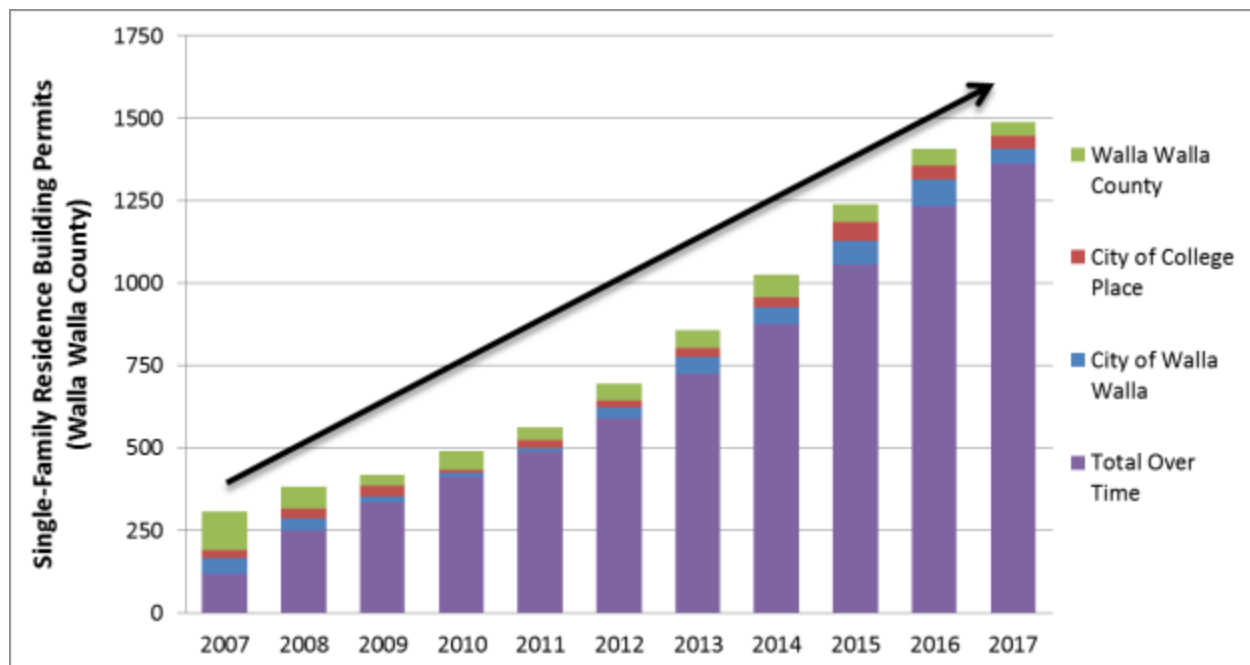


Figure 4. Development trend data based on building permit records from 2007 to 2017 for Walla Walla County.

4.4 LAND USE

The predominant land use in Walla Walla County is agriculture, in the form of dryland and irrigated fruits, berries, grain crops, federal Conservation Reserve Program (CRP) and livestock grazing. As of 2012 Walla Walla County had 943 farms covering 645,121 acres which represented 82% of the total land

area in the county. The average farm size is 684 acres ⁷. The 2012 Agriculture Census ranked Walla Walla County as fifth in Washington State for volume of agriculture sales, with a total of practices occur on approximately 92,438 acres while dryland agriculture occurs on the remaining approximately 550,000 acres. The 2012 Agriculture Census ranked Walla Walla County as fifth in Washington State for volume of agriculture sales, with a total of \$344.5 million in 2012 and an average of total of \$361,772 in annual sales per farm. Recently there has been an increase of vineyards in the area leading to increased tourism. The largest urban population is located in the County seat of Walla Walla with roughly 32,000 people or 54% of the total County population. The City of Walla Walla is also the home of two higher education establishments, Whitman College and Walla Walla Community College. The City of College Place is the home of Walla Walla University.

Table 4. Land ownership breakdown for Walla Walla County, Washington as of 2012.

Land Owner	Acreage	Percent
Private	1,249,949	89%
US Forest Service	101,197	7%
State	20,607	2%
Water	2,317	<1%
Bureau of Land Management	3547	<1%
U.S. Fish and Wildlife Service	610	<1%

4.5 CLIMATE

According to the Koppen-Geiger classification system Walla Walla, Washington is a hot Mediterranean, dry-summer climate. The average monthly temperature varies from a low of 34 degrees Fahrenheit to a high of 75 degrees in July, averaging 53 degrees. There is an average of 205 frost-free days in the growing season with annual precipitation averaging 20 inches ⁸. Rainfall in Walla Walla County averages around 16.5 inches a year, with an additional 12 inches of snowfall a year on average, and 107 days of precipitation. Winters are generally moderated by prevailing westerly winds from the Pacific Ocean; however, extreme cold temperatures periodically occur during inflows of arctic air masses. The County has one of the longest growing seasons in Eastern Washington. A milder winter is usually experienced in the lower elevations, with colder temperatures and higher precipitation in the Blue Mountains and the surrounding foothills. Precipitation varies widely in the County, ranging from less than 10 inches in lower drier areas to over 60 inches in the higher reaches of the Walla Walla River basin.

4.6 TOPOGRAPHY

The topography of the County varies from wide, low elevation river valleys (350 to 500 feet) and rolling foothills, to steep canyons (about 4,300 feet) leading into the high elevations (6,000 feet) of the Blue Mountains. Topography varies from the Blue Mountains at the East end of the County to the Snake and Columbia Rivers on the West end as most major creeks and rivers generally flow toward the West. Nearly

⁷ U.S. Department of Agriculture's National Statistics Service 2012 Census of Agriculture: Washington State and County Data.

⁸ http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1_Chapter_2_County_Level/Washington/wav1.pdf

all of the land in the County lies below 4,300 feet. Approximately 90% of the County lies between about 450 feet and 1,600 feet in elevation. However, the watersheds of Mill Creek and the Touchet and Walla Walla Rivers originate outside of the County at elevations of about 6,000 feet in the Blue Mountains.

In general, the upper portions of the Walla Walla River basin flow from steep, narrow, well-defined mountainous canyons. Many of the lower reaches of the creeks and rivers are incised in narrow steep-sided shallow canyons formed in easily erodible soils. The shallow canyons are inset into wide floodplains bounded on either side by gently rolling hills or steep walled bluffs. (Stalzer and Associates, 2009)

4.7 ECONOMY

Statistically, manufacturing has been the leading industry in the County. However, the largest employer in the County is Broetje Orchards, an apple orchard which employs 2,852 people. Broetje Orchards is one of the largest privately-owned orchards in the world with more than 5,000 acres along the Snake River and in Benton City. Other major employers include the Washington State Penitentiary, Tyson Fresh Meats, Inc., area healthcare facilities, schools, and college/universities, Boise Inc., the U.S. Army Corps of Engineers, and Wal-Mart.

4.8 SOILS

Most soils in the County are composed of highly erodible loess and Missoula Flood outwash deposits. Loess is composed of wind-blown loamy deposits and Missoula Flood outwash is composed of deposits of gravel and cobbles. Loams are friable (crumbly) mixtures of sand, clay, silt, and organic matter, and are well suited to various types of irrigated or dryland agriculture. Contributing to their erodibility is the fact that in some of the foothill areas there are shallow deposits with sparse vegetation overlying basalt bedrock.

This leads to landslide hazards on steeper slopes during wet periods, particularly if there is an earthquake. Areas susceptible to landslide hazard areas are located in the Southeast, and intermittently on steeper slopes in Southwest, corners of the County away from urban areas. When the County reviewed best available science, including soil and slope data, in 2008 with the County's critical areas ordinance update, these landslide hazard areas were mapped. Development regulations are in place to ensure that any new development in these areas is done in such a way as to protect public health and safety.

The loess soil deposits, known as the Palouse Formation, cover most of the County. The action of wind over many millennia eroded the bedrock into the characteristic gently rolling hills and deposited the loess throughout the region. River valley portions of the western area of the County are covered with the Touchet Beds. These are water-deposited soils composed of fine sands and silts with lenses of gravel. Lower river valley soils are often composed of recent alluvium deposits.

The potential for wind and water erosion varies greatly depending on the physical properties of individual soil associations. Erosion potential attributed to stormwater runoff and other water runoff generally increases with slope. According to the County's critical areas regulations, slopes over 15% are considered to be "erosion hazard areas."

Another geologically hazardous area regulated under the County's critical areas ordinance are areas with a moderate to high liquefaction susceptibility rating. Liquefaction is a significant impact that can be caused by earthquakes. A summary of County liquefaction potential is included in this hazard analysis.

4.9 GEOLOGY AND MINERAL RESOURCES

The region is composed of an irregularly shaped portion of the Columbia River basin bounded on the south and east by the Blue Mountains, on the north and northwest by the Touchet Highlands, and on the west by the Columbia and Snake Rivers.

The majority of the County is part of the Walla Walla River basin. The Walla Walla River flows into the Columbia River near Wallula. The Walla Walla River basin (and the County) is located between the physiographic regions of the Blue Mountains and the Columbia River Plateau. Geologic folding and faults in the region formed the Walla Walla River basin. The County is underlain by the Columbia River Basalt Group that was formed by successive lava flows during the Miocene Age (15-20 million years ago). The basalt is over 6,000 feet thick in some areas. Individual lava flows tend to be on the order of 50 to 150 feet thick. Gravel and clays overlie the basalt. Soils overlie gravel and clay materials. (HDR, 2008) (Stalzer and Associates, 2009)

4.10 HYDROLOGY AND WATER RESOURCES

The main waterways in the County are:

- Columbia River (forms entire western boundary of the County)
- Snake River (forms entire northern boundary of the County)
- Walla Walla River (tributary of the Columbia River)
- Touchet River (including Coppei Creek, tributary of the Walla Walla River)
- Dry Creek (tributary of the Walla Walla River)
- Mill Creek (including Blue Creek, tributary of the Walla Walla River)
- Miscellaneous small creeks (some partially regulated by the U.S. Army Corps of Engineers (USACE) Mill Creek Project)

4.11 GEOHYDROLOGY

The County is underlain by two subsurface aquifers, which supply approximately 60% of total water rights in the Walla Walla River basin. A deep basalt aquifer, covering approximately 2,500 square miles, lies beneath a smaller and shallower gravel aquifer. The gravel aquifer covers about 190 square miles. While the basalt aquifer underlies the entire river basin, the gravel aquifer is located only in the central lowlands, near the Cities of Walla Walla and College Place and rural areas surrounding Touchet and Lowden.

The gravel aquifer receives recharge from surface water which is hydraulically connected. Due to its porous nature, the gravel aquifer is susceptible to contamination from surface pollutants, such as urban runoff, agricultural chemicals or leaking septic systems.

4.12 VEGETATION RESOURCES

The two primary habitat types in the County are agricultural/pasture and shrub-steppe. The Washington State Department of Fish and Wildlife (WDFW) lists shrub-steppe as a Priority Habitat under its Priority Habitats and Species program due to its high habitat value and because of the unique plant and wildlife species associated with it.

Shrub-steppe habitat was historically dominant in the County; however, much of it has been converted to the agricultural habitat type, which now dominates the central portion of the County. Evergreen forests, dominated by Douglas fir and Grand fir, occur in the higher elevations near the Blue Mountains, and a riparian vegetation community dominated by cottonwood, white alder, willow, and various shrubs occurs along streams and rivers throughout the Walla Walla River basin.

4.13 FISH AND WILDLIFE RESOURCES

Wildlife habitat, as a result of vegetation conditions, is of relatively high quality in the upper reaches of the main rivers and tributaries (Walla Walla River, Touchet River, and Mill Creek). The mountain and foothill forests and associated habitats provide essential benefits to large mammals such as elk, mule and white-tailed deer, black bear, coyote, mountain lion, and bobcat. Furbearers such as beaver, river otter, mink, and raccoon are also common. Ruffed grouse, woodpeckers, a variety of aquatic species, hummingbirds, and dozens of other songbirds inhabit the upper drainages. Habitat complexity and quality in the lowland valleys is influenced by the presence of highly cultivated agricultural lands and remnant riparian strips and pockets. These lowland valleys are inhabited by white tailed and mule deer, ring necked pheasant, quail, mourning dove, and a variety of raptors, songbirds, and small mammals.

Historically, the Walla Walla River and the Touchet River are reported to have supported Chinook, Coho, and chum salmon. Currently, the watershed supports bull trout and steelhead, which are considered threatened species under the Federal Endangered Species Act.

A large expanse of riparian habitat exists on the 1,896-acre Wallula Habitat Management Unit that is managed in 2007 by the USACE. This unit is located at the mouth of the Walla Walla River and offers a mixture of cottonwood forest, various shrubs, wetlands, sagebrush, and agricultural lands used by many species of waterfowl, shorebirds and songbirds, raptors, upland game birds, mule and white-tailed deer, furbearers, and small mammals.

The McNary National Wildlife Refuge, managed by the U.S. Fish and Wildlife Service (USFW), near Burbank in Western Walla Walla county hosts more than 15,000 acres of habitat for migratory birds and developing fall Chinook salmon. Rare and endangered birds, including bald eagles and peregrine falcons, and thousands of nesting water birds can be found in the refuge.

4.14 SCENIC AND AESTHETIC RESOURCES

The main scenic area of the County is found in the Blue Mountains. Other scenic areas are found along the rivers and creeks, particularly along the Columbia and Snake Rivers and the upper Mill Creek area. U.S. Highway 12 and State Highway 124 are part of the Lewis and Clark Trail Scenic Byway. There are also scenic areas along the Touchet and Walla Walla Rivers and at Bennington Lake.

4.15 HISTORIC AND CULTURAL RESOURCES

The County has the benefit of historic and cultural resources that reflect the unique heritage of the area. Native Americans (Umatilla, Walla Walla, and Cayuse Tribes) were the first people in recorded history to live in Walla Walla County. Lewis and Clark explored the area between 1804 and 1806 and missionary settlements followed around 1836. The City of Walla Walla was settled in 1859 and became the County Seat on November 7, 1859.

4.16 HAZARD MANAGEMENT CAPABILITIES

Walla Walla Emergency Management is responsible for the administration and overall coordination of the disaster management program for Walla Walla County and the incorporated cities. The Incident Command System (ICS) is the basis for all direction, control and coordination of emergency response and recovery efforts. Emergency response and supporting agencies and organizations have agreed to carry out their objectives in support of the incident command structure to the fullest extent possible.

Walla Walla Emergency Management oversees emergency management personnel trained and dedicated to mitigating the negative impacts of natural and man-made disasters within the County. City offices throughout the county are equally dedicated to reducing catastrophic losses from disasters despite limited budgets.

Many states, counties and communities in the nation believe they are prepared disasters; however, many have not been tested. Too often, resources are required beyond the ability of counties and communities to match the response need. The Washington Bureau of Homeland Security and FEMA work with counties through desktop exercises and preparedness drills to increase preparation and abilities of first responders.

4.17 REGIONAL HAZARD PROFILE

SHELDUS is a county-level hazard data set for the U.S. for 18 different natural hazard event types such as thunderstorms, hurricanes, floods, wildfires, and tornados. For each event, the database includes the beginning date, location (county and state), property losses, crop losses, injuries, and fatalities that affected Walla Walla County.

The data were derived from several existing national data sources such as National Climatic Data Center's monthly Storm Data publications and NGDC's Tsunami Event Database. With the release of SHELDUS 7.0, the database includes loss causing and/or deadly event between 1960 through 1975 and from 1995 onward. Between 1976 and 1995, SHELDUS reflects only events that caused at least one fatality or more than \$50,000 in property or crop damages.

Prior to 2001, property and crop losses occurring on the same day within the same geography (i.e. county) are aggregated by hazard type. For events that covered multiple counties, the dollar losses, deaths, and injuries are equally divided among the counties (e.g. if 4 counties were affected, then each was given 1/4 of the dollar loss, injuries and deaths). Where dollar loss estimates were provided in ranges (e.g. \$50,000 - 100,000) - such as in NCEM Storm data until 1995 - the lowest value in the range of the category was used. This results in the most conservative estimate of losses during the time period of 1960-1995. Since

1995 all events that were reported by the National Climatic Data Center (NCDC) with a specific dollar amount are included in the database.⁹

It is important to keep in mind that the SHELDUS database does not include every hazard event that occurred within an area. Only those events that met a specific reporting criterion as explained above are listed. This means that many local events, considered to be major hazards, may not get recorded.

Since 1960, there have been 204 recorded hazardous events with the majority (80%) primarily due to weather events represented by Wind, Severe Storms, and Winter Weather. Since 1960 there have been 23 fatalities from natural hazards within Walla Walla County. Traffic accidents may likely be the most common cause of injuries and fatalities from hazard-related events during inclement weather and severe storms. The economic loss from hazard events occurring from 1960 – 2015 totals \$188,895,436.38 (adjusted to 2016 dollars) according to the SHELDUS database.¹⁰

9 HVRI. Natural Hazards Losses 1960-2015 (SHELDUS). Hazards & Vulnerability Research Institute. University of South Carolina. Columbia, South Carolina. Available online at <http://webra.cas.sc.edu/hvri/>. April 2018.

10 Hazards & Vulnerability Research Institute (2011). The Spatial Hazard Events and Losses Database for the United States, Version 9.0 [Online Database]. Columbia, SC: University of South Carolina. Available from <http://www.sheldus.org>

Chapter 5. PROBABILITY, VULNERABILITY AND RISK

The following terms were adopted from the 2010 Walla Walla County Hazard Identification and Vulnerability Analysis (HIVA) and are used to analyze the hazards considered in this plan:

PROBABILITY OF OCCURRENCE - An adjective description (High, Medium, or Low) of the probability of a hazard impacting Walla Walla County within the next 25 years. Probability is based on an appraisal of a hazard's frequency using information provided by relevant sources, observations and trends.

HIGH: There is great likelihood hazardous event will occur within the next 25 years.

MEDIUM: There is moderate likelihood a hazardous event will occur within the next 25 years.

LOW: There is little likelihood a hazardous event will occur within the next 25 years.

VULNERABILITY- An adjective description (High, Medium, or Low) of the potential impact a hazard could have on Walla Walla County. It is the ratio of population, property, commerce, infrastructure and services at risk, relative to the entire County. Vulnerability is an estimate generally based on a hazard's characteristics.

HIGH: The total population, property, commerce, infrastructure and services of the county are uniformly exposed to the effects of a hazard of potentially great magnitude. In a worst-case scenario there could be a disaster of major to catastrophic proportions.

MEDIUM: The total population, property, commerce, infrastructure and services of the county are exposed to the effects of a hazard of moderate influence; or the total population, property, commerce, infrastructure and services of the county are exposed to the effects of a hazard, but not all to the same degree; or an important segment of population, property, commerce, infrastructure or service is exposed to the effects of a hazard. In a worst-case scenario there could be a disaster of moderate to major, though not catastrophic, proportions.

LOW: A limited area or segment of population, property, commerce, infrastructure or service is exposed to the effects of a hazard. In a worst-case scenario there could be a disaster of minor to moderate proportions.

RISK RATING - An adjective description (High, Medium, or Low) of the overall threat posed by a hazard over the next 25 years. It is a subjective estimate of the combination of probability of occurrence and vulnerability.

HIGH: There is strong potential for a disaster of major proportions during the next 25 years; or history suggests the potential occurrence of multiple disasters of moderate proportions during the next 25 years. The threat is significant enough to warrant major program effort to prepare for, respond to, recover from, and mitigate this hazard. This hazard should be a major focus of the County's emergency management training and exercise program.

MEDIUM: There is moderate potential for a disaster of less than major proportions during the next 25 years. The threat is great enough to warrant reasonable effort to prepare for, respond to,

recover from, and mitigate this hazard. This hazard should be included in the county's emergency management training and exercise program.

LOW: There is little potential for a disaster during the next 25 years. The threat is such as to warrant a minimum of effort to prepare for, respond to, recover from, or mitigate this hazard. This hazard need not be specifically addressed in the county's emergency management training and exercise program, except as generally dealt with during hazard awareness training.

Chapter 6. RISK ASSESSMENT

This section includes the results of the 2010 Hazard Identification and Vulnerability Analysis (HIVA) and the 2017 Mill Creek and Walla Walla County Community Wildfire Protection Plan and its assessment of the Mill Creek Watershed. Updates to the natural hazard events within the County and analysis of events since 1960 have been incorporated along with additional details on flooding throughout the County.

6.1 INTRODUCTION

A full risk assessment for Walla Walla County was completed for the 2010 Hazard Identification and Vulnerability Analysis (HIVA). The HIVA analyzed all potential hazards for Walla Walla County and rated some hazards as not a significant risk. The four natural hazards posing the greatest risk to Walla Walla County were identified in the HIVA as earthquake, severe storm, wildfire, and flooding. In the table below and the following pages an overview of these four natural hazards are presented for reference along with additional detail provided by the participating County jurisdictions during the 2018 HMP update.

Table 5. Summary of Countywide Hazard Ratings from the 2010 HIVA and jurisdiction-specific input, 2018

Hazard	Probability	Vulnerability	Risk Rating
Earthquake	MEDIUM	HIGH	HIGH
Wildfire	MEDIUM	HIGH	HIGH
Severe Storm	HIGH	MEDIUM	HIGH
Flooding	HIGH	MEDIUM	HIGH
Dam Failure	LOW	HIGH	MEDIUM
Radiological Incident	LOW	MEDIUM	MEDIUM
Terrorism	LOW	MEDIUM	MEDIUM
Hazardous Materials	MEDIUM	LOW	LOW
School Violence	MEDIUM	LOW	LOW
Urban Fire	LOW	MEDIUM	LOW
Civil Disturbance	LOW	LOW	LOW
Volcanic Ash Fall	LOW	LOW	LOW

6.2 EARTHQUAKE HAZARD OVERVIEW

RATINGS	
Probability	MEDIUM
Vulnerability	HIGH
Risk	HIGH

An earthquake is a sudden release of stored energy generally caused by a sudden slip along a fault. Forces in the earth's crust push the sides of the fault together and when a plate slips suddenly it releases energy in waves causing the shaking felt during an earthquake. A fault is a fracture or zone of fractures between two "blocks" of rock allowing for a certain degree of movement. This movement may occur rapidly, in the form of an earthquake - or may occur slowly, in the form of creep over geologic time frames.

Earthquake magnitude is a logarithmic measure of the force released when plates move. Seismic monitors exist throughout the region to alert us when an earthquake is occurring and measure its magnitude. It is not possible to predict when an earthquake might occur, only measure the frequency of small seismic events and estimate the probability of a larger, potentially damaging, event. Given the history of Walla Walla County it is reasonable that the County is over-due for a larger seismic event.

The effects from earthquakes are caused by ground shaking, surface faulting and ground failure.

A geological system called the Olympic-Wallowa Lineament (OWL) stretches from the Olympic Mountains to the Wallowa Mountains through Walla Walla County. The OWL is a series of geological features that indicate a history of earthquake action.

Two fault systems are located in Walla Walla County. The Hite Fault System is located along the foothills of the Blue Mountains stretching generally north and south. The Wallula Fault Zone stretches from the Wallula Gap on the Columbia River toward Touchet.

LANDSLIDES

Only a small portion of unincorporated Walla Walla County is likely to experience landslides; none of the other jurisdictions would be susceptible. The Washington State Department of Natural Resources (WADNR) has stated that landslides are generally confined to areas with slopes that exceed 40%. This generally confines the risk of this hazard to the southeastern portion of the County in the foothills of the Blue Mountains.

There are several types of landslides that can take place in conjunction with earthquakes. The most abundant are earthquake-induced rock falls and slides of rock fragments that form on steep slopes. Shallow debris slides on steep slopes, soil and rock slumps, and block slides on moderate to steep slopes can also occur and lower frequencies. Significant landslides are most likely to occur during a significant earthquake event, which is why landslide hazards were not been addressed separately in this hazard plan update.

EARTHQUAKE HISTORY AND PROBABILITY OF OCCURRENCE

A summary of historical earthquake events and information on probability is included below. The following table provides background on intensity and potential damage levels for different earthquake

magnitudes using both the Richter Scale and the Modified Mercalli Scale and the included map displays the recent Lidar analysis of the fault lines within Walla Walla County by the Washington State Department of Natural Resources.

Table 6: Summary of Earthquake Scales and Levels and Damage (Washington State Military Department Emergency Management Division, 2009)

Modified Mercalli Scale		Level of Damage	Richter Scale
1 – 4	Instrumental to Moderate	No damage.	≤ 4.3
5	Rather Strong	Damage negligible. Small unstable objects displaced or upset; some dishes and glassware broken.	4.4 – 4.8
6	Strong	Damage slight. Windows, dishes, glassware broken. Furniture moved or overturned. Weak plaster and masonry cracked.	4.9 – 5.4
7	Very Strong	Damage slight-moderate in well-built structures; considerable in poorly built structures. Furniture and weak chimneys broken. Masonry damaged. Loose bricks tiles, plaster, and stones will fall.	5.5 – 6.1
8	Destructive	Structure damage considerable, particularly to poorly built structures. Chimneys, monuments, towers, elevated tanks may fail. Frame houses moved. Trees damaged. Cracks in wet ground and steep slopes.	6.2 – 6.5
9	Ruinous	Structural damage severe; some will collapse. General damage to foundations. Serious damage to reservoirs. Underground pipes broken. Conspicuous cracks in ground; liquefaction.	6.6 – 6.9
10	Disastrous	Most masonry and frame structures/foundations destroyed. Some well-built wooden structures and bridges destroyed. Serious damage to dams, dikes, embankments. Sand and mud shifting on beaches and flat land.	7.0 – 7.3
11	Very Disastrous	Few or no masonry structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Rails bent. Widespread earth slumps and landslides.	7.4 – 8.1
12	Catastrophic	Damage nearly total. Large rock masses displaced. Lines of sight and level distorted.	8.1

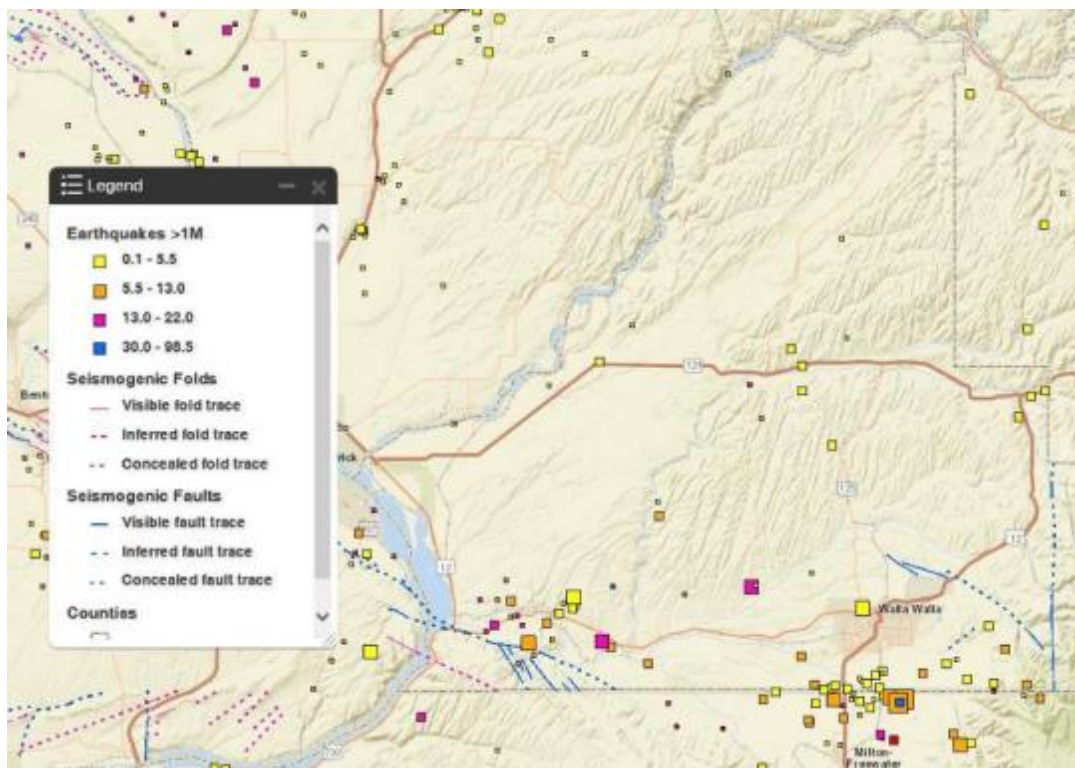


Figure 5. Walla Walla County fault and seismic activity history map (State of Washington, DNR).

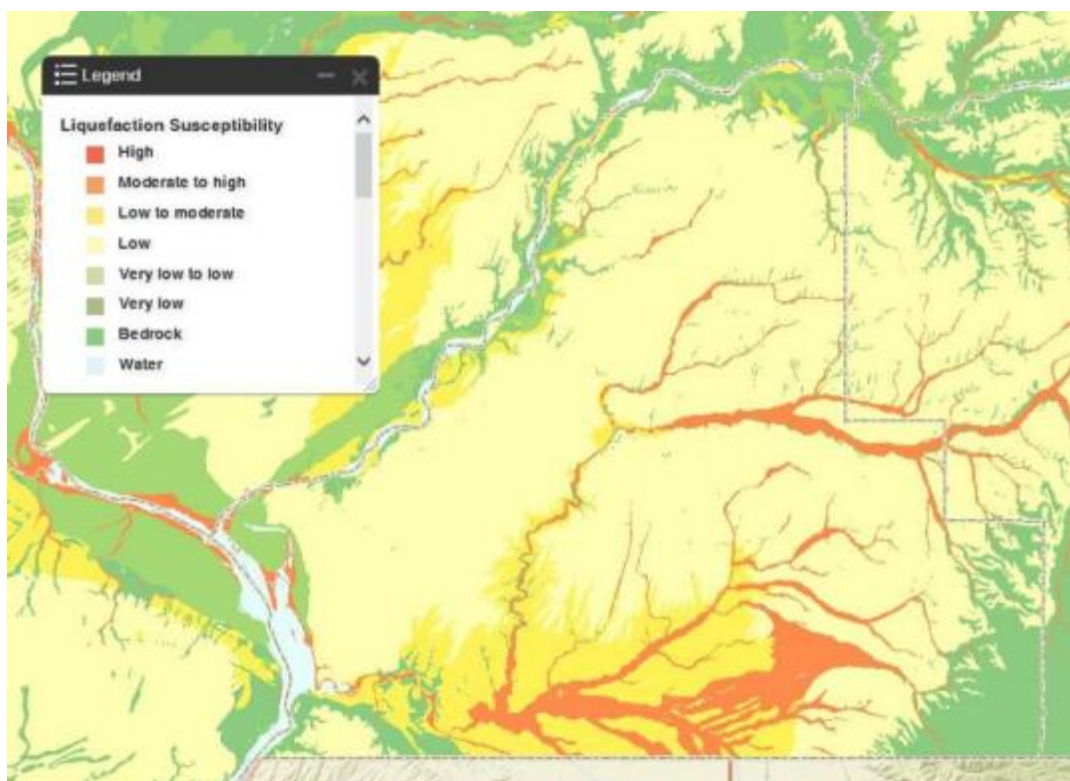


Figure 6. Walla Walla County soil liquefaction-potential risk map (State of Washington, DNR).

History has recorded earthquakes that would be considered “strong,” “very strong” and “destructive” on the Modified Mercalli scale which implies intensity up to 6.5 magnitudes on the Richter Scale. Since those earthquakes recorded in Walla Walla County are generally shallow earthquakes, significant damage would be expected. Two earthquakes were felt in Walla Walla County in November 1991 and July 1992. They were centered about five miles south of Walla Walla and measured 4.3 and 4.1 on the Richter scale.

“It is not a question of if; it is question of when a 6.5 magnitude earthquake strikes Walla Walla County.”
John Winter, Ph.D. - Professor of Geology, Whitman College

The largest recorded earthquake in the State of Washington occurred in Eastern Washington near Lake Chelan December 15, 1872. It was estimated at a magnitude 7.0. This earthquake was felt from British Columbia, Canada, to Oregon and from the Pacific Ocean to Montana. It occurred in a wilderness area, which in 1872 had only a few inhabitants - local Indian tribes, trappers, traders, and military men. Because there were few man-made structures in the epicenter area, most of the information available is about ground effects, including huge landslides, massive fissures in the ground, and a 9-meter-high geyser. One massive landslide, at Ribbon Cliff (between Entiat and Winesap), blocked the Columbia River for several hours. Another significant earthquake occurred west of Walla Walla in 1882. Its intensity is unknown but was estimated to have been an event upwards of a magnitude 6.0 on the Richter scale.

THE 1936 MILTON-FREEWATER EARTHQUAKE

The last major earthquake affecting Walla Walla County occurred in 1936 and was centered near Milton-Freewater. The following excerpt from Washington State Earthquake Hazards provides a summary of the damage that resulted from this event.

“At 11:05 P.M., July 15, 1936, the region around Walla Walla was so shaken by an earthquake that many persons left their beds for the outdoors in haste and perturbation. The writer’s house at the northern city limits of Walla Walla shook, rattled, rumbled, groaned and squeaked, but suffered no permanent damage. Many chimneys were broken, several houses were moved on their foundations, stacks of boxed and canned goods and shelf wares were scattered over floors with some damage.”

“The Milton Freewater earthquake was the most destructive earthquake of the eastern Washington-Oregon border region since the late 1800s (Shannon and Wilson, Inc., 1975). Its intensity was greatest at Milton Freewater, State Line and Umapine in Oregon. Moderate damage occurred in Athena and Milton. Windows broke, walls cracked, chimneys collapsed, a two-story concrete house near Umapine lost part of its second story, and some standing railroad cars near Milton were derailed. Two schools in Umapine were damaged. Water issued from cracks as much as 60 meters long. Numerous aftershocks were reported until November 1936.

This earthquake was estimated to have been a magnitude of 6.1 on the Richter scale. Minor earthquakes occur frequently in and near Walla Walla County. Although many are not felt, the historical occurrence provides insight as to the risk.

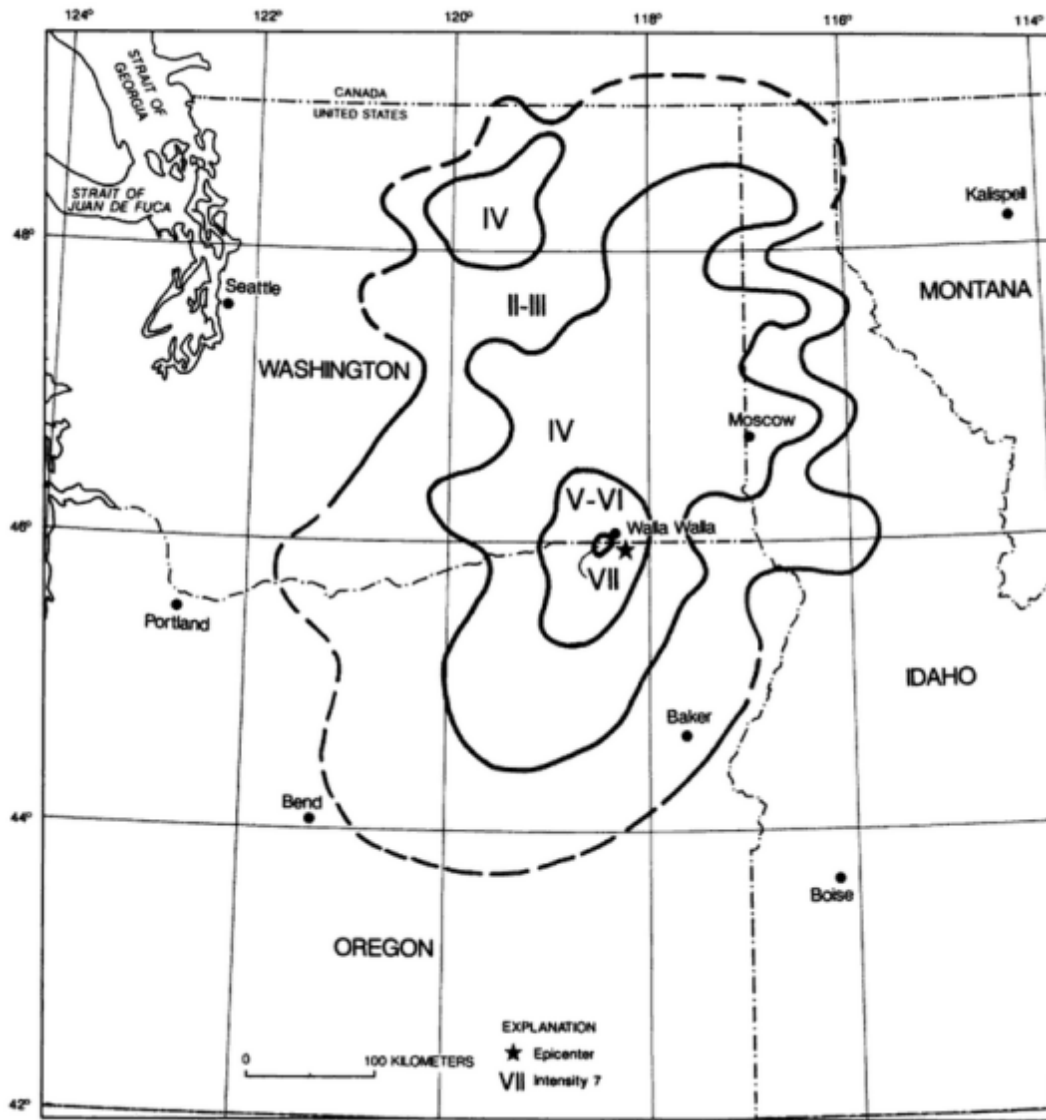


Figure 7. Map by Carl W Stover, Jerry L Coffman - *Seismicity of the United States, 1568-1989 (revised)*, Public Domain, <https://commons.wikimedia.org/w/index.php?curid=66862050>

EARTHQUAKE VULNERABILITY

The Washington State Hazard Mitigation plan used two criteria to assess vulnerability and identify counties most at risk within the State, through the criteria of:

1. The Annualized Earthquake Loss, as calculated by the HAZUS-MH software, of at least \$1 million; or
2. The Annualized Earthquake Loss Ratio, as calculated by the HAZUS-MH software, of greater than or equal to the State's ratio of 0.05.

Walla Walla County is not one of the 22 counties that met either of these criteria because it lacks building stock like many other Eastern Washington counties, but the County was added to the list by

recommendation of seismologist and federal and state geologists given perceived risk from past seismic events (Washington State Military Department Emergency Management Division, 2009).

HAZUS LOSS ESTIMATE

HAZUS-MH, a GIS software program developed by FEMA and the National Institute of Building Sciences to estimate potential losses due to earthquakes, was utilized during the 2010 HIVA update and included in the 2018 update given the geologic timeframe of earthquake occurrences. Conversations with Dr. Kevin Pogue of Whitman College, lead to the modeling of an earthquake scenario similar to the 1936 Milton-Freewater event. The parameters were set to:

- | | |
|----------------------------------|---|
| • Type of Earthquake: | Arbitrary |
| • Longitude of Epicenter: | -118.39 |
| • Latitude of Epicenter: | 46.00 |
| • Earthquake Magnitude: | 6.0 |
| • Depth (km): | 10.00 |
| • Rupture Length (km): | 7.76 |
| • Rupture Orientation (degrees): | 0.00 |
| • Attenuation Function: | WUS Shallow Crustal Event - Extensional |

This HAZUS-MH scenario produced the following lost estimates:

- About 5, 287 buildings (23% of total) will be at least moderately damaged.
- About 212 buildings will be damaged beyond repair.
- Only minor damage is expected to critical and essential facilities.
- Moderate damage is expected to occur to utility systems.
- Fire will occur after the earthquake. The model estimates that fires will displace about 132 people and burn about \$8 million of building value.
- Significant debris generation is not likely to occur.
- The model estimates that 365 households will be displaced due to the earthquake and of those, 278 people will seek temporary shelter in public shelter facilities.
- Between 4 and 9 people will be killed by the earthquake. Between 20 and 35 people will require hospitalization and an additional 97 to 131 will require some medical attention. More injuries and deaths are likely to occur if the earthquake occurs during the day rather than in the middle of the night.
- Total building-related losses were estimated to be \$425.51 million; 24% of these losses would be attributable to business interruption not structural loss. Residential losses would make up the largest segment at around 54% of total building loss.
- Significant loss ratios were estimated for bus, airport, wastewater, natural gas, and communication facilities.

EARTHQUAKE RISK RATING

The population, property, commerce, infrastructure and services of Walla Walla County are all vulnerable to the impacts of an earthquake. The scope of damage is a function of the event magnitude and level of

preparedness. Damage could range from minimal to high, with a large event resulting in loss of life and significant destruction of property. The level of preparedness for Walla Walla County has been assessed at very low given the lack of familiarity of most residents with earthquakes. Little mitigation has occurred in education and building structures. Since 1984 when building codes placed Walla Walla County in Seismic Zone 2-B, additional seismic reinforcement was required, but buildings built before that were not subject to seismic reinforcement.

Much of the County's infrastructure and buildings are located in areas of moderate to high liquefaction risk. Although the County has adopted new standards for construction in areas of significant geologic hazards, these protections do not apply to existing development.

The anticipated likelihood of a damaging earthquake in Walla Walla County is MEDIUM. Additionally, the occurrence of a 6.0 magnitude (strong) event would likely result in some loss of life and significant damage to structures therefore earthquake vulnerability for Walla Walla is considered HIGH, and the overall risk rating for earthquakes for Walla Walla County is also rated at HIGH.

6.3 SEVERE STORMS HAZARD OVERVIEW

RATINGS	
Probability	HIGH
Vulnerability	MEDIUM
Risk	HIGH

A severe storm is defined as an atmospheric disturbance that results in one or more of the following: high winds, heavy snow, large hail, thunderstorms, lightning, tornados, heavy rain or mixed precipitation. Many storm episodes contain multiple storm events. These elements have been defined by the National Weather Service as follows (Washington State Military Department Emergency Management Division, 2009):

- **High Winds** Sustained wind speeds of 40 mph or greater lasting for 1 hour or longer, or winds of 58 mph or greater for any duration.
- **Severe Thunderstorm** A thunderstorm that produces a tornado, winds of at least 58 mph (50 knots), and/or hail at least 1 inch in diameter. A thunderstorm with wind equal to or greater than 40 mph (35 knots) and/or hail at least ½ inches in diameter is defined as approaching severe.
- **Tornado** A violently rotating column of air, usually pendant to a cumulonimbus clod, with circulation reaching the ground. It nearly always starts as a funnel cloud and may be accompanied by a loud rotating noise. On a local scale, it is the most destructive of all atmospheric phenomena.
- **Heavy Snow** Generally, a snowfall accumulating to 6 inches or more in depth in 12 hours or less or a snowfall accumulating 6 inches or more in depth in 24 hours or less.
- **Lightning** Lightning is a visible electrical discharge produced by a thunderstorm. The discharge may occur within or between clouds, between the cloud

and air, between a cloud and the ground or between the ground and a cloud.

- **Hail** Showery precipitation in the form of irregular pellets or balls of ice more than 5 mm in diameter, falling from a cumulonimbus cloud.
- **Funnel Cloud** Funnel clouds are twisting clusters of air and clouds that form the beginning of a tornado. They may lower slightly below the cloud line, but do not make contact with the ground.
- **Ice Storm** Ice storms occur when rain falls from a warm, moist layer of atmosphere into a below freezing, drier layer near the ground. The rain freezes on contact with the cold ground and exposed surfaces causing damage to trees, utility wires, and structures.
- **Dust Storm** Dust storms occur when wind, following dry periods, blows dirt and light debris aloft. In worst case scenarios, blowing dust clouds can result in zero visibility.



SEVERE STORMS HISTORY AND PROBABILITY OF OCCURRENCE

The National Weather Service Forecast Office in Pendleton, Oregon provides weather advisories, watches, and warnings for Walla Walla County. In addition, Walla Walla County has achieved the StormReady designation through the National Weather Service Program to be better prepared to respond to weather

and water threats to the community (<https://www.weather.gov/StormReady>). Notice is provided to residents of severe storms well in advance if possible. The Hazards & Vulnerability Research Institute at the University of South Carolina provided the following record of significant storm events for Walla Walla County between January 1, 1960 and December 31, 2017.

Table 7: Severe Storm Events in Walla Walla County 1960 – 2017 Hazards & Vulnerability Research Institute. University of South Carolina.

Hazard	Year	Property Damage	Fatalities	Injuries	Records
Lightning	1960	(ADJ 2016)	0	0	1
Hail	1961	\$515.99	0	0	1
Severe Storm/Thunder Storm	1961	\$255.41	0	0	3
Wind	1961	\$1,277.03	0	0	4
Severe Storm/Thunder Storm	1962	\$14,698.52	0	2	1
Wind	1962	\$53,235.70	1	2	4
Flooding	1963	\$64,920.30	0	0	1
Hail	1963	\$249,564.16	0	0	1
Severe Storm/Thunder Storm	1963	\$0.00	0	3	2
Wind	1963	\$259,802.68	0	0	1
Hail	1964	\$10,238.52	0	0	1
Severe Storm/Thunder Storm	1964	\$2,463.44	8	0	2
Wind	1964	\$507,784.43	0	0	1
Winter Weather	1964	\$10,106.41	8	0	1
Flooding	1965	\$505,320.99	0	0	1
Landslide	1965	\$33,153.33	0	0	1
Severe Storm/Thunder Storm	1965	\$33,153.33	0	0	2
Tornado	1965	\$2,379.97	0	0	1
Wind	1965	\$1,385.33	2	0	4
Winter Weather	1965	\$25,801.24	0	0	1
Tornado	1966	\$33,153.33	0	0	1
Wind	1967	\$3,771.19	0	0	6
Severe Storm/Thunder Storm	1968	\$22,512.64	0	0	1
Wind	1968	\$4,501.42	0	0	1
Winter Weather	1968	\$4,501.42	0	0	1
Severe Storm/Thunder Storm	1969	\$9,002.84	0	0	1
Wind	1969	\$2,080.83	0	0	2
Winter Weather	1969	\$12,805.13	0	0	1
Wind	1970	\$4,268.38	0	0	1
Winter Weather	1970	\$807.50	0	0	1
Flooding	1971	\$26,242.85	0	0	1
Hail	1971	\$4,309.96	0	0	1
Lightning	1971	\$4,713.99	0	0	1
Severe Storm/Thunder Storm	1971	\$4,713.99	0	0	2
Wind	1971	\$34,883.52	2	0	5

Winter Weather	1971	\$85,939.64	2	0	2
Coastal	1972	\$6,382.04	0	0	1
Flooding	1972	\$36,087.96	0	0	1
Landslide	1972	\$36,087.96	0	0	1
Severe Storm/Thunder Storm	1972	\$36,087.96	0	0	1
Wind	1972	\$19,487.48	1	2	4
Winter Weather	1972	\$166,468.09	0	0	4
Wind	1973	\$224,904.40	0	0	1
Wind	1974	\$55,039.01	0	0	2
Avalanche	1975	\$20,181.51	0	0	1
Flooding	1975	\$5,976.65	0	0	2
Hail	1975	\$87,355,755.48	0	0	2
Severe Storm/Thunder Storm	1975	\$3,785.24	0	0	2
Wildfire	1975	\$87,355,755.48	0	0	1
Wind	1975	\$4,731.52	0	2	5
Winter Weather	1975	\$37,924.93	0	2	2
Wind	1976	\$8,888.35	1	1	1
Wind	1977	\$268,424.02	0	0	1
Severe Storm/Thunder Storm	1978	\$28,804.02	0	0	1
Wind	1978	\$468,506.95	0	0	1
Severe Storm/Thunder Storm	1981	\$17,036.60	0	0	1
Wind	1981	\$0.00	0	0	1
Severe Storm/Thunder Storm	1982	\$344,663.03	0	0	2
Wind	1982	\$123,762.47	0	0	1
Winter Weather	1985	\$90,441.61	0	0	1
Hail	1987	\$291.18	0	0	1
Severe Storm/Thunder Storm	1987	\$10,755.87	0	0	1
Tornado	1987	\$10,755.87	0	0	1
Wind	1987	\$1,075.59	0	0	2
Severe Storm/Thunder Storm	1988	\$39,060.75	0	0	1
Wind	1988	\$4,303.56	0	0	1
Lightning	1989	\$4,303.56	0	1	1
Severe Storm/Thunder Storm	1989	\$0.00	0	0	1
Wind	1989	\$821.15	5	0	2
Winter Weather	1989	\$130,475.87	5	0	1
Flooding	1990	\$129,654.73	0	0	1
Severe Storm/Thunder Storm	1990	\$13,355.19	0	0	1
Wind	1990	\$389.53	0	0	4
Winter Weather	1990	\$109,499.69	0	0	3
Flooding	1991	\$5,313.53	0	0	2
Hail	1991	\$179,422.34	0	0	1
Wind	1991	\$89,711.17	1	0	2
Flooding	1992	\$1,474,641.91	0	0	1

Hail	1992	\$87,089.53	0	0	1
Lightning	1992	\$17,417.91	0	1	3
Severe Storm/Thunder Storm	1992	\$888,313.22	0	0	1
Wind	1992	\$17,417.91	1	1	5
Winter Weather	1992	\$26,255.43	0	1	2
Winter Weather	1993	\$9,221.25	2	2	3
Winter Weather	1994	\$5,367.60	0	2	1
Winter Weather	1997	\$4,122.36	2	2	1
Wind	1999	\$0.00	0	0	2
Severe Storm/Thunder Storm	2000	\$6,234.01	0	0	2
Wind	2000	\$131,978.57	0	0	5
Winter Weather	2000	\$66,394.75	0	0	1
Hail	2001	\$31,930.30	0	0	1
Lightning	2001	\$6,899.30	0	0	1
Wind	2001	\$34,496.50	0	1	8
Wind	2002	\$158,338.95	0	1	6
Winter Weather	2002	\$408,194.30	0	0	1
Lightning	2003	\$0.00	0	0	1
Wind	2003	\$1,328.12	0	1	2
Severe Storm/Thunder Storm	2004	\$3,984.35	0	0	1
Wind	2004	\$3,234.16	0	0	2
Flooding	2005	\$7,632.62	0	0	1
Severe Storm/Thunder Storm	2006	\$25,025.42	0	0	2
Wind	2006	\$757,605.48	0	0	4
Wind	2007	\$763,969.36	0	0	1
Wind	2008	\$4,900,000.00	0	0	0
Wind	2009	\$2,803,499.56	0	0	1
Heat	2010	\$8,543.04	2	0	1
Severe Storm/Thunder Storm	2010	\$0.00	0	0	1
Wind	2010	\$11,206.90	0	0	3
Severe Storm/Thunder Storm	2011	\$162,500.08	0	0	1
Wind	2011	\$543.20	0	0	2
Flooding	2012	\$1,086.40	0	0	1
Wind	2012	\$1,330,463.91	1	0	3
Wind	2014	\$150,076.33	0	1	2
Wind	2015	\$0.00	1	0	1
Total for 1960 - 2017	All Years	\$188,895,436.40	45	28	204



SEVERE STORM EVENTS OF NOTE FOR WALLA WALLA COUNTY

Walla Walla County can experience all types of severe weather except hurricanes. Walla Walla County has had a history of approximately two significant storm episode every year for the past 50+ years. Walla Walla County's last Hazard Identification and Vulnerability Assessment (HIVA) included data recording severe storm events up to April 2010. Some significant recent (last 15 years) events are detailed in the descriptions below. Since the April 2010 HIVA Plan Walla Walla County has experienced an additional 15 severe weather events that resulted in property damage¹¹.

High wind and heavy snow are the most common severe weather events seen in the county during the past 20 years. Three to four wind events take place every year on average with a least one damaging wind event reported every year since 1997. A dust storm occurs about every 2-4 years. On average, there are two heavy snow events per year in the lower, more populated elevations, with two to three heavy snow events per year in the mountain areas. Seven ice storms have been reported in the past 22 years with the most recent in 2017.

There are generally 10 thunderstorm days a year. Since 1960, there have been 5 tornados sighted across the county with the most recent in 1987. There have been 6 sightings of funnel clouds since 1999, with the most recent in 2005. There have been 2 reported cases of lightning causing fire or damage. Severe thunderstorm winds occur about once every 2-3 years, with damaging hail, greater than ¾ inch occurring about once every 5-7 years.

Since April 2010, Walla Walla County has experienced 92 severe storm events, with at least 10 events that resulted in property damage, (NWS records do not always have property damage listed). Some notable events have been listed and described below.

11. HVRI. Natural Hazards Losses 1960-2015 (SHELDUS). Hazards & Vulnerability Research Institute. University of South Carolina. Columbia, South Carolina. Available online at <http://webra.cas.sc.edu/hvri/>. April 2018.

In the afternoon and early evening of Friday, May 19, 2006 an extreme thunderstorm and wind episode occurred across parts of Northern Oregon and Southeastern Washington, affecting Western Walla Walla County. According to the National Weather Service, “storms formed in association with an upper level disturbance moving northward across the area.” This area was experiencing hot temperatures after an early season heat wave. These hot temperatures, “coupled with abundant low-level moisture (surface dewpoints in the 50s) led to an unusually unstable air mass.” Throughout the path of these storms peak wind gusts were approximately 60-75 mph. Three areas experienced gusts exceeding 80 mph; one of these was in Western Walla Walla County, about 5 miles east of Burbank. Peak gusts in this area were measured as 90 mph and felled a large swath of Poplar trees at a tree farm. A portion of the tree fall is shown in the aerial photograph on the right. According to National Weather Service records, this episode resulted in \$1.25 million in damage.



On January 4, 2008, a strong low-pressure system caused heavy precipitation and damaging winds in several areas in the Western United States, including Walla Walla County. Terrain effects were important during this storm episode as wind acceleration was created by a downslope wind storm on the Blue Mountains. This storm results in about \$4.9 million in damage in Walla Walla County. In the Walla Walla Valley, about 4 in 10 homes received some damage from this storm, primarily because of falling trees. The strongest gust recorded at the Walla Walla Regional Airport was 78 mph and the strongest sustained wind was 55 mph (Top 10 Weather Events in the History of the NWS Pendleton Forecast Office, 2009).

February 22, 2012, a warm front and strong jet stream produced widespread high winds and damage. Peak wind speeds reported in miles per hour included 58 mph, 4 miles west southwest of College Place, 59 mph, 3 miles north northeast of Waitsburg, 58 mph, 5 miles west of College Place. Damage reports included trees and power lines down, near College Place, and Walla Walla.

Winter 2016-2017. An unusually cold and snowy winter was seen across the region. The period January 30th to February 22nd, saw heavy snowfall, rain and melting snow. Numerous county roads had washouts, erosion, slide and undermining. There was damage to the water distribution system in the city of Walla Walla with frozen pipes and meters. (Major Disaster Declaration #4309-09)



TORNADOS

Dr. T. Theodore Fujita of the University of Chicago developed a damage scale for tornados relating to the degree of damage to the intensity of the wind in 1971. This scale the “F-scale” became the definitive scale for estimating wind speeds within tornadoes based on the damage caused by the tornado. Rating tornados is somewhat arbitrary because it is so hard to define wind speeds and to determine how much wind may be needed to cause a certain amount of damage. In the past, tornados were labeled “significant” if they are rated as F2 or greater on the Fujita Scale. A F2 tornado is expected have wind speeds between 113 and 157 mph (98-136 kt). (National Climatic Data Center, 2008)

Recognizing weaknesses in the F-scale, the Wind Science and Engineering Research Center at Texas Tech University, in cooperation with the National Weather Service (NWS) and many other experts, developed an Enhanced Fujita Scale or the “EF-scale.” The EF-scale officially replaced the F-scale as of February 1, 2007 in all tornado damage surveys in the United States. The EF-scale is still a wind estimate. The following table shows the differences in estimated wind speeds between the F-scale and the EF-scale. (National Climatic Data Center, 2008)

Table 8: Comparison of F-Scale and EF-Scale (National Climatic Data Center, 2008)

FUJITA SCALE			EF-SCALE	
F Number	Fastest 1/4-mile (mph)	3 Second Gust (mph)	EF Number	3 Second Gust (mph)
0	40-72	45-78	0	65-85
1	73-112	79-117	1	86-110
2	113-157	118-161	2	111-135
3	158-207	162-209	3	136-165
4	208-260	210-261	4	166-200
5	261-318	262-317	5	Over 200

From 1880 through 2002 Walla Walla County has experienced seven recorded tornados and six reported funnel clouds. The seven tornados in Walla Walla County occurred in June 1916, September 1936, April 1958, June 1958, May 1964, August 1982, and August 1987. These Walla Walla County tornados have rated between F0 and F2. None of these tornados caused any injuries, fatalities or crop damage, but two of them did cause property damage. (U.S. Department of Commerce National Climatic Data Center)

Walla Walla County has only had seven reported tornados since 1880, so the probability of another occurrence within the next twenty-five years is low.

Unfortunately, tornado forecasting is virtually impossible – forecasting for today or tomorrow is quite difficult, and specific severe weather forecasting more than days in advance is almost random. This is the reason that there is no such thing as a long-range severe storm or tornado forecast. There are simply too many variables involved which cannot be reliably measured or modeled.

OVERALL PROBABILITY

Historical data on severe storm events suggests that there is a high likelihood that a damaging storm event will occur in the next 25 years. Most storm events do little damage and often damage is localized, affecting only a particular area. However, in the last 25 years there have been 81 natural hazard episodes that caused some property damage, 8 of which were severe storms¹². The probability that severe storms will have some effect on life, property, or the environment for Walla Walla County is HIGH.

12. HVRI. Natural Hazards Losses 1960-2015 (SHELDUS). Hazards & Vulnerability Research Institute. University of South Carolina. Columbia, South Carolina. Available online at <http://webra.cas.sc.edu/hvri/>. April 2018.



SEVERE STORMS VULNERABILITY

Storms that have an adverse effect on population structures and/or infrastructure are rare or limited to short durations of a few hours. Extreme damage as a result of severe storms is usually isolated to a relatively small area or set of areas. Severe storm events can cause significant damage to trees and power lines and interrupt transportation, communications, and power distribution as well as damage crops and cause hazardous conditions that can result in the perpetuation of additional incidents such as a hazardous material spill along transportation route or the start of a lightning-caused wildfire.

The relative isolation of parts of Walla Walla County contributes to its vulnerability. Isolated residents without power are more likely to use wood fires to stay warm or to cook, possibly resulting in an increase in the number of structural fires, and residents without food or water may attempt to use impassable roads and thereby increase the number of potential rescues.

Walla Walla County's overall vulnerability to severe storms is rated as MEDIUM.



SEVERE STORMS RISK RATING

The overall risk to people, property and the environment from severe storms in Walla Walla County is rated as HIGH. The potential for a tornado or a severe storm event that impacts the entire population of Walla Walla County is LOW in the next 25 years. However, the history of storm events, like those of 2006 and 2008 are greater and their potential to significantly impact portions within Walla Walla County are HIGH. Local government and personal preparedness planning for severe storm events will help reduce vulnerability and may help lessen the impact of the next significant storm event.

The threat is such as to warrant a significant effort to prepare for, respond to, recover from, and mitigate this hazard. This hazard should be specifically addressed in the county's emergency management training and exercise program and therefore has been given an overall rating of HIGH.



6.4 WILDFIRE HAZARD OVERVIEW

RATINGS	
Probability	MEDIUM
Vulnerability	HIGH
Risk	HIGH

Wildfires are the uncontrolled destruction of forests, brush, field crops and grasslands caused by nature or humans. The probability of a wildfire in any one location at a particular day depends on many factors: fuel conditions, topography, the time of year, wind direction and speed, past and present weather conditions, and the activity that is or will be taking place (debris burning, land clearing, camping, etc.). Controlled burns are also conducted because the fire cycle is an important aspect of management for many ecosystems. These are not considered hazards unless they were to get out of control and are also not included in the description of wildfire as outlined in the following.



The ***Mill Creek and Walla Walla County Community Wildfire Protection Plan*** (CWPP) was developed in response to the threat of wildfire to Walla Walla County residents in the Wildland Urban Interface (WUI). In 2017 by the Mill Creek & Walla Walla County CWPP committee, the City of Walla Walla, and the Oregon Department of Forestry along with local funding, meeting space, leadership and editing by the Walla Walla County Emergency Management, completed the CWPP. Project facilitation and support was provided by Northwest Management, Inc. of Moscow, Idaho. Funding for the project was provided by the Oregon Department of Forestry. The Community Wildfire Protection Plan will be reviewed annually and updated at least every five years starting from the year of adoption. The Plan was developed in compliance with the Federal Emergency Management Agency requirements for a wildfire mitigation plan and is available in final version on the Walla Walla County Emergency Management Department website at: http://www.co.walla-walla.wa.us/document_center/emergency%20management/WallaWallaCountyCWPPFINAL.pdf.

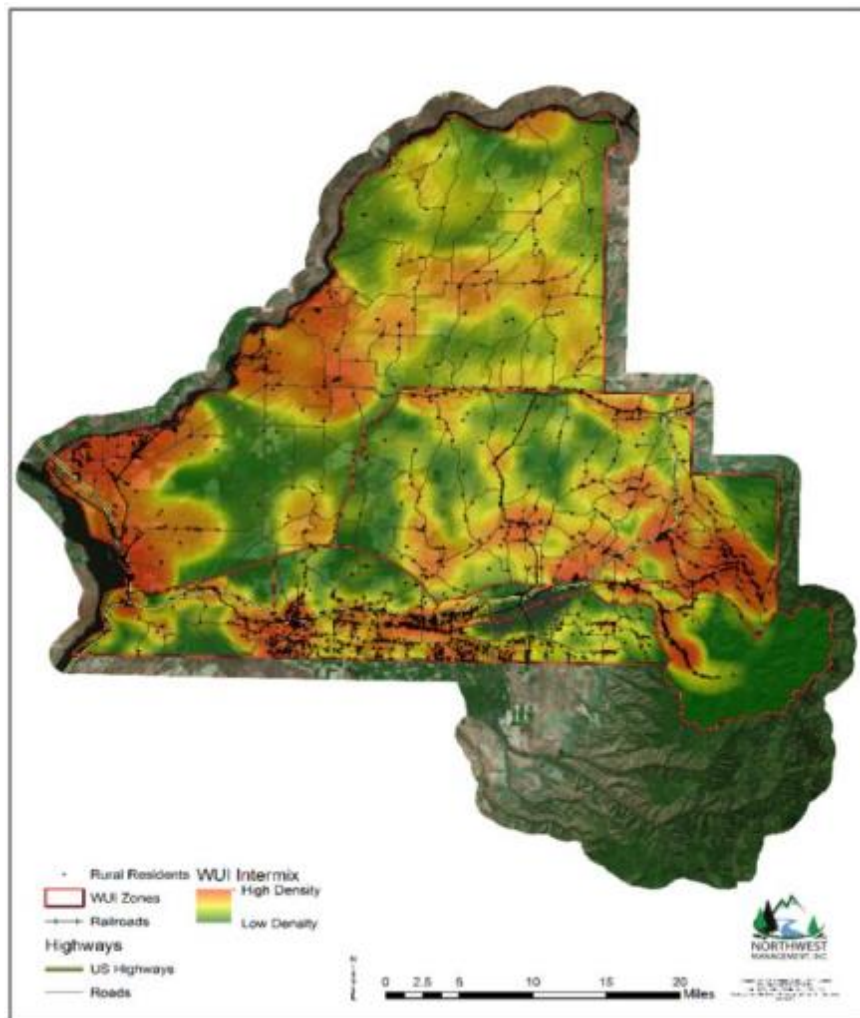


Figure 8. Map of Walla Walla County and the Mill Creek Watershed that identifies the Wildland Urban Interface (WUI) zones and risk ratings for County consideration. The lower portion of the map represents an area in Union County, Oregon that was deemed to present a significant risk of fire to the residents and infrastructure of Walla Walla County and the Mill Creek Watershed. This area was not assessed for fire risk in this CWPP, however details of risk, resources and threat within this area can be found in the Union County, Oregon CWPP currently available in the Oregon State website.

WILDFIRE HISTORY AND PROBABILITY OF OCCURRENCE

A major wildfire event, affecting a large area, could result in complete destruction of timber, structures, personal property, wildlife habitat, recreation areas and watershed areas. A major wildfire could also have substantial negative impact on commerce and infrastructure. Throughout the past twenty years there have been a number of significant wildfires in Walla Walla County.

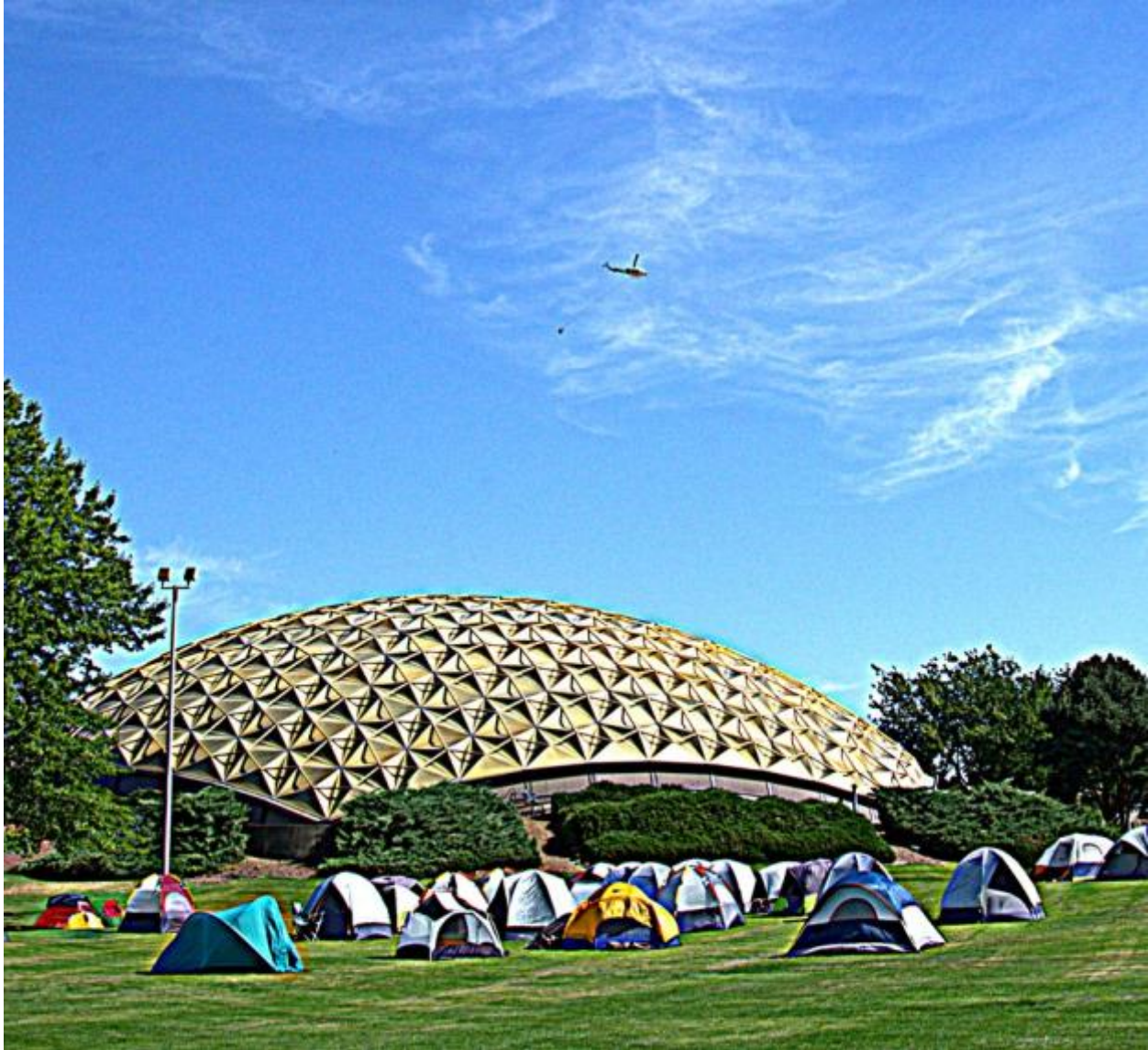
The Port Kelley Fire which began in mid-afternoon on July 28, 2001 with multiple ignitions adjacent to the Union Pacific Railroad track coincident with a passing train. The fire started on lands protected by Walla Walla Protection District #6 and spread to the adjacent Wallula Unit of McNary National Wildlife Refuge. Due to extreme dryness and winds (sustained 25 mph, with gusts to 40 mph), the fire quickly escalated to

over 3500 acres. The fire threatened structures, agricultural lands, and privately and publicly owned utility infrastructures. At the peak there were 311 firefighters, more than 45 engines, 4 tenders, 2 dozers, 2 air tanker and helicopters. The fire was officially declared out on August 6, 2001.

The North Coppei Fire which started 5 miles southeast of Waitsburg on September 18, 2001, when a Walla Walla County farmer lost control of a field burn, which farmers commonly use to control insects and disease. Winds of 15 to 20 mph hampered suppression efforts and the fire quickly grew to 4,810 acres. The fire consumed a large tract of trees, grassland and wheat fields. Ten structures were threatened and saved. All five of Washington State's multi-agency fire incident management Teams were deployed, with 341 personnel fighting the fire. The fire was officially declared out on September 30, 2001.

The Wallula Gap Fire which began on July 30, 2010 and consumed approximately 3,500 acres before it was put out on Sunday, August 1, 2010. This fire began as a result of a lightning strike. This is the same area that was affected by the Port Kelley Fire in 2001. According to Walla Walla County Fire District 5 Chief, Mike Wickstrom, "history has shown that fire moves fast on the ground" in this area. (Dupler, 2010)

Just a week after the Wallula Gap Fire a human-caused wildfire began in Northwest Walla Walla County near the community of Eureka. This fire began on Friday, August 6, 2010 and was contained on Monday, August 9, 2010 after burning approximately 34 square miles between Lyons Ferry Road and the Snake River. About 185 firefighters from across the state, 40 fire engines and one helicopter were called in to fight the wildfire. The fire burned primarily wheat stubble, grass, and sagebrush. Firefighters were able to save homes and several structures from burning, but one machine-shed, and a shop were destroyed. Although fire officials had initially hoped to be able to contain the fire on Friday, strong winds and dry weather conditions caused the fire to burn out of control. This fire was also difficult because of how remote it was. Access to the fire was limited by steep terrain and a lack of roads in the area.



The Blue Creek Fire began on July 20, 2015 in agriculture lands at the base of the Blue Mountains. The fire grew rapidly due to Red Flag Warning conditions and spread to adjacent forest lands. The fire threatened many homes, summer cabins, timber, and the City of Walla Walla Watershed. One primary residence and eleven outbuildings were destroyed by the 6,004-acre fire. The fire was on lands protected by Walla Walla County Fire District #4 and Washington Department of Natural Resources (WADNR). Unified command was established immediately after arrival of the first units which worked well for a coordinated ground and air attack during the Initial Attack phase of the fire. On July 21, 2015, a Type 2 Incident Management Team assumed command of the Blue Creek Fire for the next 10 days. Fire Suppression personnel peaked at approximately 1,000 including 19 crews, 60 engines, 5 dozers, 17 water tenders, 3 helicopters, and several air tankers. The fire was controlled at the edge of the Mill Creek Watershed which provides the drinking water for the City of Walla Walla. Several of the homes threatened by the fire had good defensible space around them resulting in protecting the home.

The Dry Creek Fire started west of the areas between Prescott and the Washington State Penitentiary on August 21, 2016. The fire rapidly consumed over 10,000 acres of dryland crops, riparian forests, a residence and outbuildings. Farmers who assisted with creating fire breaks described the fire as travelling faster than they could travel. The Dry Creek fire jumped over the 60 foot plus paved right-of-way for Harvey Shaw Road in addition to other roadways. Damage was assumed to be in the range of \$400,000 to \$600,000. The fire was controlled using both Walla Walla and Benton County Fire Districts. The fire was contained within two days.



The Frog Hollow Fire south of Touchet began August 30, 2016. The fire consumed approximately 300 acres of cropland but restarted several times after being contained as a result of fleeing birds and rodents carrying the fire to adjacent fields. The fire was contained using two dozen firefighters from 5 fire stations.

Changes in regional weather and growing seasons are impacting fuel loads and the likelihood of future fires. For example, the fall of 2016 and winter/spring of 2017 were one of the wettest in recent years. This spurred an uncommon amount of vegetative growth. This was followed by over 80 days with no precipitation during the summer of 2017. These conditions would be ideal for a significant fire. These situations are becoming the new norm, not the exception.



OVERALL PROBABILITY

Development near wildlands increases the potential of loss from wildfire, particularly when structures are built with minimal awareness of the need for fire protection. Wildfires are most likely to occur during May through October as well as other times where reduced precipitation and warmer, windy conditions present fuel ignition risks.

Wildland Urban Interface (WUI) fires are fires that occur where "combustible vegetation meets combustible structures" and therefore combine the hazards associated with both forest and structure fires. These types of fires have increased dramatically in the last few decades as more and more people move to rural areas.

In a case study of a destructive wildland urban interface fire, National Fire Protection Association (NFPA) lists four reasons for the increased risk of fire occurrence in wildland urban interface:

1. Wildfires continue to ignite and threaten homes in the wildlands;
2. Wildfires continue to present particular problems to fire protection agencies;
3. Lack of good vegetative management predisposes areas to wildfires; and
4. Unless specific preventive measures are taken by homeowners and local governments homes will continue to be lost and people's lives will continue to be in danger.

Conditions exist in Walla Walla County for a major fire and the probability of occurrence should not be determined based on history, but the conditions present. The recently completed Mill Creek and Walla

Walla County Community Wildfire Protection Plan of 2017 suggests the vulnerability of wildfire within the County should be considered HIGH. The likelihood of a major wildfire in the county is rated as MEDIUM given efforts of the Emergency Management and local fire departments throughout the County in awareness following recent fires and completion of the 2017 CWPP.

WILDFIRE VULNERABILITY

The effects of wildland fires vary with intensity, area, and time of year. Factors affecting the degree of risk include rainfall, humidity, types of vegetation, water availability, topography and proximity to firefighting agencies. In addition to these factors, the risk to structures in the wildland-urban interface includes building construction, means of access, location of vegetation in relation to the structure, roofing assembly, and utilities placement. Short-term loss is the complete destruction of valuable resources, such as timber, wildlife habitat, scenic vistas, and watersheds along with destruction of structures, personal property and utilities. Loss of life, injuries and casualties may occur as well. Vulnerability to flooding increases due to the destruction of watersheds. Severe fires producing high soil temperatures create a water-repellent layer below the soil surface. The soil above this layer becomes highly prone to erosion, often resulting in mud slides. Long-term effects are reduced amounts of timber for building and recreational areas.



WILDLAND URBAN INTERFACE RISK ASSESSMENT

In Walla Walla County, the highest hazard area is the wildland urban interface (WUI) in the eastern part of the county. In 2006 the County's Emergency Management Department hired a City of Walla Walla firefighter to conduct a wildfire risk assessment in the WUI and in 2017 they, along with the City of Walla

Walla, contracted with Northwest Management, Inc to complete a County-wide Community Wildfire Protection Plan (CWPP) that included the Mill Creek Watershed and its portions outside of Walla Walla County. The purpose of the assessment and the CWPP were to determine where, if any, high-risk and/or extreme-risk wildfire areas are located throughout the County given fuel conditions, fire behavior and local condition risk factors. During the 2006 survey a total of 435 structures were assessed, compared to 285 in 2002, with the purpose of the assessments being to:

1. Identify high risk areas/structures for mitigation;
2. Capture information useful to responders in the event of a fire; and
3. To inform the public of their risk and provide recommendations of how they can reduce the probability of a wildfire and lower their vulnerability.

The 2006 assessment implemented criteria from the National Fire Protection Agency (NFPA) Standard for Protection of Life and Property from Wildland Fire, using the Wildland Urban Interface Fire Hazard Assessment Methodology. Emergency Management Department staff developed additional survey criteria consistent with FIREWISE USA® recommendations. Structures rated as extreme hazard (8% of all structures) are located primarily on South Fork Coppei, Lewis Peak, and Scott roads. Mill Creek Road and the Kooskooskie area contained a large number of high hazard ratings. The average rating was medium.

The highest risk factor was vegetation, highlighting that development of defensible space surrounding structures is critical in reducing risk. Insufficient access and lack of available fire protection were also significant risk factors. Four high vulnerability hazard areas were established based on the survey. Property valuations for structures in these areas were calculated for the 2018 CMP update to estimate the potential loss of structures during a wildfire in each of these areas.



Table 9: Value of Property in Wildfire Hazard Areas as of the 2018 assessment are presented in the table below.

Assessment	Total Area	Improved Value
Mill Creek Road Area	8.6 square miles	\$11,626,240
Tracy Road Area	4.9 square miles	\$6,678,890
Scott Canyon Area	10.9 square miles	\$10,983,000
Walla Walla Watershed Area	6.3 square miles	\$99,000

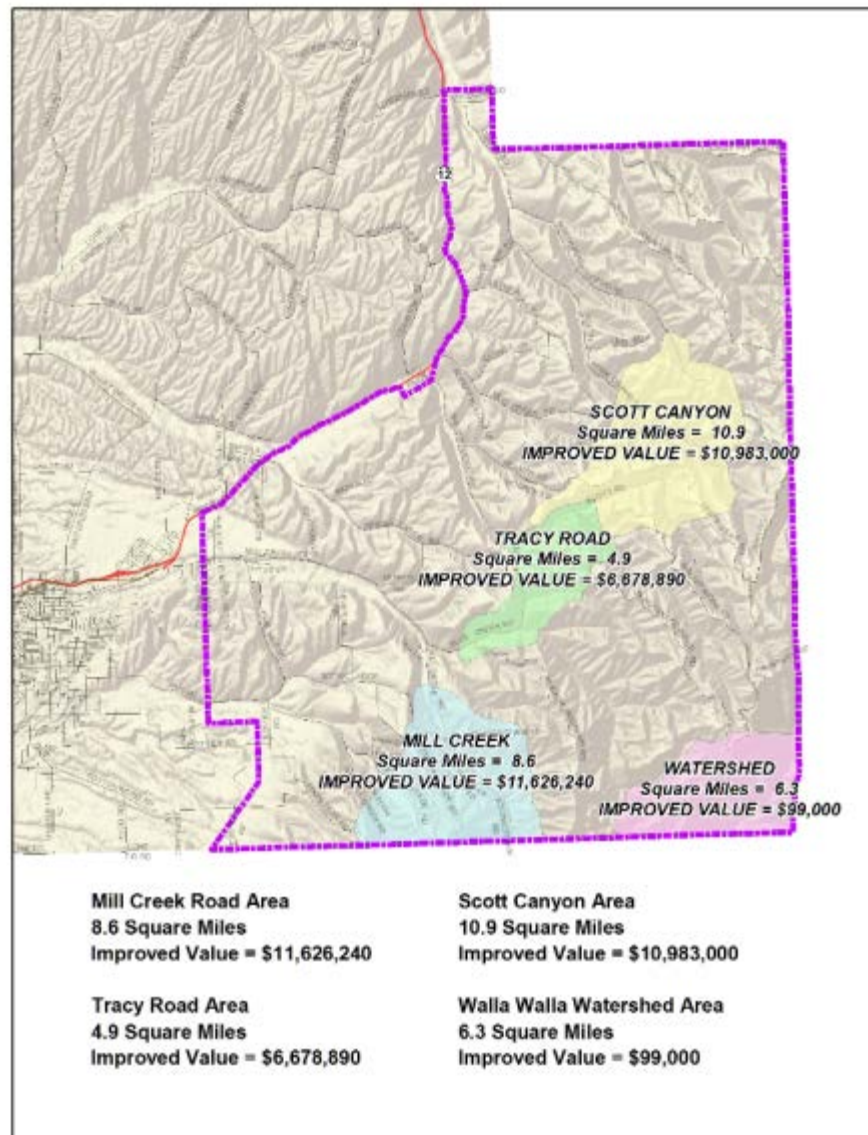


Figure 9. Walla Walla County Watershed map of Property Values in Wildfire Hazard Areas as of the 2018.

OVERALL VULNERABILITY

The mild climate, abundance of solar irradiance and low annual and timing of precipitation results in an environment that is potentially very prone to wildland fire. Although much of the native grasslands have been converted for agricultural purposes, there are many areas of native vegetation and fallow farm land that cures early in the summer and remains combustible until winter. If ignited, these areas burn rapidly, potentially threatening people, homes, and other valued resources.

Walla Walla County contains over 90% agriculture lands with scattered sagebrush steppe and CRP land intermixed throughout the prairie, the eastern edge of the County rises into the Blue Mountains with the transition from sagebrush to a conifer forest system. Development in the prairie is scattered with farm houses and farming structures dispersed throughout with very low density, structures within the prairie

can be long distances from EMS assistance. Development within the Blue Mountains front range is more concentrated and occurs along drainage bottoms and ridgelines, structures within these areas are typically long distances from emergency services and have poor access. This poor access and long travel distances requires some effort on the property owner to mitigate against wildfires.

Not every acre can be effectively treated to prevent rangeland fires throughout the lowlands in Walla Walla County, nor can every acre impacted by fire be restored. Setting priorities for prevention, suppression, and restoration is essential to increase the efficiency of operations and the efficacy of treatments. The use of risk-based, landscape-scale assessments help prioritize treatment areas to reduce fire risk as well as set priorities to strategically guide the allocation and pre-positioning of resources for fire suppression.

Fire history locations were collected using the MODIS sensor, on the TERRA and AQUA satellites, for fire observations from 2000 through 2017. The MODIS sensors acquire 4 images a day for each location on the ground, fires that were ignited and suppressed between observations are not included within the fire start locations. Likewise, small fires that emit a low amount of energy such as the practice of burning ditch banks and small pile burnings, may not be seen by the satellite. The fire starts data identified a total of 37 fires located within the boundary of the Mill Creek Watershed and an additional 2,885 fires throughout the remainder of Walla Walla County between 2000 and 2017. The satellite cannot differentiate between agricultural fires and wildfires, so it is likely that the number of wildfires will be much lower than the satellite estimate.

There are a number of ways to reduce wildland fires and minimize injury and property loss. Recommendations determined by the results of the 2017 CWPP and fire risk assessment were to:

1. Focus mitigation efforts on homeowners in these areas to encourage them to develop defensible space;
2. Seek ways to encourage owner mitigation;
3. Consider adopting land use and/or building code ordinances to reduce risk of structures to wildfire; and
4. Encourage creating emergency water supply for those areas where emergency water is not readily available.

Creating a community that is resilient to wildfires begins with identifying where the threat of wildfire may occur and mitigating against the risk of wildfires against property, life, and infrastructure. In the process of mitigation, when mitigation is focused on a landscape scale, healthy ecosystems and more resilient communities are created.

A wildfire threat analysis provides firefighters and managers with a wildfire tool that describes various physical and environmental conditions for fire risk across a landscape. The threat analysis completed in the 2017 CWPP included fire start locations (2000 - 2017), fuels, fuel moisture, rate of spread, flame length, crown fire potential, and historic fire locations. The risk analysis additionally considered locations where fire threats coincide with infrastructure, cultural and environmental resources, and residences within the wildland urban interface.

Risk analysis showed that the southwestern corner and the northern portion of Walla Walla County, with scattered areas between Eureka Flats and the City of Walla Walla, were more at risk than others across the prairie landscape. This is due to the number of fire starts, proximity to EMS, available fuels, fire history, and locations of developed properties in these areas.

One of the most vulnerable areas in Walla Walla County to wildfire is the Mill Creek Municipal Watershed and surrounding areas. This area is located in the wildland-urban interface and is especially vulnerable to wildfire. A wildfire in this area would not only impact the many homes and cabins in this area but would also affect the watershed environment and water quality. This would indirectly affect the City of Walla Walla's 30,000 municipal water customers. (Hulbert, 2006)

Fire suppression within the Mill Creek Watershed over the last century has led to a deviation from the historical ecosystem norms producing an accumulation of fuels. The lack of access within the watershed make mitigation and suppression efforts difficult. Mill Creek Watershed is more at risk in the timbered portions of the watershed where the majority of fuels are concentrated. The increased potential for crown fires leads to a higher probability for stand replacement/high-severity events, which in turn leads to secondary fire effects such as; erosion, alteration of site productivity, latent mortality of trees and wildlife, and the change in wildlife habitat.

A significant area or segment of Walla Walla County's population, property, commerce, infrastructure or service could be affected by a major wildfire, particularly a wildfire in the Mill Creek Watershed. The overall vulnerability is MEDIUM.

WILDFIRE RISK RATING

A risk rating of HIGH is assigned. There is significant potential for a wildfire disaster of moderate to major proportions during the next 25 years. The threat is great enough to warrant a significant effort to prepare for, respond to, recover from, and mitigate wildfire risk. This hazard is recommended to be included, and expanded on, in the county's emergency management training and exercise program.

6.5 FLOODING HAZARD OVERVIEW

RATINGS	
Probability	HIGH
Vulnerability	MEDIUM
Risk	HIGH

Flooding occurs when an overflow of water submerges land that was previously dry. This typically occurs when the volume of water within a water body, such as a river or lake, exceeds its capacity. Walla Walla County is susceptible to riverine and flash flooding. Flooding can also occur as a result of dam failure which was addressed in the 2010 HIVA and HMP and is still included in this update given its relevance. However, FEMA did not include dam failure in the scope of this project for the 2018 HMP update.

Flooding in Walla Walla County is most likely to occur in winter and spring when localized rainstorms, snowmelt and rain-on-snow events can overwhelm channels with rapid runoff. Frozen soil conditions are often present during these periods and help to increase the volume and rate of runoff by preventing

infiltration. With deeper snowpack conditions or spring snowfall events large volumes of water can result in flood events that can last several days.

FLOODPLAIN

Most flood damage occurs in floodplains. Much of the development within Walla Walla County occurs within a short distance of streams in areas of less topography and often times floodplains which increases the risk of damage by rising water. The floodway and 100-year floodplain are the two areas most likely to experience flooding. The floodway experiences frequent inundation and within Walla Walla County construction is not permitted within this zone. The 100-year floodplain is defined as an area where there is a 1% annual probability of flooding. The prediction is that a 100-year flood event will occur once every 100 years. Recent studies suggest an increased risk to infrastructure can be anticipated during the 21st century as a result of climate change. The floodway and the 100-yr floodplain have been mapped for Walla Walla County by the Federal Emergency Management Agency (FEMA). However, with a few exceptions, floodplain and floodway boundaries have not been reassessed since their initial mapping in 1983.

FLOODING HISTORY AND PROBABILITY OF OCCURRENCE

There have been three severe floods in Walla Walla County since about 1925. These floods took place in March 1931, December 1964, and February 1996. Primary flood hazards include Mill Creek, the Touchet River, and Coppei Creek. Overall, the probability of flood damages occurring within Walla Walla County within the next 25 years is HIGH.



The 1931 flood took place after heavy rains saturated the soil and then turned cold enough to snow. It snowed about 12 inches and then rained as temperatures warmed and rapidly melted snow. The 1931 flood on Mill Creek was devastating to the City of Walla Walla. The Mill Creek diversion and storage

reservoir (Bennington Lake) and Mill Creek flood channel were all constructed by the U.S. Army Corps of Engineers (USACE) as a result of the 1931 event and have been the dominant means of flood protection to the City of Walla Walla since.

The 1996 flood occurred in a similar fashion following a rain-on-snow event where warming temperatures and rain following a late season snowfall rapidly melted snow over frozen ground. In some areas as soils began to thaw saturated conditions led to landslides. The 1996 flood impacted many areas throughout the County with some of the most severe impacts being realized in Waitsburg and the upper Mill Creek area. Flood-specific damages cost the County \$6,500,000, while specific jurisdictions, primarily Waitsburg, experienced flood-specific damages totaling an additional \$5,500,000.



WALLA WALLA RIVER FLOODING

The largest recorded flood on the Walla Walla River occurred in December 1964 and was estimated to have a stage of 18.90 ft (423.90 ft above mean sea level) and a peak discharge of 33,400 cubic feet per second (cfs) near Touchet (after confluence with Touchet River). Flooding of the Walla Walla River also occurred in January of 1965, as well as 1906, 1931, 1949, 1951, 1972, and 1996. Most flood damages on the lower Walla Walla River are related to various types of road and bridge impacts, bank and field erosion, and sediment deposition. The probability of occurrence has been assessed as MEDIUM.

TOUCHET RIVER

Recorded significant floods on the Touchet River have occurred in 1906, 1931, 1949, 1951, 1964, 1965, 1972, and 1996. The maximum flood on the Touchet River occurred in December 1964 with a peak flood discharge of about 9,350 cfs at Bolles Bridge (estimated 40-year event) and 11,500 cfs at Touchet (estimated 30-year event). In Walla Walla County, flooding of the Touchet River has mainly caused

damages in the communities of Prescott and Waitsburg. Flooding also causes various types of road and bridge damage, bank and field erosion, and sediment deposition along the Touchet River to the Walla Walla River. Widespread severe damages and disruptions occurred in Waitsburg during the flood of February 1996. The probability of occurrence has been assessed as MEDIUM.

COPPEI CREEK

Coppei Creek has experienced significant flooding several times. The flows and levels on Coppei Creek are not gauged. However, it is known that Coppei Creek contributed to the severe level of damages in Waitsburg during the flood of February 1996. The creek left its channel and was diverted down Coppei Avenue where it collected behind the existing levee along the Touchet River causing damages to local structures. Other Coppei flood problems were related to road and bridge damage, bank and field erosion, and sediment deposition. Using high water marks, the U.S. Army Corps of Engineers (USACE) has estimated the February 1996 peak flood discharge on Coppei Creek to have been about 1,700 cfs. The probability of occurrence has been assessed as MEDIUM.

MILL CREEK

Due to the topography of its watershed, Mill Creek tends to have short duration, high volume, flood events. The largest of these floods are usually caused by prolonged intense rainfall on saturated soils, or rapid snowmelt in conjunction with rain and warming temperatures. The FEMA Flood Insurance Study reported in 1983 stated Mill Creek flow exceeded the bank-full capacity (600 cfs) 29 times out of 36 years of records. The 1931 flood that impacted the City of Walla Walla and spurring the construction of the Mill Creek Reservoir was partially in response to the hydrology of the Mill Creek Watershed. The USACE completed the Mill Creek flood control project in 1942 diverting a portion of Mill Creek floodwaters to Bennington Lake reservoir successfully decreasing discharges through the City of Walla Walla. Flows in Garrison, Russell, and Yellowhawk Creeks are also controlled by this project. The project consisted primarily of a constructed concrete floodwater conveyance channel with a 5,400 csf capacity through the City of Walla Walla. This channel is now aging and in many areas of the City it needs significant repairs or reconstruction to remain functional.

Major flood events on Mill Creek have occurred in 1931 (6,000 cfs with a stage of 7.5 ft in Walla Walla), 1964 (3,300 csf controlled to 2,400 csf by diversion), and 1996 (about 4,000 cfs, both concrete channel and reservoir were reported to be at maximum capacity). The City of Walla Walla sustained only minor damages during the February 1996 flood due to the operation of the diversion and detention system. Mill Creek has regularly caused damaging impacts in the Kooskooskie area due to infrastructure and private dwellings occurring within flood zones. Mill Creek flooding has also consistently led to bank undercutting and erosion downstream of the City of Walla Walla. The probability of occurrence has been assessed as HIGH.



This is a USDA SCS flooding picture.

YELLOWHAWK, COTTONWOOD, RUSSELL, GARRISON, AND RESER CREEKS

There is little flooding data available regarding flows on Garrison, Yellowhawk, Cottonwood, Russell, and Reser Creeks. Flows in Russell, Garrison, and Yellowhawk Creeks are partially regulated by the Mill Creek Diversion and Reservoir project. In the absence of the USACE project the causes and frequency of flooding on these creeks would be expected to be similar to Mill Creek. The 1983 FEMA FIS reported that there was evidence of at least five floods in the last 50 years. These were in 1926, 1927, 1931, 1949, and 1964. The largest flood may have occurred in 1949. Only nuisance flooding was reported in these drainages during 1996. The probability of occurrence has been assessed as LOW.

FLASH FLOODING

Flash floods are characterized by a rapid rise in water level that exceeds bank-full capacity of any measurable water course (i.e., stream, river, dry ravine). In an extreme case a flash flood could be a wall of water moving down a steep canyon or ravine. Flash floods are common in areas of steep terrain and alluvial fans. Flash floods are distinguished from other types of flooding by the short time frame in which they can develop and intensify. They can occur within a short time (\leq six hours) of a rain event or following a sudden release of water held by an ice or debris dam. There is often little warning of a flash flood.

The brief, intense rainfall from a thunderstorm is usually the cause of a flash flood. Inadequate urban drainage systems increase the likelihood of a flash food. In urban environments where vegetation has been removed, where bridges and culverts constrict flow, or where buildings and paving have greatly expanded impermeable surfaces, there is an increasing flash flood risk. Several factors contribute to flash flooding. Two key elements are rainfall intensity and duration. As discussed above, other factors include topography, soil conditions, and ground cover.

On July 16, 2012, a stationary upper level low pressure area near Brookings, Oregon brought abundant moisture across eastern Washington. This combined with daytime heating to produce a few severe thunderstorms and locally heavy rainfall. Thunderstorms training from south southwest to north northeast over the narrow path produced an estimated 1 to 2 inches of rainfall and caused flash flooding and mud slides two to three miles south of Touchet. A parked pickup truck was completely submerged. Over a dozen county roads were damaged. Damage was estimated at 1.25 million.

Currently development regulations are in place which limit impervious surface, plan for flooding, and require that storm water run-off is contained within property boundaries and not allowed to flow onto adjacent roadways and properties. These regulations are enforced by local public works and planning departments as well as by the Washington State Department of Ecology.

Damage from localized flash flooding would most likely be contained to a relatively small area or drainage and vulnerability has been significantly reduced for many areas due to state and local flooding and storm water regulations.

The National Weather Service (NWS) has reported two flash flood events since 1950: April 24, 2005 in the Waitsburg area, and May 8, 2005 in the City of Walla Walla area. No damage was reported in the Waitsburg incident and the City of Walla Walla reported approximately \$20,000 in damages (U.S. Department of Commerce National Climatic Data Center). The overall probability of a flash flood event is MEDIUM.



FLOODING VULNERABILITY

Local, state and federal agencies have taken steps to reduce the vulnerability of flooding for both municipal and rural jurisdictions. These jurisdictions can regulate development within the floodplain through construction standards and critical-area regulations, increase the Communities' flood disaster preparedness, plan response, conduct mitigation projects, encourage participation in the National Flood Insurance Program (NFIP) and educate the public. All of these activities will reduce vulnerability.

For Walla Walla County, in response to the flood events of 1996, the County worked with other agencies to develop the *Walla Walla County Comprehensive Flood Hazard Management Plan (CFHMP)*, completed in 1999. This plan presents a comprehensive floodplain management strategy regarding flood hazards and providing guidance for mitigation actions. Additionally, in June 2009 the first phase of the Walla Walla County Flood Response plan (FRP) was adopted. The first phase focused on Mill Creek but additional phases addressing the Walla Walla, Touchet, and Coppei Rivers are planned. The FRP provides a plan for response to a flood event on Mill Creek but also supports efforts to "develop community awareness and understanding of flood hazards" which is a key component in mitigating flood hazards and reducing vulnerability.

The 2009 Washington State - Hazard Identification and Vulnerability Assessment (HIVA) outlined a new approach to flood risk management: the "soft path." This strategy takes into account that floods will happen and provides solutions. Another key component of this strategy is the understanding that flooding is "essential for the health of riverine ecosystems." This approach suggests that restoration of meanders and wetlands can help reduce speed, size and duration of flooding. Currently the State of Washington has

released the Draft 2018 statewide Hazard Mitigation Plan and updates on flood risk management and natural hazard mitigation measures Counties and local jurisdictions can use.

Over the last decade, citizens have reported to the Walla Walla County Conservation District of damage due to high flow events or “flashier” flood events. Most often these events occur during or shortly after a significant amount of precipitation coupled with rapid warm winds, called Chinook winds. The events seem to be more volatile and their frequency increasing. In spring 2017 one of these events resulted in damage to existing infrastructure and loss of economic land with an estimated cost of \$1.3 million to repair the damage; acres of land lost to rapid erosion cannot be replaced. Waterways naturally move but the concern is the direction of movement is impacting private property, residences, and undermining roads and bridge abutments. Levees, armored banks and channelization of waterways send river energy downstream and can exacerbate erosion and damage from these events. For example, the levee system that protects the town of Waitsburg from flooding has been implicated in the rapid erosion occurring on the reach between the town and the Bolles Bridge.

Efforts to help restore stream segments, instead of reacting as eroding land and moving rivers encroach near existing homes and infrastructure, can increase resiliency from severe storms and floods. Bioengineering is a preferred method to improve stream function versus armoring with large boulders and concrete. In general, bioengineering involves anchoring large logs and root wads in, or adjacent to, the stream channel at strategic locations. These methods are described in the *Stream Habitat Restoration Guidelines* (2004) and other documents endorsed by the Washington Department of Fish & Wildlife, the Washington Department of Ecology, and the U.S. Fish & Wildlife Service. The *Lower Mill Creek Final Habitat and Passage Assessment and Strategic Action Plan* (2017) and the *Lower Walla Walla River Geomorphic Assessment and Action Plan* (2015) both by the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) describe similar methods as the Stream Habitat Restoration Guidelines. The goal is to dissipate river energy and restore stream function within the riparian corridor.



Picture by Rob

Grandstaff



The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) have led restorations projects including the Nursery Bridge project on the Walla Walla River. While this project is outside of Walla Walla County, the impacts of this restoration project include reducing the hazards on the Walla Walla River. The

Walla Walla County Conservation District sponsored two projects on the Touchet River involving creating side channels, reconnecting floodplain area, and installing a series of bioengineered log structures. A third project will be installed during the summer of 2018. The Tri-State Steelheaders completed the first phase of the Bridge-to-Bridge restoration project on the Walla Walla River. In addition to the methods described above, the project also included removal of ½ mile of levee which expanded the accessible floodplain. Other projects are in the design phase and will likely be constructed in upcoming years as funding is available.

The geomorphic assessment provides recommendations on restoration and mitigation project which can reduce the vulnerability of jurisdictions within Walla Walla County to flood impacts. The report also supports a “community-based flood control and river awareness strategy.” There is consensus at many levels that increasing awareness and engaging the community has been, and still remains to be, a key component in hazard mitigation in 2018 and looking forward.

NATIONAL FLOOD INSURANCE PROGRAM PARTICIPATION

Walla Walla County and the four cities listed in the table below participate in the National Flood Insurance Program (NFIP). As defined by the NFIP, there are no “repetitive loss” or “severe repetitive loss” properties located within Walla Walla County’s planning area.

Table 10: Summary of National Flood Insurance Program Participation

Jurisdiction	Regular Entry Date	Current Map Date	Last CAV Date	Total Policies in Force	Total Insurance in Force	Number of Paid Losses	Total Losses Paid
Walla Walla County	12/1/1983	1/18/2002	7/31/2009	155	\$37,082,600	22	\$318,083
College Place	5/26/1978	9/7/2001	12/7/2006	18	\$4,653,000	1	\$4,259
Prescott	2/23/2004	1/18/2002	6/19/2007	4	\$313,500	0	\$0
Waitsburg	11/3/1982	11/3/1982	10/19/2017	46	\$7,610,000	25	\$394,036
Walla Walla	3/30/1981	12/1/1983	5/13/2014	17	\$4,662,000	0	\$0

OVERALL VULNERABILITY

The areas of Walla Walla County listed above are vulnerable to the impacts of flooding. Future floods may threaten lives, damage property and impact transportation infrastructure located in floodways and within 100- and 500-year floodplain zones. Although the total population of the county is not directly exposed to this hazard the effect of the hazard will affect all residents indirectly. A worst-case scenario of flooding could occur within Walla Walla County and is likely to have moderate to major impacts given the aging flood control infrastructure, increasing population and increased urban and rural development. The overall vulnerability of Walla Walla County to flood damages has been assessed to be MEDIUM.

Federal Dams

Mill Creek Dam is currently classified as Low Incremental Risk. This is due to confirmed and unconfirmed dam safety issues, the combination of life, economic, or environmental consequences with likelihood of failure is low to very low and the dam may not meet all essential USACE guidelines. USACE considers this level of life-risk to be in the range of tolerability but the dam does not meet all essential USACE guidelines.

Ice Harbor Lock and Dam is currently classified as Low Incremental Risk. This is due to confirmed and unconfirmed dam safety issues, the combination of life, economic, or environmental consequences with likelihood of failure is low to very low and the dam may not meet all essential USACE guidelines. USACE considers this level of life-risk to be in the range of tolerability but the dam does not meet all essential USACE guidelines.

FLOODING RISK RATING

Based on the probability of occurrence and Walla Walla County's vulnerability, an overall risk rating of HIGH has been given to this hazard following the information provided in the 2010 HIVA and updated information from participating jurisdictions during the 2018 update. There is moderate to high potential for a flood disaster of less than major proportions during the next 25 years. The threat is believed to be sufficient to warrant direct and coordinated efforts to prepare for, respond to, recover from, and mitigate this hazard through planned infrastructure updates, engineering assessments, and public education and outreach. This hazard should be included in the county's emergency management training and exercise program.



Chapter 7. MULTI-JURISDICTION HAZARD MITIGATION

This plan is an update of the 2010 Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan (HMP). This chapter was new in the 2010 plan in order to outline mitigation goals and objectives and assemble information in an easily-accessible single location where there are applications to all jurisdictions throughout the County. It also incorporates the shared mitigation strategy and prioritization methods identified throughout the process and has been updated to reflect new information and priorities brought forth by participants throughout the 2018 HMP update.

Table 11. Overall Vulnerability and Risk Assessment

Hazard	Probability	Vulnerability	Risk Rating
Earthquake	MEDIUM	HIGH	HIGH
Severe Storm	HIGH	MEDIUM	HIGH
Wildfire	MEDIUM	HIGH	HIGH
Flooding	HIGH	MEDIUM	HIGH

7.1 MITIGATION GOALS

The mitigation goals listed in this portion of the plan are multi-jurisdictional in nature. The following mitigation goals were identified through the original planning process and re-affirmed during the 2010 update. These goals were reviewed by the Planning Team throughout the 2018 update and re-affirmed as general guiding principles to use in combination with the goals and objectives presented in Chapter 1, Section 1.6.

1. Protect critical facilities from damage caused by earthquake, flooding, wildfire and severe storms;
2. Reduce environmental and property damage, injury, and deaths caused by hazards; and
3. Increase public awareness of hazards and improve voluntary mitigation actions.

7.2 MITIGATION OBJECTIVES

The mitigation objectives listed in this portion of the plan are multi-jurisdictional in nature. In the 2010 Plan updated mitigation objectives were compiled into a multi-jurisdictional list and were combined and re-worded as appropriate. The content of these objectives remains the same for the 2018 Plan update as they provide a framework for developing mitigation measures in each jurisdiction. Each mitigation action (both in this section as well as jurisdiction-specific measures) is targeted to meet at least one of these mitigation measures.

- MO-1. Protect critical facilities from hazards.
- MO-2. Reduce loss of life and injuries.
- MO-3. Reduce property damage.
- MO-4. Protect Infrastructure.
- MO-5. Improve and increase public information regarding hazard mitigation.

7.3 MITIGATION STRATEGY

All jurisdictions in Walla Walla County will work together to create and maintain disaster resistant communities. We will promote hazard mitigation between the governments, the business community and organizations. We will elevate mitigation efforts to a high priority if funding allows. This process will develop and maintain an effective multi-jurisdictional hazard mitigation plan. Each jurisdiction will plan and conduct mitigation projects and take mitigation measures based on their risk and funding availability.

We want to ensure the communities of Walla Walla County have the capability to initiate and sustain emergency operations during and after a disaster. To accomplish this each jurisdiction will develop mitigation measures to maintain local government operational continuity during and after a disaster.

Each jurisdiction will maintain a list of mitigation measures whether shared with other jurisdictions or unique to that jurisdiction. A lead agency, desired implementation timeline and potential funding sources will be determined for each measure and local governments will review other plans and incorporate the elements of this plan, when appropriate. This may include such plans as the Basin Watershed plan, Irrigation plans and Land Use planning, etc.

Jurisdictions will utilize the priority factors to determine a relative priority of measures appropriate for their jurisdiction.

7.4 PRIORITIZATION OF MITIGATION MEASURES

Priority for each measure will be determined using a ranking system as described here. A rating of LOW, MEDIUM or HIGH will be assigned to each element to identify the priority for each project or measure.

The results of a benefit-cost review will help further weight the jurisdiction's mitigation measure priorities. Projects having a high benefit to cost ratio must be considered high priority. The remaining factors may be considered as mitigating factors when determining priority, but the benefit cost ratio will be the primary means to determine priority.

FACTORS FOR DETERMINING PRIORITY

- *Benefit-Cost review.* Review the benefit and costs. Estimate the general benefit to cost ratio. Such a review may be taken as a preliminary estimate of the monetary value of the project. This information can provide a general estimate of the savings that may be realized as a result of the project compared to the estimated costs should the project not be completed. For example, if a project is estimated to save \$20,000 in losses resulting from a hazard and the cost of the project to mitigate the hazard is estimated at \$5,000, then the benefit cost review is 4:1. When FEMA hazard mitigation funding is being requested, then a formal benefit-cost analysis is conducted.
- *Population benefited.* Estimate the total population that is benefited as a result of the mitigation action.
- *Percentage of jurisdiction benefited.* Divide the population benefited by the total population of the jurisdiction to determine the percent of the total jurisdiction that is benefited.
- *Health and safety.* Consider the health and safety of the community and make a narrative statement.
- *Estimated project or initiative cost.* Estimate the total cost of the project.

- *Cost impact of the project or initiative.* Estimate the impact of the project or measure in terms of what damage will be prevented.
- *Probability of community acceptance.* Estimate the likelihood of community acceptance, using a rating of HIGH, MEDIUM or LOW.
- *Probability of funding.* Estimate the likelihood that a project will be funded through hazard mitigation grants, state funding and local funding. Consider the local matching funds, if required.
- *Feasibility of implementing.* Estimate the feasibility of the effort to implement the measure, using a rating of HIGH, MEDIUM or LOW.
- *Consistency with other plans and programs.* Provide a simple statement after reviewing this project and comparing it to other plans and programs.

7.5 MULTI-JURISDICTIONAL MITIGATION MEASURES

During the 2018 update, the Planning Team chose to categorize strategies and/or projects that would benefit multiple jurisdictions, special purpose districts or agencies. While these mitigation strategies and/or projects have been suggested by various officials and staff through the planning process, these strategies and/or projects have not been officially approved and funding has not been allocated. In many cases, funding is dependent upon the jurisdiction receiving future federal and/or state hazard mitigation grant funding.

NATIONAL FLOOD INSURANCE PROGRAM (NFIP) CONTINUED COMPLIANCE

The planning participants have incorporated mitigation practices and projects into local planning efforts in order to ensure continued compliance with the NFIP. As part of the County's ongoing emergency outreach, information is provided to the public regarding flood and fire hazards. During Walla Walla County's recent critical areas ordinance update a few minor changes to flood development standards were recommended to ensure compliance with NFIP and strengthen regulations.

MULTI-HAZARD MITIGATION MEASURES

- MJ-1. Incorporate mitigation goals, objectives, and measures into other planning mechanisms such as Comprehensive plans, County Wildfire Protection Plans, and building codes for all jurisdictions throughout Walla Walla County. Incorporation of these measures was completed for the 2017 Mill Creek and Walla Walla County Wildfire Protection Plan and has had some influence on local building codes and planning efforts since the 2010 Mill Creek CWPP for the City of Walla Walla.

PRIORITY:	Medium
LEAD AGENCY:	Emergency Management Department
TIME-LINE:	Current and on-going
FUNDING SOURCE:	Local, State, and Federal

- MJ-2. Walla Walla County is interested in including the capability of the Disaster Airlift Response Team (DART) in their safety and hazard mitigation response plans moving forward in the 2018-2022 planning period. The DART is a volunteer emergency airlift organization that can transport people, food, materials, medical and other supplies to areas cut off from ground transportation or where time is highly critical.

Walla Walla County could benefit from this capability in an emergency as the county may be especially vulnerable to some disaster scenarios (e.g., earthquakes). In the current Hazard

Mitigation Plan, more than 250 bridges and overpasses on critical transportation routes are identified. Damage or failure of one or more of these structures could isolate areas from ground transportation assistance.

The benefit to adding this capability in a county plan is that typically the U.S. Federal Aviation Administration declares a Temporary Flight Restriction (TFR) during emergencies. If listed in the county emergency plan, this capability can be activated and utilized even if a TFR is in place. Otherwise, volunteer pilots would be unable to enter a TFR in flight. Other benefits to naming this capability is that no advanced agreement or planning is necessary to utilize this capability.

PRIORITY: Medium
LEAD AGENCY: Emergency Management Department
TIME-LINE: Unfunded, volunteer efforts and funding are being sought
FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

- MJ-3. Continue to develop partnerships with various jurisdictions and agencies as well as business owners to identify and pursue funding opportunities and implement mitigation measures and to increase coordination of projects throughout the County. This is a continuing mitigation measure from the 2010 plan.

PRIORITY: High
LEAD AGENCY: Emergency Management Department
TIME-LINE: Current and on-going
FUNDING SOURCE: Local, State, and Federal

- MJ-4. Update and categorize critical facilities inventory. Although the Walla Walla County critical facilities inventory was updated in 2009 and has been incorporated into this plan, the inventory lacks a classification system. Using more specific criteria and categorizing the inventory information is recommended to focus mitigation and response efforts on more essential facilities. This is a continuing goal from the 2010 plan.

PRIORITY: Medium
LEAD AGENCY: Emergency Management Department
TIME-LINE: Unfunded, Short term from funding
FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

- MJ-5. Develop a County wide evacuation plan and identify and plan for critical transportation routes. Walla Walla County has a well-developed emergency contact network in place since the 2010 plan and continued efforts to improve this network and map critical transportation routes are on-going.

PRIORITY: Medium
LEAD AGENCY: Emergency Management Department
TIME-LINE: Unfunded, Short term from funding
FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

- MJ-6. Continue and enhance existing public education and outreach programs on hazard vulnerability and mitigation including, but not limited to:

- Encouraging non-structural earthquake mitigation projects;
- Encouraging the use of wind-resistant roofing;

- Encouraging property owners to correctly prune and trim vegetation to protect infrastructure, privately owned homes, property, and power from damage during severe storms and wildfire events; and
- Providing public workshops and information via the web.

During the 2004-2010 planning cycle as well as following the 2017 CWPP wildfire risk assessment update, information regarding wildfire vulnerability and mitigation were provided on the Emergency Management Department's website and in public meetings. This mitigation measure continues to be on-going and has been re-affirmed for the 2018-2022 planning cycle given the continued County housing development information and increasing risk to life and property within the WUI.

PRIORITY: High
 LEAD AGENCY: Emergency Management Department
 TIME-LINE: Current and on-going
 FUNDING SOURCE: Local, State, and Federal

- MJ-7. Encourage installation of underground electrical utilities to reduce their vulnerability to earthquake and storm damage. This mitigation action is current and on-going and has been re-affirmed for the 2018-2022 planning cycle.

PRIORITY: Medium
 LEAD AGENCY: All
 FUNDING SOURCE: Local
 TIME-LINE: Current and on-going

- MJ-8. Provide emergency power for critical facilities. The specific facility identified as needing an emergency power source includes the Blue Mountain TV Station. After conducting a review and update of the critical facilities list, additional needs for emergency power also include water well systems in multiple jurisdictions and other communication-facility infrastructure as identified in the jurisdiction-specific sections below (Chapters 8-13). This mitigation objective is current and on-going and has been re-affirmed for the 2018-2022 planning cycle.

PRIORITY: Medium
 LEAD AGENCY: Owner
 TIME-LINE: Unfunded, Short term from funding
 FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

- MJ-9. Conduct Light Detection and Ranging (LIDAR) flight of part of County not yet covered to gain better information on topography and use to assess floodplain and seismic hazards. This mitigation measure has been partially completed through the acquisition of Lidar data for select areas however additional data acquisition and processing are anticipated to meet this mitigation objective.

PRIORITY: Low
 LEAD AGENCY: Emergency Management Department
 TIME-LINE: Unfunded, Short term from funding
 FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

MJ-10. Install AM alert radio system on Highway 12.

PRIORITY:	Low
LEAD AGENCY:	Emergency Management Department
TIME-LINE:	Unfunded, Short term from funding
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

FLOODING MITIGATION MEASURES

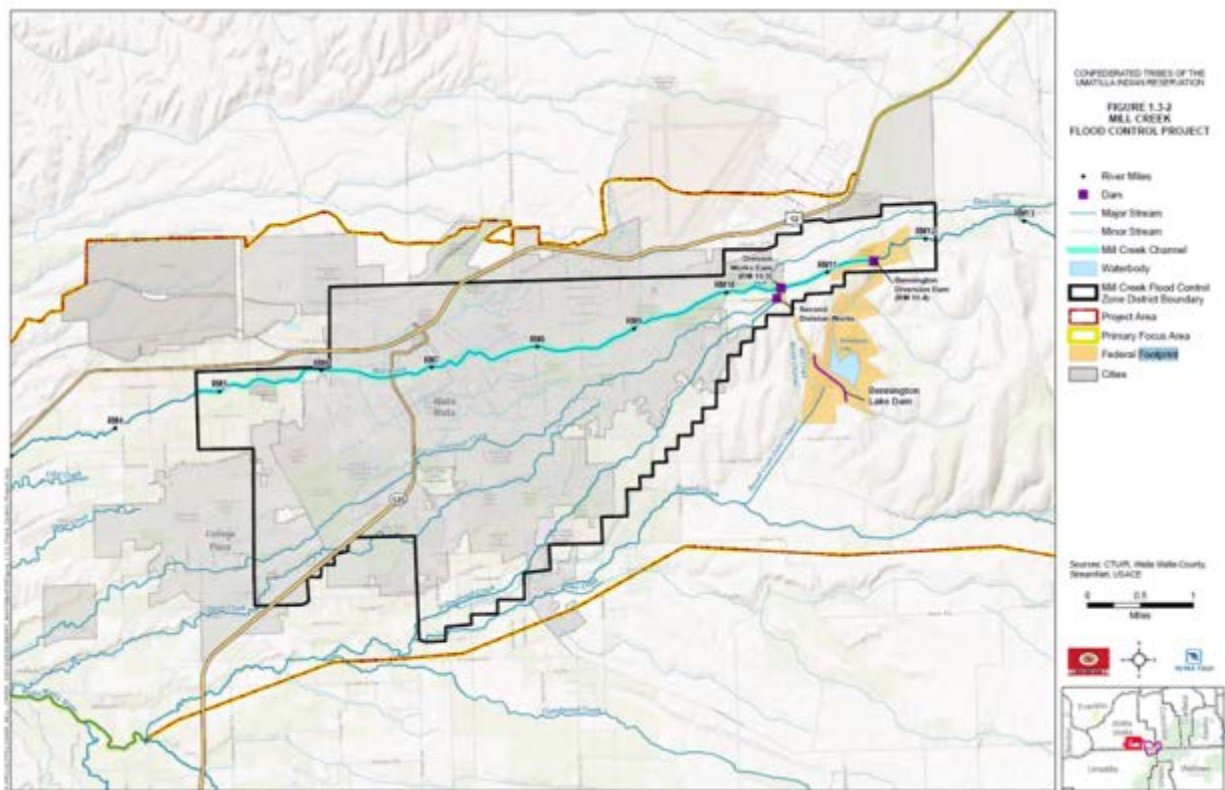


Figure 10. Map of the Mill Creek flood control project and stream-mile references for management/ownership reference for project planning.

Mill Creek Channel – generally refers to the portion of Mill Creek from RM 4.8 (Gose Street) to RM 11.5 (just past Bennington Diversion Dam). The channel consists of two major channel types—a concrete flume type and a channel-spanning sills or weirs type (Burns et al. 2009). The portion of the channel from RM 4.8 to approximately RM 10.4 (just downstream from the Division Works Dam) is maintained and operated by the Mill Creek Flood Control Zone District. The portion of the channel from RM 10.4 to RM 11.5 (just past the Bennington Diversion Dam) is owned, maintained, and operated by the USACE (USACE 2015a). According to the USACE, the purpose of the Mill Creek Channel is to protect creek banks and increase the capacity of Mill Creek to pass up to 3,500 cubic feet per second (cfs) flows (USACE 2015a).

Mill Creek Flood Control Project (MCFCP) – includes all structures associated with flood control on Mill Creek from RM 4.8 to RM 11.5 including all levees, mainstem dams, flood diversion system, 612 acres of land and open water including Bennington Lake, and the first 500 feet of distributaries Yellowhawk and Garrison Creeks (USACE 2015a, 2016a). The lower 6 miles of the Mill Creek Channel (RM 4.8 to 10.4) are

managed by the Mill Creek Flood Control Zone District and include riprapped levees, channel-spanning weirs, and 2 miles of concrete flume. The remainder of the MCFCP footprint is owned and operated by the USACE (USACE 2015a).

Mill Creek Flood Control Zone District (MCFCZD) – originally established as the Walla Walla County Mill Creek Flood Control District in 1948 but reorganized into the current entity in 1974. It is directed by the Walla Walla County Commissioners and is responsible for the normal operations and maintenance of the *non-federal portion of the Mill Creek Channel*. The MCFCZD boundary includes 7,994 acres in and near the city of Walla Walla. The MCFCZD boundary includes Mill Creek RM 4.8 to RM 12.1; however, the Mill Creek Channel from RM 10.4 to 11.5 is owned by the USACE and RM 4.8 to 10.4 and 11.5 to 12.1 is maintained by the MCFCZD.

Mill Creek Flume – includes the concrete flume type portion of the Mill Creek Channel, which extends from RM 6.7 to 8.4 through downtown Walla Walla and includes the 1,400-foot underground portion of the channel. The flume is generally 50 feet wide, with vertical concrete walls, and has a 9-foot-wide, low-flow trench (or trenches) with staggered baffles, and either a sloped or horizontal shoulder (overbank area) between the trench and the vertical walls.

MJ-11. Limit new development in the 100-year floodplain. This mitigation action is current and on-going and has been re-affirmed for the 2018-2022 planning cycle.

PRIORITY:	High
LEAD AGENCY:	All
TIME-LINE:	Current and on-going
FUNDING SOURCE:	Local (Defined by entity in Section 3.5 on Page 24)

MJ-12. Address increasing frequency of localized flooding and spring melt flood events throughout the County for both natural stream channels and engineered structures. This mitigation action is new as of the 2018 update.

PRIORITY:	High
LEAD AGENCY:	Emergency Management Department
TIME-LINE:	Unfunded, Long term from funding
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

WILDFIRE MITIGATION MEASURES

MJ-13. Prepare community wildfire protection plan to cover entire County. This mitigation measure was completed in the previous planning cycle with the completion of a Walla Walla County CWPP in 2017. The County will continue to update this 2017 CWPP and provide outreach to citizens for fire prevention, vegetation management information and fire notification communication.

PRIORITY:	Medium
LEAD AGENCY:	Emergency Management Department
TIME-LINE:	Unfunded, Long term from funding
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

MJ-14. Implementation of Phase II of the shaded fuels break project for the Mill Creek watershed. This entails landowner outreach and contracting work to remove high risk fire fuels in the Mill Creek watershed near road corridors. The County anticipates this work to commence in 2018-2019.

PRIORITY:	High
LEAD AGENCY:	Emergency Management Department
TIME-LINE:	Currently Funded, long term funding for maintenance is desired.
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

EARTHQUAKE MITIGATION MEASURES

- MJ-15. Conduct non-structural mitigation on government buildings. This mitigation action is current and on-going and has been re-affirmed for the 2018-2022 planning cycle.

PRIORITY:	Medium
LEAD AGENCY:	Owner
TIME-LINE:	Current and on-going
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

- MJ-16. Evaluate critical facilities for structural integrity and conduct necessary structural mitigation. A few critical facilities have been evaluated and a project has been evaluated to assess Walla Walla Public Schools facilities, however, there are many other critical facilities that have not been addressed. This mitigation action is current and on-going and has been re-affirmed for the 2018-2022 planning cycle.

PRIORITY:	Medium
LEAD AGENCY:	Owner
TIME-LINE:	Partially funded, Current and on-going
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

- MJ-17. Mitigate roads and bridges from earthquake damage as needs are identified. As deficiencies are identified and as funding is available mitigation on roads and other transportation facilities are conducted. This mitigation action is current and on-going and has been modified and re-affirmed for the 2018-2022 planning cycle.

PRIORITY:	High
LEAD AGENCY:	Owner
TIME-LINE:	Partially funded, Current and on-going
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

- MJ-18. Conduct mitigation for public and private drinking water supplies. This mitigation action is current and on-going and has been re-affirmed for the 2018-2022 planning cycle.

PRIORITY:	High
LEAD AGENCY:	Owner
TIME-LINE:	Current and on-going
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

SEVERE STORMS MITIGATION MEASURES

MJ-19. Prune and trim trees to protect power and other infrastructure from ice and wind storms. This mitigation action is current and on-going and has been re-affirmed for the 2018-2022 planning cycle.

PRIORITY:	High
LEAD AGENCY:	Owner
TIME-LINE:	Current and on-going
FUNDING SOURCE:	Local

Chapter 8. JURISDICTION SPECIFIC HAZARD MITIGATION

UNINCORPORATED WALLA WALLA COUNTY

This plan is an update of the 2010 Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan (HMP). This section focuses on consolidation of information and jurisdiction-specific mitigation measures for unincorporated Walla Walla County. This section includes portions of multiple chapters from the 2010 plan and has been updated during the 2018 planning process to include new and reconfirmed mitigation measures by identified natural hazard category. A summary of general changes and updates is also presented in Chapter 1 - Section 1.7 at the beginning of this document.

Table 12: Unincorporated County Vulnerability and Risk Assessment

Hazard	Probability	Vulnerability	Risk Rating
Earthquake	HIGH	MEDIUM	HIGH
Severe Storm	HIGH	MEDIUM	HIGH
Wildfire	HIGH	MEDIUM	HIGH
Flooding	MEDIUM	MEDIUM	MEDIUM

8.1 INTRODUCTION

Walla Walla County, in partnership with city governments as well as several special purpose districts, has been an active participant throughout the 2018 planning update process. The 2010 plan was reviewed to determine what plan information needed to be updated. The Local Multi-Hazard Mitigation Planning Guidance dated July 1, 2008 and Local Hazard Mitigation Plan Review Crosswalk were used to help determine what new components needed to be included in the plan and how the update process should be managed.

Walla Walla County's Emergency Management Department (EMD), in partnership with Northwest Management, Inc., has continued to act as the coordinating body. In addition to EMD, the County has been represented by the Community Development and County Public Works Departments. A list of County personnel involved in the 2018 update process is presented in Chapter 3, Section 3.2.

8.2 CURRENT POLICIES, CODES AND ORDINANCES

Walla Walla County has adopted the most current state-adopted versions of the International Building Code (IBC) and International Fire Code (IFC) (Walla Walla County Code Title 15.04). The purpose of this is to provide minimum standards to protect public health and safety. The IBC provides general standards for seismic design, high wind design and high snow load design based on local characteristics. Both the building and fire codes are enforced through the County's Community Development Department.

Listed below are other applicable codes, plans, ordinances, and programs:

- Walla Walla County Comprehensive plan

- Countywide planning Policies (CPPs)
- Title 8, Health and Safety
- Title 11, Stormwater
- Title 15, Buildings and Construction
- Title 16, Subdivisions
- Title 17, Zoning
- Chapter 18.08, Critical Areas
- Chapter 18.12, Flood Damage Prevention
- Participation in the National Flood Insurance Program (NFIP)

8.3 GENERAL MITIGATION MEASURES AND PUBLIC EDUCATION

One of Walla Walla County's top mitigation priorities is increasing public awareness regarding all hazards within the County. The Walla Walla County Emergency Management Department (EMD) is the lead, working closely with other County departments, as well as local, state and federal agencies. Throughout the year EMD provides information through the County website, informational meetings, educational presentations, and written materials.

Walla Walla County also participates in annual Building Safety Month, which is organized by the International Code Council, every May. The Walla Walla County Community Development Department provides information to the public regarding building and fire safety. Information on creating disaster supply kits, developing a family action/evacuation plan, and where to get up-to-date information regarding hazards and events was provided to members of the public. Tips for easy non-structural hazard mitigation were also provided.

8.4 JURISDICTION-SPECIFIC MITIGATION STRATEGIES AND PROJECTS

It should be noted that although the various mitigation strategies and/or projects listed on the following pages are contained in the Unincorporated Walla Walla County portion of this plan, many of these strategies and/or projects would most likely benefit multiple jurisdictions, special purpose districts or agencies and may ultimately be funded by a variety of sources.

While these mitigation strategies and/or projects have been suggested by various county officials and staff through the planning process, they have not been officially approved by the Walla Walla County Board of Commissioners and funding has not been allocated. In many cases, funding for these is dependent upon Walla Walla County receiving future federal and/or state hazard mitigation grant funding.

Walla Walla County also supports and recommends the multi-jurisdictional mitigation measures contained in Chapter 7 of this plan.

8.5 MULTI-HAZARD MITIGATION MEASURES

- CO-1. Relocate the Emergency Management Department and Walla Walla Emergency Services Communications Center (WESCOM/911 dispatch) offices to a seismically sound building. Additional office space and communication facility space is needed to continue to support the

growing needs of the County. Therefore, this mitigation goal will continue in order to further support Walla Walla County hazard risk mitigation efforts.

PRIORITY: Medium
LEAD AGENCY: Emergency Management Department
TIMELINE: On-going
FUNDING SOURCE: Local

- CO-2. Conduct structural mitigation projects to protect public roadways and bridges from flooding and earthquake hazards and ensure that critical transportation routes are intact, including, but not limited to the following projects:

McEntrye Bridge
Gardena Bridge – Touchet Gardena Road
Cottonwood Road MP 0.47 – 0.81
Reser Road MP 0.00 – 0.50
Lewis Peak Road MP 0.00 – 9.24
Sudbury Road MP 11.6 – 17.0
Touchet Gardena Road – MP 0.00 – 1.53
Goble Bridge MP 0.62 – 1.40
Harvey Shaw Road MP 3.40 – 3.50
Hart Road at Walter Bridge
Paxton Bridge
Lower Whetstone Road MP 0.00 – 2.20
CM Rice Road MP 6.40 – 6.80
Depping Culvert on Depping Road
Substation Bridge on Lower Hogeye Road

This mitigation measure incorporates several measures from the 2010 plan. The list of road and bridge projects included above is based on current knowledge from the County Public Works Department. The Department has procedures in place to conduct assessments of roads and bridges and maintains an internal list of projects. This mitigation measure was modified during the 2010 planning cycle to incorporate several different measures including upgrades to transportation facilities to reduce possible damage from multiple hazards. This mitigation objective has been re-affirmed for the 2018-2022 planning cycle.

PRIORITY: High
LEAD AGENCY: Emergency Management Department
TIMELINE: Partially funded, Long term from funding
FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

8.6 FLOODING

A significant portion of the County Is located within the 100-year floodplain and there are also parts of the County located within the floodway and the 500-year floodplain. The most significant losses due to flooding occurred in 1996 and 2012.

FLOODING – *OTHER PLANS, POLICIES, MITIGATION AND DEVELOPMENT STANDARDS*

Walla Walla County has adopted floodplain development standards under **Walla Walla County Code Chapter 18.12, Flood Damage Prevention**, which is enforced by the Community Development Department and contains methods and provisions to minimize the potential public and private losses from flooding. It also promotes the public health, safety and welfare of all citizens through:

- Restricting or prohibiting uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
- Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- Controlling the alteration of natural floodplains, stream channels and natural protective barriers, which help accommodate or channel floodwaters;
- Controlling filling, grading, dredging and other development which may increase flood damage; and
- Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters, or which increase flood hazards in other areas.

In 2008-2009 the County completed a mandatory update of the Walla Walla County Critical Area Ordinance (CAO) which was based on a review of best available science (BAS). This review recommended a few minor updates to conduct in order to meet FEMA and Department of Ecology minimum requirements for the NFIP program. Primary recommendations were to:

1. Update Chapter 18.12 to incorporate the most recent revisions to the Ecology requirements contained in Chapter 173-158 WAC, Floodplain Management; and
2. Check cross references to other sections.

The County employs the following specific food hazard mitigation policies, standards and planning mechanisms:

- The **Walla Walla County County-wide Planning Policies (CPPs)**, adopted in 1993, form a basis for planning and multi-jurisdictional coordination within the County and have been adopted by Walla Walla County as well as each of the cities within the County who are all planning partners in this plan. The following CPPs directly address flood hazard mitigation:

CPP 11.3	Priority should be given to preserving and protecting resource and critical lands. Development that is permitted that is associated or adjacent to these areas should be properly managed.
CPP 11.5	The County will continue to utilize the Federal Emergency Management Agency program for floodplain management.
- The **Walla Walla County Comprehensive Plan** serves as a guide to make decisions about future development within unincorporated Walla Walla County. In addition to the annual amendment process, since the Hazard Mitigation plan was adopted in 2004 the County committed to a mandatory 7-year update of the Comprehensive Plan. The last plan update was completed in 2007 and the newest update is anticipated to be completed in fall 2018. As required by the Washington

State Growth Management Act, in addition to providing a land use policy framework for accommodating growth in the County, the Comprehensive Plan also provides policies for critical areas, including flood hazard areas, and serves as the basis for the County development standards. The following goals and policies related to flood hazards are included in the Comprehensive Plan:

- | | |
|--------------|--|
| Goal CA-1 | Promote public health, safety, welfare, economic and environmental well-being in the County for present and future citizens by identifying and protecting critical areas. |
| Policy CA-1 | Update studies on a regular basis to identify critical areas and make the information available to the public. |
| Policy CA-2 | Provide technical assistance and education to applicants and interested parties on critical areas and applicable regulations. |
| Policy CA-3 | Prepare materials which enable citizens to clearly understand the location of critical areas on and adjacent to their property, what obligations, rights, and opportunities they have regarding those critical areas and how those critical areas affect future land use management practices and options. |
| Policy CA-4 | Avoid unnecessary inter-jurisdictional duplication in the identification and regulation of critical areas and promote cooperation and coordination between land owners and regulators whenever possible in addressing critical areas. |
| Policy CA-5 | Provide methods to avoid, minimize, and mitigate, when addressing critical areas, including innovative techniques such as wetland banking, vegetation management, clustered development, planned unit development, replacement ratios, density limitations, and enhancement options. |
| Policy CA-6 | Convert, update, and maintain critical area/flood mapping in a digital format whenever possible. Make this data available to the public via the Internet if feasible. |
| Policy CA-9 | Minimize construction of structural shoreline stabilization and flood control works in favor of methods utilizing setback levees and bioengineering. |
| Goal CA-3 | Utilize floodplain planning to protect human life and health as well as the riparian ecosystem in order to minimize public and private economic losses and expenditures related to flood control and to protect and preserve wildlife habitat. |
| Policy CA-15 | Use the FEMA supplied Flood Insurance Rate Maps and Floodway maps to determine areas of special flood hazard. |
| Policy CA-16 | Refine and improve upon FEMA flood mapping whenever possible by working with the Corps of Engineers, FEMA, individual agencies, and landowners. |

- Walla Walla County has adopted and implemented **Flood Damage Prevention Standards**, at Walla Walla County Code Chapter 18.12. These standards guide new development and growth within unincorporated Walla Walla County in such a way as to reduce potential damage. Included below is a summary of the key components of these development standards.
 - All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure (WWCC 18.12.190A).
 - All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage and using methods and practices that minimize flood damage (WWCC 18.12.200A-B).
 - Electrical heating, ventilation, plumbing and/or air-conditioning equipment or other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding (WWCC 18.12.200C).
 - All new and replacement water supply systems, sanitary sewage systems, and on-site waste disposal systems shall be located and designed to minimize infiltration of floodwaters and avoid impairment and contamination (WWCC 18.12.210A-C).
 - All subdivision proposals shall be consistent with the need to minimize flood damage (WWCC 18.12.220A-E).
 - Within the 100-year floodplain, new construction and substantial improvement of any residential structure shall have the lowest floor, including basements, elevated to one foot above base flood elevation. Additionally, fully enclosed areas below the lowest floor that are subject to flooding are prohibited or must be flood proofed and accommodate the entrance and exit of flood waters (WWCC 18.12.250).
 - Within the 100-year floodplain, new construction and substantial improvement of any commercial, industrial or other nonresidential structure shall have either the lowest floor, including basements, elevated to the level of one foot above the base flood elevation or be flood proofed so that below the base flood level the structure is watertight and has structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy (WWCC 18.12.260).
 - Encroachments and obstructions, including fill, new construction, substantial improvement and other uses are generally prohibited. Construction and reconstruction within the designated floodway is generally limited to only projects where it has been certified by a registered professional engineer or architect that the construction will not result in any increase in flood levels and where all applicable flood hazard reduction provisions are met. Minor repairs and reconstruction if the structure has been damaged and if the ground floor area will not increase are permitted (WWCC 18.12.290).
- Walla Walla County completed a mandatory update of **Walla Walla County Chapter 18.08, Critical Areas**, which satisfies the Growth Management Act requirement to have a Critical Areas Ordinance (CAO). All areas within the County meeting the frequently flooded designation criteria—in the Identification and Delineation Manual, regardless of any formal identification, are designated critical areas. Both the floodway and floodplain are subject to regulation under

Chapter 18.12. These frequently flooded areas are the same areas regulated by Chapter 18.12 and Title 15 and no additional development standards are provided in Chapter 18.08.

- The first phase of the **Walla Walla County Flood Response Plan (FRP)** was completed in June 2009 and builds on the previous **Walla Walla Comprehensive Flood Hazard Management Plan (CFHMP)** completed in 1999. Phase I of the FRP focuses on Mill Creek flood response. Additional phases for the Coppei, Touchet, and Walla Walla Rivers will be added as they are completed. These phases and additions are anticipated during the 2018-2022 planning period. Currently, the FRP focuses primarily on response, not mitigation, but it does include valuable information regarding flooding, and inundation maps. The primary goal of the FRP was to “develop community awareness and understanding of flood hazards.” Following the flooding of 2012 the County has prioritized the next Phases of the FRP to include other jurisdictions. The current FRP provides valuable information regarding flood hazards within Walla Walla County and, as part of the implementation component, provides guidance on mitigation measures. Parts of the 1999 CFHMP and 2009 FRP flood information have been included in this HMP update from participating citizens and Planning Team members where appropriate.
- The Walla Walla County Public Works Department administers the **Mill Creek Flood Control Zone District**, working closely with the U.S. Army Corps of Engineers and other local, state and federal agencies to manage flood risk. The Mill Creek Flood Control Zone District is described in section 12.5.

FLOODING – JURISDICTION MITIGATION OBJECTIVES AND PROJECTS

- CO-3. Conduct embankment enhancement to alleviate Mill Creek Flooding near the intersection of Wallula Avenue and Highway 12. This mitigation measure was new in the 2010 plan and this area along with three others have been identified as needing additional flood mitigation work. The additional three priority areas for the 2018-2022 planning period are: The Touchet River between Hwy 125 and Donnelly Rd; Mill Creek from Blue Creek Road extending upstream approximately three (3) miles between Gose Street and the Walla Walla River (which includes the Wallula Avenue flooding concern location), and; Coppei Creek throughout the majority of its length. These three areas have a direct impact on adjacent infrastructure and residences.

PRIORITY: High

LEAD AGENCY: County Public Works Department and City of Walla Walla

TIME-LINE: Unfunded, Long term from funding

FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

- CO-4. Make physical dam safety modifications and conduct non-structural maintenance to Mill Creek Storage Dam. This mitigation measure is on-going for the 2018-2022 planning cycle.

PRIORITY: Medium

LEAD AGENCY: US Army Corps of Engineers

TIME-LINE: Partially funded, Long term from funding

FUNDING SOURCE: Federal (Defined by entity in Section 3.5 on Page 24)

- CO-5. Plan and conduct mitigation projects to protect critical bridges and roadways threatened by flooding based on semi-annual inspections and evaluations. This mitigation measure has been reworded based on discussions with the County Public Works Department and is re-affirmed for the 2018-2022 planning cycle.

PRIORITY: High
 LEAD AGENCY: County Public Works Department
 FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)
 TIME-LINE: Partially funded, Long term from funding

- CO-6. Conduct public outreach to increase the awareness of the State-provided system for identification of culverts in need of maintenance. This mitigation measure has been modified from the 2010 plan to focus on public outreach and increasing awareness of this tool for the 2018-2022 planning cycle. Better use of this system will ensure the County has more up-to-date information and enable the more efficient dispatching of resources.

PRIORITY: Medium
 LEAD AGENCY: County Public Works Department
 TIME-LINE: Current and ongoing
 FUNDING SOURCE: Local

- CO-7. Improve and maintain the capacity of storm water ditches and drainages as part of on-going maintenance program. This mitigation measure is on-going for the 2018-2022 planning cycle.

PRIORITY: Medium
 LEAD AGENCY: County Public Works Department
 TIME-LINE: Current and ongoing
 FUNDING SOURCE: Local

8.7 WILDFIRE

In Walla Walla County the highest wildfire hazard area is in the wildland urban interface (WUI) in the eastern part of the County. This area has been the primary focus of wildfire hazard mitigation in the past. There are, however, dry-land portions of the County which also have an elevated wildfire risk. Recognizing this fact, the Planning Team added a mitigation measure during the 2010 update to prepare a wildfire protection plan addressing risk throughout the rest of the County. This mitigation measure was completed in 2017. Highlights from this document are included in Chapter 6, Section 6.4 as well as links to the digital document on the EMD website for maps and additional detail.

WILDFIRE – OTHER PLANS, POLICIES, MITIGATION AND DEVELOPMENT STANDARDS

The County has participated in wildfire hazard mitigation through a variety of different mechanisms:

- The City of Walla Walla receives 90% of its municipal water supply from the Mill Creek Municipal Watershed which is located adjacent to the wildland urban interface (WUI). The watershed is characterized by forest conditions with heavy fuel loads and is vulnerable to wildfires. A destructive wildfire could have serious negative effects on water quality. The City adopted the Mill Creek Community Wildfire Protection plan in 2006 and completed a **County-wide Community Wildfire Protection Plan in 2017** that included a reassessment of the Mill Creek watershed and associated fire risk ratings. This plan contains many mitigation measures to be implemented within the WUI which will reduce wildfire vulnerability within the unincorporated areas of Walla Walla County. The 2017 CWPP can be found on the Walla Walla Emergency Management website (<http://www.co.walla->

walla.wa.us/document_center/emergency%20management/WallaWallaCountyCWPPFINAL.pdf.
).

- In May 2007 the County completed a **Wildfire Risk Assessment of the Wildland-Urban Interface**. This assessment was funded through the Emergency Management Preparedness Assistance Grant (EMPAG) program. Gunner Fulmer, a City of Walla Walla Firefighter, conducted a survey of 435 structures within the WUI. Only 52 structures in the WUI were not assessed. This assessment helped the County identify where high-risk areas within the WUI are located. The average structure rating was medium, but 41.6% of them received a “High” or “Extreme” hazard rating. This assessment provided detailed information regarding wildfire risk within the County and included recommendations for hazard mitigation.
- Walla Walla County works closely with the Washington State Department of Ecology, local fire districts, and the Walla Walla County Conservation District to implement the local **burn program**. The Community Development Department issues residential burn permits and works with other agencies to conduct enforcement and provide valuable information to property owners regarding alternatives to burning and recommendations on safe practices that can reduce risk. A daily burn decision is issued by the Department of Ecology Eastern Regional Office.
- Walla Walla County has adopted the International Code Council family of codes through Walla Walla County Code Title 15. The County has incorporated the most current state-adopted version of the **International Fire Code (IFC)** into Chapter 15.04 of its Code. The IFC provides regulations to protect life and property from all types of fire and explosion hazards. The regulations include general precautions against fire, emergency planning and preparedness, fire department access, hydrants, sprinkler and alarm systems, hazardous materials storage and use, etc. The fire code applies to all new construction and land development and some modifications to existing buildings.
- In addition to access requirements in the fire code, the County has also adopted standards in **Walla Walla County Code (WWCC) Title 12** for access and road/address marking which are enforced through the County Public Works Department. The Community Development Department ensures through **Title 16, Subdivisions**, that all lots in new land divisions have necessary ingress/egress and meet fire protection and access standards.
- In 2010 the County adopted new **development standards** to reduce wildfire vulnerability for new construction in the Wildland-urban Interface and additionally adopted wildfire protection standards later that year that apply to the Mill Creek area. The County has also adopted access standards, road standards, and address marking requirements and is continuing to adapt and apply them throughout the 2018-2022 planning period.

WILDFIRE – JURISDICTION-SPECIFIC MITIGATION OBJECTIVES AND PROJECTS

- CO-8. Walla Walla County will continue working on implementation of fire mitigation measures following the updated recommendations of the Mill Creek and Walla Walla County Community Wildfire Protection Plan from 2017 that includes a reassessment of the fire risks in the Mill Creek Municipal Watershed. This mitigation measure is renewed for the 2018-2022 planning period.

PRIORITY:	High
LEAD AGENCY:	Emergency Management Department and Fire Districts
TIME-LINE:	Unfunded, long term reoccurring funding need
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

8.8 EARTHQUAKES

There are several indicators which suggest that Walla Walla County could experience a large earthquake: proximity to large faults, evidence of large earthquakes in the recent geologic past and historical seismicity. Although it is very difficult to predict when an earthquake will occur, we do have valuable information regarding vulnerability which helps focus hazard mitigation efforts. Although Walla Walla County has significant geologic hazard, damage and loss from an earthquake has not occurred recently.

EARTHQUAKES – OTHER PLANS, POLICIES, MITIGATION AND DEVELOPMENT STANDARDS

Other plans, policies, and development standards relevant to mitigation of earthquake and other geologic hazards include the following:

- As part of the 2008 **Critical Areas Ordinance** update completed by the County in 2009 the County adopted new standards and background information related to various geologic hazards including landslide, erosion, and seismic hazard areas. In areas with steep or unstable slopes or with soil characteristics prone to liquefaction, geotechnical reports are required as part of development permits. When design and construction methods cannot reduce the risk to acceptable levels development may be prohibited.
- Walla Walla County has adopted the **International Building Code** which classifies the County as seismic zone D0. The IBC also provides design/construction requirements for geologic hazard areas including areas with steep slope which are landslide and erosion hazards which could be exacerbated by an earthquake.

EARTHQUAKES – JURISDICTION-SPECIFIC MITIGATION OBJECTIVES AND PROJECTS

- CO-9. Conduct non-structural mitigation in County-owned buildings. This mitigation action is current and on-going and has been re-affirmed for the 2018-2022 planning cycle.

PRIORITY:	High
LEAD AGENCY:	Walla Walla County
TIME-LINE:	Unfunded, Long term from funding
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

- CO-10. Plan and conduct mitigation projects to protect critical roadways threatened by earthquakes based on semi-annual inspections and evaluations. This mitigation action is current and on-going and has been re-affirmed for the 2018-2022 planning cycle.

PRIORITY:	High
LEAD AGENCY:	County Public Works Department
TIME-LINE:	Partially funded, Current and on-going
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

- CO-11. Plan and conduct mitigation projects to protect critical bridges threatened by earthquakes based on semi-annual inspections and evaluations. This mitigation action is current and on-going and has been re-affirmed for the 2018-2022 planning cycle.

PRIORITY: High
LEAD AGENCY: County Public Works Department
TIME-LINE: Partially funded, Current and on-going
FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

8.9 SEVERE STORMS

Walla Walla County experienced notable damage and loss from severe storm events in 2008, 2010 and 2012 from wind storms (2008, 2010) and severe flooding then a wind storm (2012). County-wide damages totaled nearly \$16 million from the events in 2012 alone.

SEVERE STORMS – OTHER PLANS, POLICIES, MITIGATION AND DEVELOPMENT STANDARDS

Walla Walla County implements the following mitigation measures through other planning and enforcement mechanisms:

- Through adoption of the **International Building Code (IBC)** Walla Walla County requires structures to be built to resist wind speeds up to 85 mph and allows installation of wind-resistant roofing. The building code also provides snow load, winter design, and severe weathering design requirements.

SEVERE STORMS – JURISDICTION-SPECIFIC MITIGATION OBJECTIVES AND PROJECTS

Walla Walla County does not have any jurisdiction specific mitigation projects but does commit to all the severe storm multi-jurisdictional mitigation measures.

Chapter 9. JURISDICTION SPECIFIC HAZARD MITIGATION CITY OF COLLEGE PLACE

This plan is an update of the 2010 Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan (HMP). Although it is only an update, the plan has been redesigned and reorganized so it is easier to use. This section has been continued from the 2010 plan and consolidates the jurisdiction specific mitigation measures and plan for the City of College Place. This section has been updated through Planning Team efforts to include new and reconfirmed mitigation measures by identified natural hazard category. A summary of general changes and updates is also presented in Chapter 1 - Section 1.7 at the beginning of this document.

Table 13: City of College Place Vulnerability and Risk Assessment

Hazard	Probability	Vulnerability	Risk Rating
Earthquake	HIGH	MEDIUM	HIGH
Severe Storm	HIGH	MEDIUM	HIGH
Wildfire	MEDIUM	LOW	LOW
Flooding	LOW	LOW	LOW

9.1 INTRODUCTION

The City of College Place has been an active participant throughout the 2018 update process. The 2010 plan was reviewed to determine what information needed to be updated based on changing conditions since 2010. The Local Multi-Hazard Mitigation Planning Guidance dated July 1, 2008 and Local Hazard Mitigation Plan Review Crosswalk were used to help determine what new components needed to be included in the plan and how the update process should be managed.

9.2 CURRENT POLICIES, CODES AND ORDINANCES

The City of College Place has adopted the 2009 editions of the International Building Code (IBC) as adopted by Washington State with the Washington State Amendments, effective July 1, 2018 and International Fire Code (IFC). The purpose of these codes is to provide minimum standards to protect public health and safety. The IBC provides general standards for seismic design, wind design and snow load design based on local characteristics. As a city, College Place enforces all building and fire codes as adopted by the State of Washington.

Listed below are other applicable codes, plans, ordinances, and programs:

- City of College Place Comprehensive Plan
- Countywide Planning Policies (CPPs)
- Title 15, Buildings and Construction
- Chapter 18.10, Critical Area Protection
- Ordinance No. 867, Flood Protection Measures

9.3 JURISDICTION-SPECIFIC MITIGATION STRATEGIES AND PROJECTS

It should be noted that although the various mitigation strategies and/or projects listed on the following pages are contained in the City of College Place portion of this plan, many of these strategies and/or projects would most likely benefit multiple jurisdictions, special purpose districts or agencies and may ultimately be paid for from a variety of sources.

While these mitigation strategies and/or projects have been recommended by various city officials and staff through the planning process, these strategies and/or projects have not been officially approved by the City of College Place City Council and funding for these strategies and/or projects has not been allocated. In many cases, funding for these mitigation strategies and/or projects is dependent upon the City receiving future federal and/or state hazard mitigation grant funding.

The City also supports and recommends the multi-jurisdictional mitigation measures contained in Chapter 7 of this plan that cover the extent of Walla Walla County.

9.4 MULTI-HAZARD MITIGATION MEASURES

CP-1. Acquire emergency power for Well No. 1. This specific mitigation measure has been continued for the 2018 plan although general goals to provide emergency power to critical facilities were included in the 2010 plan. During the update process, the need for emergency power at this facility was specifically identified by the City's Planning Team and has been identified as a priority for the 2018-2022 planning period.

PRIORITY:	High
LEAD AGENCY:	City of College Place
TIMELINE:	Unfunded, Short term from funded
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

9.5 FLOODING

No frequently flooded areas are located within the City of College Place at this time, although the City still has potential to experience losses due to flood events, including flash flooding.

FLOODING – OTHER PLANS, POLICIES, MITIGATION AND DEVELOPMENT STANDARDS

- As mentioned above, Ordinance No. 867 provides **flood protection measures** for the City of College Place. This ordinance provides standards which regulate all new development in the 100-year floodplain in an effort to reduce potential damage. These regulations were adopted as an element of the requirements for the City's participation in FEMA's NFIP Program.
- The first phase of the **Walla Walla County Flood Response Plan (FRP)** was completed in June 2009 and builds on the previous **Walla Walla Comprehensive Flood Hazard Management Plan (CFHMP)** completed in 1999. Phase I of the FRP focuses on Mill Creek flood response. Additional phases for the Coppei, Touchet, and Walla Walla Rivers will be added as they are completed. These phases and additions are anticipated during the 2018-2022 planning period. Currently, the FRP focuses primarily on response, not mitigation, but it does include valuable information regarding flooding, and inundation maps. The primary goal of the FRP was to "develop community awareness and understanding of flood hazards." Relevant information from the existing Plan has

been incorporated into this 2018 update of the HMP and the past 2010 update of the County's HIVA. Increasing public awareness of flood hazards is one of the primary goals of this HMP update and educating the public about hazards is a key component of the mitigation process moving forward.

- The **Walla Walla County County-wide Planning Policies (CPPs)**, adopted in 1993, form a basis for planning and multi-jurisdictional coordination within Walla Walla County and have been adopted by the City of College Place. The following CPP directly addresses flood hazard mitigation:

CPP 11.5 – The County will continue to utilize the Federal Emergency Management Agency program, FRIMs and NFIP requirements for guidance and floodplain management.

FLOODING – JURISDICTION MITIGATION OBJECTIVES AND PROJECTS

In addition to the goal identified below the City of College Place additionally commits to all the flooding multi-jurisdictional mitigation measures.

- CP-2. The City of College Place in cooperation with the City of Walla Walla and multiple stakeholders is planning to participate in the 2009 Flood Response Plan (FRP) Phase 2 updates during the 2018-2022 planning period. This is a new mitigation goal as of the 2018 update process.

PRIORITY:	Medium
LEAD AGENCY:	City of College Place
TIMELINE:	Unfunded, Short term type of funding
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

9.6 WILDFIRE

Direct damage to properties within the City of College Place is not likely to result from a wildfire event.

WILDFIRE – JURISDICTION-SPECIFIC MITIGATION OBJECTIVES AND PROJECTS

The City of College Place does not have any jurisdiction specific mitigation projects but does commit to all the wildfire multi-jurisdictional mitigation measures of the County and is in support of the recently completed Mill Creek and Walla Walla County Community Wildfire Protection Plan as it includes recommendations for the Mill Creek Watershed that could influence the City's municipal water.

9.7 EARTHQUAKES

There are indicators which suggest that City of College Place could experience a large earthquake: proximity to large faults, evidence of large earthquakes in recent geologic past, and historical seismicity. Although it is very difficult to predict when an earthquake will occur, we do have valuable information regarding vulnerability which helps focus hazard mitigation efforts. Although the area has significant geologic hazard, damage and loss from an earthquake has not occurred recently.

EARTHQUAKES – OTHER PLANS, POLICIES, MITIGATION AND DEVELOPMENT STANDARDS

Other plans, policies, and development standards relevant to mitigation of earthquake and other geologic hazards include the following:

- As part of the 2008 **Critical Areas Ordinance** update completed in 2008 the City adopted new standards and background information related to various geologic hazards including landslide,

erosion, and seismic hazard areas. In areas with steep or unstable slopes or with soil characteristics prone to liquefaction, geotechnical reports are required as part of development permits. When design and construction methods cannot reduce the risk to acceptable levels development may be prohibited.

- Walla Walla County has adopted the **International Building Code** which classifies the City as seismic zone D0. The IBC also provides design/construction requirements for geologic hazard areas including areas with steep slope which are landslide and erosion hazards which could be exacerbated by an earthquake.

EARTHQUAKES – JURISDICTION-SPECIFIC MITIGATION OBJECTIVES AND PROJECTS

- CP-3. Conduct structural assessment and necessary improvements to the city water tower. Although general goals to reduce vulnerability to critical facilities were included in 2004, this specific mitigation measure was identified in 2010 and re-affirmed by the Planning Team in 2018.

PRIORITY:	High
LEAD AGENCY:	City of College Place
TIME-LINE:	Unfunded, Short term from funding
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

- CP-4. Protect government records and priority systems by ensuring that records are retained in a building that has been retrofitted to meet seismic standards. Although general goals to reduce structural vulnerability and to protect government records were included in 2004 and 2010, this specific mitigation measure was identified in 2018 by the Planning Team and reaffirmed for the 2018-2022 planning period.

PRIORITY:	Medium
LEAD AGENCY:	City of College Place
TIME-LINE:	Unfunded, Short term from funding
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

9.8 SEVERE STORMS

The City of College Place last experienced significant damage and loss from a severe storm event on January 4, 2008 when central Oregon and the foothills of the Blue Mountains experienced a wind storm. Strongest gust speed at the Walla Walla airport was 78 mph and strongest sustained wind speed was 55 mph. Estimates were that 4.9 million dollars in damage was experienced within Walla Walla County (not just unincorporated). In the Walla Walla Valley approximately 4 in 10 homes received damage from the storm. Much of the damage was due to falling trees.

SEVERE STORMS – OTHER PLANS, POLICIES, MITIGATION AND DEVELOPMENT STANDARDS

The City of College Place implements the following mitigation measures through other planning and enforcement mechanisms:

- Through adoption of the **International Building Code (IBC)** the City of College Place requires structures to be built to resist wind speeds up to 85 mph and allows installation of wind-resistant roofing. The building code also provides snow load, winter design, and severe weathering design requirements.

- The City of College Place ensures that trees and vegetation are pruned and trimmed as necessary to protect roads, bridges and other infrastructure from damage. In past years the City has conducted a semi- annual **“Yard Debris Collection”** to work with citizens to prune and trim trees and reduce other yard debris which might result in damage during a severe storm event.
- The City of College Place encourages the installation of **underground utilities** in all areas and included the following policy in the Comprehensive plan regarding the City’s primary commercial area:

CP-5. Policy LU- 14B: Develop a program for the timely underground placement of the present overhead utilities in the College Avenue Commercial District (except for major distribution feeders). This was identified in the 2010 planning efforts and has been re-affirmed for the 2018-2022 planning period.

PRIORITY:	Medium
LEAD AGENCY:	City of College Place
TIME-LINE:	Unfunded, Short to Long-term from funding
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

SEVERE STORMS – JURISDICTION-SPECIFIC MITIGATION OBJECTIVES AND PROJECTS

CP-6. Install wind-resistant roofing on City Annex building. The original plan contained general goals to encourage the use of wind-resistant roofing, but the City Annex building was specifically identified during the 2010 update as a structure that needed to have a new, wind-resistant roof installed. This had not been completed as of 2018 and has been identified as a priority for the 2018-2022 planning period.

PRIORITY:	High
LEAD AGENCY:	City of College Place
TIME-LINE:	Unfunded, Short term from funding
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

Chapter 10. JURISDICTION SPECIFIC HAZARD MITIGATION CITY OF PRESCOTT

This plan is an update of the 2010 Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan (HMP). Although it is only an update, the plan has been redesigned and reorganized so it is easier to use. This section has been continued from the 2010 plan and consolidates the jurisdiction specific mitigation measures and plan for the City of Prescott. This section has been updated through Planning Team efforts to include new and reconfirmed mitigation measures by identified natural hazard category. A summary of general changes and updates is also presented in Chapter 1 - Section 1.7 at the beginning of this document.

Table 14: City of Prescott Vulnerability and Risk Assessment

Hazard	Probability	Vulnerability	Risk Rating
Earthquake	HIGH	MEDIUM	HIGH
Severe Storm	HIGH	MEDIUM	HIGH
Wildfire	MEDIUM	LOW	LOW
Flooding	HIGH	MEDIUM	HIGH

INTRODUCTION

The City of Prescott was an active participant throughout the 2018 update process. The 2010 plan was reviewed to determine what information needed to be updated based on changes since 2010. The Local Multi-Hazard Mitigation Planning Guidance dated July 1, 2008 and Local Hazard Mitigation Plan Review Crosswalk were used to help determine what new components needed to be included in the plan and how the update process should be managed.

CURRENT POLICIES, CODES AND ORDINANCES

The City of Prescott has adopted the most recent editions of the International Building Code (IBC) and International Fire Code (IFC). The purpose of these codes is to provide minimum standards to protect public health and safety. The IBC provides general standards for seismic design, high wind design and high snow load design based on local characteristics.

Listed below are other applicable codes, plans, ordinances, and programs applicable to the City of Prescott jurisdiction:

- City of Prescott Comprehensive plan
- Countywide planning Policies (CPPs)
- International Building Code (IBC)
- International Fire Code (IFC)
- Critical Areas Regulations
- Floodplain Development Standards

JURISDICTION-SPECIFIC MITIGATION STRATEGIES AND PROJECTS

It should be noted that although the various mitigation strategies and/or projects listed on the following pages are contained in the City of Prescott portion of this plan, many of these strategies and/or projects would most likely benefit multiple jurisdictions, special purpose districts or agencies and may ultimately be paid for from a variety of sources.

While these mitigation strategies and/or projects have been recommended by various city officials and staff through the planning process, these strategies and/or projects have not been officially approved by the City of Prescott City Council and funding for these strategies and/or projects has not been allocated. In many cases, funding for these mitigation strategies and/or projects is dependent upon the City receiving future federal and/or state hazard mitigation grant funding.

The City also supports and recommends the multi-jurisdictional mitigation measures contained in Chapter 7 of this plan.

MULTI-HAZARD MITIGATION MEASURES

- PR-1. Evaluate structural integrity of City Hall and conduct structural mitigation to ensure the building meets current seismic design standards and is wind resistant. During the update process in 2010, the Planning Team focused mitigation measures on a specific need to evaluate and retrofit City Hall. This project was re-affirmed in the 2018 plan.

PRIORITY: High
LEAD AGENCY: City of Prescott
TIMELINE: Unfunded, Short term from funding
FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

- PR-2. Acquire emergency power to serve fire station and public water system. The 2010 plan contained a general goal to provide an emergency power source for critical facilities. During the update process in 2018, the Planning Team focused on these mitigation measures and reaffirmed the specific need for emergency power to the fire station and public water system for the 2018-2022 planning period.

PRIORITY: High
LEAD AGENCY: City of Prescott
TIMELINE: Unfunded, Short term from funding
FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

10.1 FLOODING

A few properties on the north side of the city are located within the 100-year floodplain for Whetstone Creek on a portion of the city on the south side is in the 100-year floodplain for the Touchet River. The last time there were significant losses due to flooding was in 1996.

FLOODING – OTHER PLANS, POLICIES, MITIGATION AND DEVELOPMENT STANDARDS

- The first phase of the **Walla Walla County Flood Response Plan (FRP)** was completed in June 2009 and builds on the previous **Walla Walla Comprehensive Flood Hazard Management Plan (CFHMP)** completed in 1999. Phase I of the FRP focuses on Mill Creek flood response. Additional

phases for the Coppei, Touchet, and Walla Walla Rivers will be added as they are completed. These phases and additions are anticipated during the 2018-2022 planning period. Currently, the FRP focuses primarily on response, not mitigation, but it does include valuable information regarding flooding, and inundation maps. The primary goal of the FRP was to “develop community awareness and understanding of flood hazards.” Relevant information from the existing Plan has been incorporated into this 2018 update of the HMP and the past 2010 update of the County’s HIVA. Increasing public awareness of flood hazards is one of the primary goals of this HMP update and educating the public about hazards is a key component of the mitigation process moving forward.

- The **Walla Walla County County-wide Planning Policies (CPPs)**, adopted in 1993, form a basis for planning and multi-jurisdictional coordination within Walla Walla County and have been adopted by the City of Prescott. The following CPPs directly address flood hazard mitigation:

CPP 11.5 The County will continue to utilize the Federal Emergency Management Agency program for floodplain management.

FLOODING – JURISDICTION MITIGATION OBJECTIVES AND PROJECTS

PR-3. Improve culverts on the north side of the City to accommodate a 100-year flood event from Whetstone Creek. This mitigation measure was continued in the 2018 plan, expanding on a general mitigation measure from the 2010 plan to “improve culverts.”

PRIORITY:	High
LEAD AGENCY:	City of Prescott
TIMELINE:	Unfunded, Short term from funding
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

10.2 WILDFIRE

Direct damage to properties within the City of Prescott is not likely to result from a wildfire event. Participation in a joint effort to develop a community wildfire protection plan will help the City reduce vulnerability.

WILDFIRE – OTHER PLANS, POLICIES, MITIGATION AND DEVELOPMENT STANDARDS

- The City of Prescott has adopted the International Code Council family of codes. This includes the **International Fire Code (IFC)**. The IFC provides regulations to protect life and property from all types of fire and explosion hazards. The regulations include general precautions against fire, emergency planning and preparedness, fire department access, hydrants, sprinkler and alarm systems, hazardous materials storage and use, etc. The fire code applies to all new construction and land development and some modifications to existing buildings.

WILDFIRE – JURISDICTION-SPECIFIC MITIGATION OBJECTIVES AND PROJECTS

- PR-4. The City of Prescott will work toward implementation of the Mill Creek and Walla Walla County Community Wildfire Protection Plan recommendations from the 2017 update to reduce wildfire vulnerability. This mitigation measure is new for the 2018-2022 planning period.

PRIORITY: Medium
LEAD AGENCY: City of Prescott
TIMELINE: Unfunded, Short term from funding
FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

10.3 EARTHQUAKES

There are indicators which suggest that City of Prescott could experience a large earthquake: proximity to large faults, evidence of large earthquakes in the recent geologic past, and historical seismicity. Although it is very difficult to predict when an earthquake will occur, we do have valuable information regarding vulnerability which helps focus hazard mitigation efforts. Although the area has significant geologic hazard, damage and loss from an earthquake has not occurred recently.

EARTHQUAKES – OTHER PLANS, POLICIES, MITIGATION AND DEVELOPMENT STANDARDS

Other plans, policies, and development standards relevant to mitigation of earthquake and other geologic hazards include the following:

- The City of Prescott has adopted a **Critical Areas Ordinance** which includes standards and information related to various geologic hazards including areas that could be prone to landslides and erosion during earthquakes.
- The City of Prescott has adopted the **International Building Code** which classifies the City as seismic zone D0. The IBC also provides design/construction requirements for geologic hazard areas including areas with steep slope which are landslide and erosion hazards which could be exacerbated by an earthquake.

EARTHQUAKES – JURISDICTION-SPECIFIC MITIGATION OBJECTIVES AND PROJECTS

- PR-5. Conduct structural assessment of water system to ensure that there are no leaks or weak sections which might vulnerable to damage during an earthquake event. This mitigation measure has been re-affirmed in the 2018 plan.

PRIORITY: High
LEAD AGENCY: City of Prescott
TIME-LINE: Unfunded, Short term from funding
FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

10.4 SEVERE STORMS

Like the rest of the County, Prescott is likely to experience severe storms although vulnerability is low.

SEVERE STORMS – OTHER PLANS, POLICIES, MITIGATION AND DEVELOPMENT STANDARDS

The City of Prescott implements the following mitigation measures through other planning and enforcement mechanisms:

- Through adoption of the **International Building Code (IBC)** the City of Prescott requires structures to be built to resist wind speeds up to 85 mph and allows installation of wind-resistant roofing. The building code also provides snow load, winter design, and severe weathering design requirements.
- The City of Prescott trims trees and other vegetation as necessary to protect roads and other infrastructure as part of an on-going maintenance program. The City also works with private property owners to ensure that trees and other vegetation do not increase vulnerability to severe storm damage.

SEVERE STORMS – JURISDICTION-SPECIFIC MITIGATION OBJECTIVES AND PROJECTS

The City of Prescott does not have any jurisdiction specific mitigation projects but does commit to all the severe storm multi-jurisdictional mitigation measures.

SEVERE STORMS – JURISDICTION-SPECIFIC MITIGATION OBJECTIVES AND PROJECTS

- PR-6. Install vegetative wind break surrounding city. This was a new mitigation measure in the 2010 plan and has been reaffirmed for the 2018-2022 planning period.

PRIORITY:	Medium
LEAD AGENCY:	City of Prescott
TIME-LINE:	Unfunded, Long term from funding
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

Chapter 11. JURISDICTION SPECIFIC HAZARD MITIGATION CITY OF WAITSBURG

This plan is an update of the 2010 Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan (HMP). Although it is only an update, the plan has been redesigned and reorganized so it is easier to use. This section has been continued from the 2010 plan and consolidates the jurisdiction specific mitigation measures and plan for the City of Waitsburg. This section has been updated through Planning Team efforts to include new and reconfirmed mitigation measures by identified natural hazard category. A summary of general changes and updates is also presented in Chapter 1 - Section 1.7 at the beginning of this document.

Table 15: City of Waitsburg Vulnerability and Risk Assessment

Hazard	Probability	Vulnerability	Risk Rating
Earthquake	HIGH	MEDIUM	HIGH
Severe Storm	HIGH	MEDIUM	HIGH
Wildfire	MEDIUM	LOW	LOW
Flooding	HIGH	MEDIUM	HIGH

INTRODUCTION

The City of Waitsburg has been an active participant throughout the 2018 update process. The 2010 plan was reviewed to determine what information needed to be updated during the 2018 review. The Local Multi-Hazard Mitigation Planning Guidance dated July 1, 2008 and Local Hazard Mitigation Plan Review Crosswalk were used to help determine what new components needed to be included in the plan and how the update process should be managed.

CURRENT POLICIES, CODES AND ORDINANCES

The City of Waitsburg has adopted the most recent editions of the International Building Code (IBC) and International Fire Code (IFC) (Waitsburg Municipal Code Title 15). The purpose of these codes is to provide minimum standards to protect public health and safety. The IBC provides general standards for seismic design, high wind design and high snow load design based on local characteristics. Both the building and fire codes are enforced and regulated through the City's Development Services Department.

Listed below are other applicable codes, plans, ordinances, and programs:

- City of Waitsburg Comprehensive plan
- Countywide planning Policies (CPPs)
- Title 11, Building Codes
- Article 10.2, Critical Areas
- Article 10.7, Flood Hazard Areas

JURISDICTION-SPECIFIC MITIGATION STRATEGIES AND PROJECTS

It should be noted that although the various mitigation strategies and/or projects listed on the following pages are contained in the City of Waitsburg portion of this plan, many of these strategies and/or projects would most likely benefit multiple jurisdictions, special purpose districts or agencies and may ultimately be paid for from a variety of sources.

While these mitigation strategies and/or projects have been recommended by various city officials and staff through the planning process, these strategies and/or projects have not been officially approved by the City of Waitsburg City Council and funding for these strategies and/or projects has not been allocated. In many cases, funding for these mitigation strategies and/or projects is dependent upon the City receiving future federal and/or state hazard mitigation grant funding.

The City also supports and recommends the multi-jurisdictional mitigation measures contained in Chapter 7 of this plan.

MULTI-HAZARD MITIGATION MEASURES

WG-1. Protect government records and priority systems by archiving records electronically and backing-up of this system in an off-site location. This mitigation measure has been reworded and reaffirmed as a priority for the jurisdiction during the 2018-2022 planning cycle.

PRIORITY:	Medium
LEAD AGENCY:	City of Waitsburg
TIMELINE:	Funded, Current and on-going
FUNDING SOURCE:	Local (Defined by entity in Section 3.5 on Page 24)

11.1 FLOODING

Significant portions of the City of Waitsburg are located within the 100-year floodplain. There are also parts of the City located within the floodway and the 500-year floodplain. Significant losses due to flooding for Waitsburg have occurred in 1996 and in 2012.

FLOODING – OTHER PLANS, POLICIES, MITIGATION AND DEVELOPMENT STANDARDS

- As mentioned above, Article 10.7 provides **flood protection measures** for the City of Waitsburg. This ordinance provides standards which regulate all new development in the 100-year floodplain in an effort to reduce potential damage.
- The first phase of the **Walla Walla County Flood Response Plan (FRP)** was completed in June 2009 and builds on the previous **Walla Walla Comprehensive Flood Hazard Management Plan (CFHMP)** completed in 1999. Phase I of the FRP focuses on Mill Creek flood response. Additional phases for the Coppei, Touchet, and Walla Walla Rivers will be added as they are completed. These phases and additions are anticipated during the 2018-2022 planning period. Currently, the FRP focuses primarily on response, not mitigation, but it does include valuable information regarding flooding, and inundation maps. The primary goal of the FRP was to “develop community awareness and understanding of flood hazards.” Relevant information from the existing Plan has been incorporated into this 2018 update of the HMP and the past 2010 update of the County’s HIVA. Increasing public awareness of flood hazards is one of the primary goals of this HMP update

and educating the public about hazards is a key component of the mitigation process moving forward.

- The **Walla Walla County County-wide planning Policies (CPPs)**, adopted in 1993, form a basis for planning and multi-jurisdictional coordination within Walla Walla County and have been adopted by the City of Waitsburg. The following CPPs directly address flood hazard mitigation:

CPP 11.5 The County will continue to utilize the Federal Emergency Management Agency program for floodplain management.

FLOODING – JURISDICTION MITIGATION OBJECTIVES AND PROJECTS

WG-2. Relocate City shop building outside the floodplain. This mitigation measure was identified during 2010 update and is re-affirmed for the 2018-2022 planning cycle.

PRIORITY: High
LEAD AGENCY: City of Waitsburg
TIMELINE: Unfunded, Long term from funding
FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

WG-3. Participate in the 2018-2022 planning period update (Phase II) of the 2009 Flood Response Plan for the County. This mitigation measure is new for the 2018 update.

PRIORITY: High
LEAD AGENCY: City of Waitsburg
TIMELINE: Unfunded, Long term from funding
FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

WG-4. Install culverts on Main Street. Since completion of the 2010 Mitigation plan, four culverts were identified as needing to be installed as a flood mitigation measure. This mitigation measure is ongoing for the 2018-2022 planning period and has been expanded further to include a general mitigation goal of “improving culverts.”

PRIORITY: High
LEAD AGENCY: City of Waitsburg
TIMELINE: Unfunded, Short term from funding
FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

WG-5. Support reactivation of the Prescott-Bolles Flood Control District and encourage public participation for continued operation. The flood control district stalled after 1996 and has not been active since. There has been no levy and, therefore, no money available. It has also been difficult to get necessary public participation to sustain the district. The Planning Team identified this mitigation measure during the 2018 HMP update confirming that planning and implementation would be more efficient with the flood control district in place and with resources to support it.

PRIORITY: High
LEAD AGENCY: City of Waitsburg and Walla Walla County
TIMELINE: Unfunded, Long term from funding
FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

WG-6. Reconstruct and improve road behind fairgrounds. This elevated road is critical during flood events because it allows equipment access necessary for flood protection and response. The road needs to be widened and armored.

PRIORITY: High
LEAD AGENCY: City of Waitsburg and the US Army Corps of Engineers (USACE)
TIMELINE: Partially funded, Short term from funding
FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

WG-7. Improve flood monitoring and warning systems for Coppei Creek and the Touchet River, support installation of river gauge near Dayton on Coppei Creek, south of the city limits. This measure is continued in the 2018 plan. The 2010 plan contained a general project to “improve flood monitoring and warning systems.” The Planning Team identified this mitigation measure as a specific project during the update and refined it to specify a particular location.

PRIORITY: High
LEAD AGENCY: City of Waitsburg
TIMELINE: Unfunded, Long term from funding
FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

WG-8. Remove of flood prone structures in the floodway related to the 100-year flood plain associated with the Touchet River. The structure locations vary, but for the greater part they are located along U.S. Hwy 12 and Harmon Street as well as some trailer park properties along Murphy Street. (2020 Revision)

PRIORITY: High
LEAD AGENCY: City of Waitsburg and Walla Walla County
TIMELINE: Unfunded, Long term from funding
FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

11.2 WILDFIRE

Direct damage to properties within the City of Waitsburg is not likely to result from a wildfire event. Vulnerability to wildfire for the city is primarily based on the location of the municipal watershed within the Wildland Urban Interface (WUI). The City has conducted hazard mitigation to reduce vulnerability within the watershed in the past, and it is critical that the City continue these efforts in order to protect water quality.

Participation in a joint effort to develop a community wildfire protection plan will help the City reduce vulnerability.

WILDFIRE – OTHER PLANS, POLICIES, MITIGATION AND DEVELOPMENT STANDARDS

- The City of Waitsburg has adopted the International Code Council family of codes through Waitsburg Municipal Code Title 11. This includes the **International Fire Code (IFC)**. The IFC provides regulations to protect life and property from all types of fire and explosion hazards. The regulations include general precautions against fire, emergency planning and preparedness, fire department access, hydrants, sprinkler and alarm systems, hazardous materials storage and use, etc. The fire code applies to all new construction and land development and some modifications to existing buildings.

- Between 2008 and 2009 the City conduct mitigation projects within the City of Waitsburg Watershed, cutting and trimming trees to reduce wildfire hazard. It will be necessary to continue such mitigation projects within the watershed. Assessments and planning are necessary to identify a comprehensive mitigation strategy for this critical area.

WILDFIRE – JURISDICTION-SPECIFIC MITIGATION OBJECTIVES AND PROJECTS

WG-9. The City of Waitsburg will work toward implementation of the Mill Creek and Walla Walla County Community Wildfire Protection Plan recommendations from the 2017 update to reduce wildfire vulnerability. This mitigation measure is new for the 2018-2022 planning period.

PRIORITY:	Medium
LEAD AGENCY:	City of Waitsburg
TIME-LINE:	Unfunded, Long term from funding
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

11.3 EARTHQUAKES

There are indicators which suggest the City of Waitsburg could experience a large earthquake: proximity to large faults, evidence of large earthquakes in the recent geologic past, and historical seismicity. Although it is very difficult to predict when an earthquake will occur, we do have valuable information regarding vulnerability which helps focus hazard mitigation efforts. Although the area has significant geologic hazard, damage and loss from an earthquake has not occurred recently.

EARTHQUAKES – OTHER PLANS, POLICIES, MITIGATION AND DEVELOPMENT STANDARDS

Other plans, policies, and development standards relevant to mitigation of earthquake and other geologic hazards include the following:

- The City of Waitsburg has adopted a **Critical Areas Ordinance** via Article 10.2 which includes standards and information related to various geologic hazards including areas that could be prone to landslides and erosion during earthquakes.
- The City of Waitsburg has adopted the **International Building Code** which classifies the City as seismic zone D0. The IBC also provides design/construction requirements for geologic hazard areas including areas with steep slope which are landslide and erosion hazards which could be exacerbated by an earthquake.

EARTHQUAKES – JURISDICTION-SPECIFIC MITIGATION OBJECTIVES AND PROJECTS

WG-10. Minimize damage to public sewer and storm water systems by making structural upgrades to systems including lining sewer lines. Although general goals to reduce vulnerability to critical facilities and infrastructure were included in the 2004 and 2010 plans, this mitigation measure has not been completed and was reaffirmed as a priority for the 2018-2022 planning period by the Planning Team.

PRIORITY:	High
LEAD AGENCY:	City of Waitsburg
TIME-LINE:	Partially funded, Current and on-going
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

11.4 SEVERE STORMS

The City of Waitsburg last experienced significant damage and loss from a severe storm event on January 4, 2008 when central Oregon and the foothills of the Blue Mountains experienced a wind storm. Strongest gust speed at the Walla Walla airport was 78 mph and strongest sustained wind speed was 55 mph. Estimates were that \$4.9 million dollars in damage was experienced within Walla Walla County (not just unincorporated). In the Walla Walla Valley approximately 4 in 10 homes received damage from the storm. Much of the damage was due to falling trees.

SEVERE STORMS – OTHER PLANS, POLICIES, MITIGATION AND DEVELOPMENT STANDARDS

The City of Waitsburg implements the following mitigation measures through other planning and enforcement mechanisms:

- Through adoption of the **International Building Code (IBC)** the City of Waitsburg requires structures to be built to resist wind speeds up to 85 mph and allows installation of wind-resistant roofing. The building code also provides snow load, winter design, and severe weathering design requirements.
- The City of Waitsburg trims trees and other vegetation as necessary to protect roads and other infrastructure as part of an on-going maintenance program. The City also works with private property owners to ensure that trees and other vegetation do not increase vulnerability to severe storm damage. Letters are sent to property owners are problem areas are identified.

SEVERE STORMS – JURISDICTION-SPECIFIC MITIGATION OBJECTIVES AND PROJECTS

The City of Waitsburg does not have any jurisdiction specific mitigation projects but does commit to all the severe storm multi-jurisdictional mitigation measures.

Chapter 12. JURISDICTION SPECIFIC HAZARD MITIGATION CITY OF WALLA WALLA

This plan is an update of the 2010 Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan (HMP). Although it is only an update, the plan has been redesigned and reorganized so it is easier to use. This section has been continued from the 2010 plan and consolidates the jurisdiction specific mitigation measures and plan for the City of Walla Walla. This section has been updated through Planning Team efforts to include new and reconfirmed mitigation measures by identified natural hazard category. A summary of general changes and updates is also presented in Chapter 1 - Section 1.7 at the beginning of this document.

Table 16: City of Walla Walla Vulnerability and Risk Assessment

Hazard	Probability	Vulnerability	Risk Rating
Earthquake	MEDIUM	HIGH	HIGH
Severe Storm	HIGH	MEDIUM-HIGH	HIGH
Wildfire	LOW	HIGH	LOW**
Flooding	HIGH	HIGH	HIGH
Mass Shooting*	HIGH	HIGH	HIGH
Terrorism*	HIGH	HIGH	HIGH

* These risks/hazards are within the county jurisdiction and included in this updated 2017 HMP from the previous 2010 version. The risk for these items does include updated information and assessment as completed, and supplied by, the jurisdiction.

** Fire risk within the City is considered “LOW” however impacts to the City’s water supply from a wildfire within the Mill Creek Watershed could be debilitating and therefore ranks the vulnerability at “HIGH”.

12.1 INTRODUCTION

The City of Walla Walla has been an active participant throughout the 2018 update process. The 2010 plan was reviewed to determine what information needed to be updated based on changes since 2010. The Local Multi-Hazard Mitigation Planning Guidance dated July 1, 2008 and Local Hazard Mitigation plan Review Crosswalk were used to help determine what new components needed to be included in the plan and how the update process should be managed.

12.2 CURRENT POLICIES, CODES AND ORDINANCES

The City of Walla Walla has adopted the 2006 editions of the International Building Code (IBC) and International Fire Code (IFC) (Walla Walla Municipal Code Title 15). The purpose of these codes is to provide minimum standards to protect public health and safety. The IBC provides general standards for

seismic design, high wind design and high snow load design based on local characteristics. Both the building and fire codes are enforced and regulated through the City's Development Services Department.

Listed below are other applicable codes, plans, ordinances, and programs:

- City of Walla Walla Comprehensive plan
- Countywide planning Policies (CPPs)
- Title 15, Buildings and Construction
- Chapter 21.04, Critical Areas

12.3 JURISDICTION-SPECIFIC MITIGATION STRATEGIES AND PROJECTS

It should be noted that although the various mitigation strategies and/or projects listed on the following pages are contained in the City of Walla Walla portion of this plan, many of these strategies and/or projects would most likely benefit multiple jurisdictions, special purpose districts or agencies and may ultimately be funded from a variety of sources.

While these mitigation strategies and/or projects have been suggested by various city officials and staff through the planning process, these strategies and/or projects have not been officially approved by the City of Walla Walla City Council and funding for these strategies and/or projects has not been allocated. In many cases, funding for these mitigation strategies and/or projects is dependent upon the City receiving future federal and/or state hazard mitigation grant funding.

The City of Walla Walla also supports and recommends the multi-jurisdictional mitigation measures contained in Chapter 7 of this plan.

12.4 MULTI-HAZARD MITIGATION MEASURES

- WW-1. Conduct design, engineering and retrofit of Senior Center at the Park with showers and emergency power so that the building can be used as a community shelter and provide meals to other occupied shelters during an event. This mitigation measure has been re-affirmed in the 2018 plan and would benefit multiple jurisdictions.

PRIORITY:	Medium
LEAD AGENCY:	City of Walla Walla
TIMELINE:	Unfunded, Short term from funding
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

- WW-2. Acquire emergency power generator and complete building re-wiring for the Public Works facility. This specific mitigation measure is continued in the 2018 plan although general goals to provide emergency power to critical facilities were included in the 2010 plan. During the update process, need for emergency power at this facility was specifically identified by the City's Planning Team.

PRIORITY:	High
LEAD AGENCY:	City of Walla Walla
TIMELINE:	Unfunded, Short term from funding
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

12.5 FLOODING

No frequently flooded areas are located within the City of Walla Walla at this time although the City still has potential to experience losses due to flood events, including flash flooding. The infrastructure associated with Mill Creek is of concern and the multiple jurisdictions controlling parts of the hydrologic control system associated with it have come together to begin a plan to address these concerns. A breakdown of the authorities involved, and the location of their stream reaches and infrastructure are included in the following.

The **Walla Walla County County-wide planning Policies (CPPs)**, adopted in 1993, form a basis for planning and multi-jurisdictional coordination within Walla Walla County and have been adopted by the City of Walla Walla. The following CPPs directly address flood hazard mitigation:

CPP 11.5 The County will continue to utilize the Federal Emergency Management Agency program for floodplain management.

FLOODING – *OTHER PLANS, POLICIES, MITIGATION AND DEVELOPMENT STANDARDS*

- The first phase of the **Walla Walla County Flood Response Plan (FRP)** was completed in June 2009 and builds on the previous **Walla Walla Comprehensive Flood Hazard Management Plan (CFHMP)** completed in 1999. Phase I of the FRP focuses on Mill Creek flood response. Additional phases for the Coppei, Touchet, and Walla Walla Rivers will be added as they are completed. These phases and additions are anticipated during the 2018-2022 planning period. Currently, the FRP focuses primarily on response, not mitigation, but it does include valuable information regarding flooding, and inundation maps. The primary goal of the FRP was to “develop community awareness and understanding of flood hazards.” Relevant information from the existing Plan has been incorporated into this 2018 update of the HMP and the past 2010 update of the County’s HIVA. Increasing public awareness of flood hazards is one of the primary goals of this HMP update and educating the public about hazards is a key component of the mitigation process moving forward.

FLOODING – *JURISDICTION MITIGATION OBJECTIVES AND PROJECTS*

WW-3. The City of Walla Walla in cooperation with local, State, and Federal Legislators is pursuing the United States Corps of Engineers initiate a General Investigative Study for the Mill Creek Channel. This Study will address structural improvement needs for the existing channel. If the Study is undertaken by the Corps as hoped, its improvements could be fiscally programmed for funding/completion. This is a new mitigation goal as of the 2018 update process.

PRIORITY:	High
LEAD AGENCY:	Mill Creek Flood Control Zone District
TIME-LINE:	Federal funding recently acquired
FUNDING SOURCE:	Federal (Defined by entity in Section 3.5 on Page 24)

WW-4. The City of Walla Walla in cooperation with multiple stakeholders is planning to complete an update on the 2009 Flood Response Plan (FRP) that includes the addition of other jurisdictions within the County (Phase 2). This is a new mitigation goal as of the 2018 update process.

PRIORITY:	High
LEAD AGENCY:	City of Walla Walla

TIME-LINE: Unfunded, Short term from funding
FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

WW-5. Conduct flood vulnerability assessment of Cottonwood Sewage Lift Station. This station is an identified critical facility. Through the 2018 risk assessment it was noted that the facility is located within the 100-year floodplain, and it was unknown what the vulnerability level for the lift station is. This project is continued from the 2018 plan.

PRIORITY: High
LEAD AGENCY: City of Walla Walla
TIME-LINE: Unfunded, Short term from funding
FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

12.6 WILDFIRE

Direct damage to properties within the City of Walla Walla is not likely to result from a wildfire event. Vulnerability to wildfire for the city is primarily based on the location of the Mill Creek Municipal Watershed adjacent to the Wildland Urban Interface (WUI). The municipal watershed provides approximately 90 percent of the City's municipal water supply. Large fires in the watershed have been avoided for the past 100 years due to effective USFS fire suppression. The City has completed fire fuels reduction projects in 2008, 2015, and 2018 on areas within the watershed it has ownership. It is critical that the City continue the maintenance and progress of these efforts into the future in order to protect water quality.

WILDFIRE – OTHER PLANS, POLICIES, MITIGATION AND DEVELOPMENT STANDARDS

The City has participated in wildfire hazard mitigation through a variety of different mechanisms:

- The watershed is characterized by forest conditions with heavy fuel loads and is vulnerable to wildfires. A destructive wildfire could have serious negative effects on water quality. The City and Walla Walla County completed and adopted the **Mill Creek and Walla Walla County Community Wildfire Protection Plan** in 2017. This plan contains many mitigation measures to be implemented within the WUI which will reduce wildfire vulnerability to the municipal watershed. Additionally, the USFS has jurisdiction over more than 90% of the Mill Creek watershed and the City is dependent on the fire protection services of that agency for those areas.
- The City of Walla Walla has adopted the International Code Council family of codes through Walla Walla Municipal Code Title 15. This includes the **International Fire Code (IFC)**. The IFC provides regulations to protect life and property from all types of fire and explosion hazards. The regulations include general precautions against fire, emergency planning and preparedness, fire department access, hydrants, sprinkler and alarm systems, hazardous materials storage and use, etc. The fire code applies to all new construction and land development and some modifications to existing buildings.

WILDFIRE – JURISDICTION-SPECIFIC MITIGATION OBJECTIVES AND PROJECTS

WW-6. Continue with implementation of the Mill Creek and Walla Walla County Community Wildfire Protection Plan recommendations from the 2017 update to reduce county and city wildfire vulnerability and risk to the Mill Creek Municipal Watershed. This mitigation measure only included Mill Creek during the 2010 HMP and has been expanded to include all of Walla Walla

County and an updated assessment of the Mill Creek Municipal Watershed for the 2018-2022 planning period.

PRIORITY: Medium
LEAD AGENCY: City of Walla Walla
TIME-LINE: Partially funded, Current and on-going
FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

12.7 EARTHQUAKES

There are indicators which suggest that City of Walla Walla could experience a large earthquake: proximity to large faults, evidence of large earthquakes in the recent geologic past, and historical seismicity. Although it is very difficult to predict when an earthquake will occur, we do have valuable information regarding vulnerability which helps focus hazard mitigation efforts. Although the area has significant geologic hazard, damage and loss from an earthquake has not occurred recently.

EARTHQUAKES – OTHER PLANS, POLICIES, MITIGATION AND DEVELOPMENT STANDARDS

Other plans, policies, and development standards relevant to mitigation of earthquake and other geologic hazards include the following:

- As part of the 2008 **Critical Areas Ordinance** update completed in 2008 the City adopted new standards and background information related to various geologic hazards including landslide, erosion, and seismic hazard areas. In areas with steep or unstable slopes or with soil characteristics prone to liquefaction, geotechnical reports are required as part of development permits. When design and construction methods cannot reduce the risk to acceptable levels development may be prohibited.
- The City of Walla Walla has adopted the **International Building Code** which classifies the City as seismic zone D0. The IBC also provides design/construction requirements for geologic hazard areas including areas with steep slope which are landslide and erosion hazards which could be exacerbated by an earthquake.

EARTHQUAKES – JURISDICTION-SPECIFIC MITIGATION OBJECTIVES AND PROJECTS

WW-7. Conduct structural assessment and necessary improvements to City Hall to reduce potential earthquake damage. Although general goals to reduce vulnerability to critical facilities were included in 2010, this specific mitigation measure was re-affirmed in 2018 by the Planning Team.

PRIORITY: Medium
LEAD AGENCY: City of Walla Walla
TIME-LINE: Unfunded, Short term from funding
FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

WW-8. Conduct structural assessment and necessary improvements to city public parking infrastructure nearby and overlaying the Mill Creek diversion canal under the City to reduce potential earthquake damage has been identified as a new mitigation need. Although general goals to reduce structural vulnerability were included in 2010, this specific mitigation measure is new in the 2018 HMP.

PRIORITY: High
LEAD AGENCY: City of Walla Walla
TIME-LINE: Unfunded, Short term from funding

FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

WW-9. Construct seismic retrofit upgrades to the above ground water storage tanks connections (3). The tanks need to be online after an earthquake to provide the City with drinking water and fire protection. A Seismic upgrade would consist of flexible earthquake joints connecting the tanks to the pipelines, earthquake anchor system so the tanks do not slide off the foundations, and larger tank vents so if the pipe line ruptures and rapidly drains the tank the larger vent will prevent a vacuum collapse of the tank. (Version 2 revision)

PRIORITY: High

LEAD AGENCY: City of Walla Walla

TIME-LINE: Unfunded, Short term from funding

FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

WW-10. Replace 22,000 linear feet of 24" water main. The City water system is fed with dual transmission mains from the water treatment plant. One main was constructed in 1928 the other in 1953. The former is a 1928 riveted steel water main that is highly susceptible to earthquake damage. The latter is a steel line at the end of its service life requiring frequent repairs. The project would replace both these pipelines with new earthquake resistant transmission mains. (Version 2 revision)

PRIORITY: High

LEAD AGENCY: City of Walla Walla

TIME-LINE: Unfunded, Short term from funding

FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

12.8 SEVERE STORMS

The City of Walla Walla last experienced significant damage and loss from a severe storm event on January 4, 2008 when Central Oregon and the foothills of the Blue Mountains experienced a wind storm. Strongest gust speed at the Walla Walla airport was 78 mph and strongest sustained wind speed was 55 mph. Estimates were that 4.9 million dollars in damage was experienced within Walla Walla County (not just unincorporated). In the Walla Walla Valley approximately 4 in 10 homes received damage from the storm. Much of the damage was due to falling trees.

SEVERE STORMS – OTHER PLANS, POLICIES, MITIGATION AND DEVELOPMENT STANDARDS

The City of Walla Walla implements the following mitigation measures through other planning and enforcement mechanisms:

- Through adoption of the **International Building Code (IBC)** the City requires structures to be built to resist wind speeds up to 85 mph and allows installation of wind-resistant roofing. The building code also provides snow load, winter design, and severe weathering design requirements.
- The City of Walla Walla ensures that trees and vegetation are pruned and trimmed as necessary to protect roads, bridges and other infrastructure from damage.

SEVERE STORMS – JURISDICTION-SPECIFIC MITIGATION OBJECTIVES AND PROJECTS

The City of Walla Walla does not have any jurisdiction specific mitigation projects but does commit to all severe storm multi-jurisdictional mitigation measures.

Chapter 13. JURISDICTION SPECIFIC HAZARD MITIGATION WALLA WALLA PUBLIC SCHOOL DISTRICT

This plan is an update of the 2010 Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan (HMP). Although it is only an update, the plan has been redesigned and reorganized so it is easier to use. This section has been continued from the 2010 plan and consolidates the jurisdiction specific mitigation measures and plan for Walla Walla Public School District. This section has been updated through Planning Team efforts to include new and reconfirmed mitigation measures by identified natural hazard category. A summary of general changes and updates is also presented in Chapter 1 - Section 1.7 at the beginning of this document.

Table 17: Walla Walla Public Schools Vulnerability and Risk Assessment

Hazard	Probability	Vulnerability	Risk Rating
Earthquake	HIGH	MEDIUM	HIGH
Severe Storm	HIGH	LOW	MEDIUM
Wildfire	LOW	LOW	LOW
Flooding	LOW	LOW	LOW

13.1 INTRODUCTION

Walla Walla Public School District has been an active participant throughout the 2018 update process. Mitigation projects in the original plan addressed hazards for schools and school districts generally. The 2010 plan was reviewed to determine what information needed to be updated based on changes since 2010. The Local Multi-Hazard Mitigation Planning Guidance dated July 1, 2008 and Local Hazard Mitigation Plan Review Crosswalk were used to help determine what new components needed to be included in the plan and how the update process should be managed.

Walla Walla Public School District has a population of about 6,000 students. The district is comprised of: 2 high schools, 2 middle schools, 6 elementary schools, an Opportunity Program, SEA-TECH and a child development center hosting HeadStart/ECEAP programs. The district employs over 800 staff members. Approximately 70% of revenue comes from the state, 16% locally and 14% from federal sources.

13.2 CURRENT POLICIES, CODES AND ORDINANCES

The Walla Walla Public School District has adopted the 2017 editions of the International Building Code (IBC) and International Fire Code 2018 (IFC) (Walla Walla Municipal Code Title 15 2018) in alignment with the City of Walla Walla. The purpose of these codes are to provide minimum standards to protect public health and safety. The IBC provides general standards for seismic design, high wind design and high snow load design based on local characteristics. Both the building and fire codes are enforced and regulated through the City's Development Services Department.

Listed below are other applicable codes, plans, ordinances, and programs:

- The Walla Walla Municipal Code is current through Ordinance 2018-03, passed January 10, 2018
- City of Walla Walla Comprehensive plan
- Title 15, Buildings and Construction
- Chapter 21.04, Critical Areas
- Walla Walla County Comprehensive plan June 2018

Additionally, in support of the current HMP efforts and associated identified risks Walla Walla Public Schools is proposing a \$65.6 million Replacement Bond on the November 6, 2018 General Election ballot to renovate three schools and fund \$6.6 million in safety and infrastructure improvements. This proposal would renovate Walla Walla High School, Lincoln High School and Pioneer Middle School. Renovation improvements at all three sites would include meeting current seismic codes and other required safety-related building codes. This Replacement Bond proposal also includes \$52.6 million in State Match funds which will be applied to the Walla Walla High School, Lincoln High School and Pioneer Middle School projects. The November 6, 2018 Replacement Bond proposal requires a 60 percent yes vote for approval.

13.3 JURISDICTION-SPECIFIC MITIGATION STRATEGIES AND PROJECTS

It should be noted that although the various mitigation strategies and/or projects listed on the following pages are contained in the Walla Walla Public School District portion of this plan, many of these strategies and/or projects would most likely benefit multiple jurisdictions, special purpose districts or agencies and may ultimately be paid for from a variety of sources.

While these mitigation strategies and/or projects have been recommended by various city officials and staff through the planning process, these strategies and/or projects have not been officially approved by the Walla Walla Public School District and funding for these strategies and/or projects has not been allocated. In many cases, funding for these mitigation strategies and/or projects is dependent upon the district receiving future federal and/or state hazard mitigation grant funding.

Walla Walla Public School District also supports and recommends the multi-jurisdictional mitigation measures contained in Chapter 7 of this plan.

13.4 EARTHQUAKES

The primary hazard facing the school district is a threat from earthquakes. Walla Walla Public School District has been part of a pilot project to assess the seismic risk of all schools in the district. This project is a cooperative effort between many agencies, including: Washington State Department of Natural Resources (DNR), Washington State Emergency Management Division (EMD), the Office of Superintendent of Public Instruction (OSPI), and the Washington State Seismic Safety Team. Seismic assessments were completed in August 2018 and at the close of the project the district will receive a study report that details the findings for each school facility (estimated to be delivered in 2019). The report will include an ordered list of structures that should be targeted for retrofitting.

EARTHQUAKES – JURISDICTION-SPECIFIC MITIGATION OBJECTIVES AND PROJECTS

- PS-1. Conduct assessment of seismic integrity for all school facilities. This mitigation project has been modified from the 2010 plan and is anticipated to be completed within 2018 and reported on in early 2019.

PRIORITY: High
 LEAD AGENCY: Washington State Department of Natural Resources
 Walla Walla Public School District
 TIME-LINE: 2018-2019
 FUNDING SOURCE: State (Defined by entity in Section 3.5 on Page 24)

PS-2. Conduct non-structural mitigation in all Walla Walla Public Schools buildings. This mitigation project has been modified from the 2010 plan and following the report anticipated for 2019 the District will update their mitigation targets and goals for the 2018-2022 planning period.

PRIORITY: High
 LEAD AGENCY: Washington State Department of Natural Resources
 Walla Walla Public School District
 TIME-LINE: Current and ongoing
 FUNDING SOURCE: Local (Defined by entity in Section 3.5 on Page 24)

PS-3. Retrofit school buildings to meet current seismic design standards based on 2018 seismic assessments using prioritization outlined in final report. The results of the seismic assessment being conducted by the Washington State Department of Natural Resources and other state, local and federal agencies will inform this project. This mitigation goal is new for the 2018 plan and has been modified from the 2010 plan.

PRIORITY: High
 LEAD AGENCY: Washington State Department of Natural Resources
 Walla Walla Public School District
 TIME-LINE: Unfunded, Long term from funding
 FUNDING SOURCE: Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

13.5 SEVERE STORMS

Walla Walla Public School District was last threatened by severe storm event on January 4, 2008 when Central Oregon and the foothills of the Blue Mountains experienced a wind storm. The strongest gust speed at the Walla Walla airport was 78 mph and strongest sustained wind speed was 55 mph. In the Walla Walla Valley approximately 4 in 10 homes received damage from the storm. Much of the damage was due to falling trees.

SEVERE STORMS – OTHER PLANS, POLICIES, MITIGATION AND DEVELOPMENT STANDARDS

The Walla Walla Public School District implements the following mitigation measures through City and County planning and enforcement mechanisms:

- Through adoption of the **International Building Code (IBC)** the School District complies with the requirements of structures to be built to resist wind speeds up to 85 mph and the installation of wind-resistant roofing. Local building codes also provide snow load, winter design, and severe weathering design requirements.
- Walla Walla Public School District works with other entities such as the City of Walla Walla to ensure trees and vegetation are pruned and trimmed as necessary to protect roads, bridges and other infrastructure associated with School District facilities.

SEVERE STORMS – JURISDICTION-SPECIFIC MITIGATION OBJECTIVES AND PROJECTS

The Walla Walla Public School District does not have any jurisdiction specific mitigation projects but does commit to all severe storm multi-jurisdictional mitigation measures.

13.6 WILDFIRE

Direct damage to properties within the Walla Walla Public School District is not likely to result from a wildfire event. Vulnerability to wildfire for the School District is primarily based on the location of the municipal watershed within the Wildland Urban Interface (WUI) and the impacts a wildfire may have on municipal water supplies. Walla Walla County has conducted hazard mitigation measures to reduce vulnerability within the watershed in the past, and plans to continue these efforts into the future in order to protect water quality.

WILDFIRE – OTHER PLANS, POLICIES, MITIGATION AND DEVELOPMENT STANDARDS

- The Walla Walla Public School District has adopted the International Code Council family of codes through local Municipal Codes for Walla Walla County. This includes the **International Fire Code (IFC)**. The IFC provides regulations to protect life and property from all types of fire and explosion hazards. The regulations include general precautions against fire, emergency planning and preparedness, fire department access, hydrants, sprinkler and alarm systems, hazardous materials storage and use, etc. The fire code applies to all new construction and land development and some modifications to existing buildings.

WILDFIRE – JURISDICTION-SPECIFIC MITIGATION OBJECTIVES AND PROJECTS

PS-1 The Walla Walla Public School District will work with other County jurisdictions and continue to support efforts that implement the Mill Creek and Walla Walla County Community Wildfire Protection Plan recommendations from the 2017 update to reduce wildfire vulnerability. This mitigation measure is new for the 2018-2022 planning period.

PRIORITY:	Low
LEAD AGENCY:	City of Walla Walla and Walla Walla County EMD
TIME-LINE:	Unfunded, Long term from funding
FUNDING SOURCE:	Local, State, and Federal (Defined by entity in Section 3.5 on Page 24)

13.7 FLOODING

The Walla Walla Public School District does not have any infrastructure located in frequently flooded areas at this time, although the City of Walla Walla has potential to experience losses due to flood events and this would impact the operations of the Walla Walla Public School District. The infrastructure associated with Mill Creek is of mutual concern and the multiple jurisdictions controlling parts of the hydrologic control system associated with it have come together to begin a plan to address these concerns.

- **The Walla Walla County County-wide planning Policies (CPPs)**, adopted in 1993, form a basis for planning and multi-jurisdictional coordination within Walla Walla County and have been adopted by the City of Walla Walla and the Walla Walla Public School District. The following CPP directly addresses flood hazard mitigation:

CPP 11.5 The Walla Walla Public School District with continue to work with the County in their efforts to continue utilization of the Federal Emergency Management Agency program for floodplain management.

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APPENDIX A: CRITICAL FACILITIES

This plan is an update of the 2010 Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan (HMP). This section is an updated version of Section V from the 2004 plan and has been continued and updated in this 2018 revision from the efforts in the 2010 plan.

14.1 INTRODUCTION

Critical facilities are those essential to the health and welfare of the whole population and are especially important following hazard events. Transportation systems, lifeline utility systems, high potential loss facilities and hazardous material facilities may also be considered critical. The list of critical facilities in the original plan has been reviewed and amended so it is accurate. Facilities have been classified generally by type and are listed in alphabetical order for simplicity.

14.2 FIRE DISTRICT FACILITIES

WALLA WALLA COUNTY FIRE DISTRICT #5, STATION 53	BURBANK	FIRE STATION
WALLA WALLA COUNTY FIRE DISTRICT #5, STATION 51	BURBANK	FIRE STATION
WALLA WALLA COUNTY FIRE DISTRICT #5, STATION 54	BURBANK	FIRE STATION
COLLEGE PLACE FIRE DEPARTMENT	COLLEGE PLACE	FIRE STATION
WALLA WALLA COUNTY FIRE DISTRICT #8, DIXIE	DIXIE	FIRE STATION
WALLA WALLA COUNTY FIRE DISTRICT #3, LEE STATION	PRESCOTT	FIRE STATION
WALLA WALLA COUNTY FIRE DISTRICT #1, PLEASANT VIEW	PRESCOTT	FIRE STATION
WALLA WALLA COUNTY FIRE DISTRICT #3, EUREKA STATION	PRESCOTT	FIRE STATION
WALLA WALLA COUNTY FIRE DISTRICT #7, LAMAR STATION	PRESCOTT	FIRE STATION
WALLA WALLA COUNTY FIRE DISTRICT #1, CLYDE	PRESCOTT	FIRE STATION
WALLA WALLA COUNTY FIRE DISTRICT #7, BERRYMAN STATION	PRESCOTT	FIRE STATION
WALLA WALLA COUNTY FIRE DISTRICT #7, PRESCOTT STATION	PRESCOTT	FIRE STATION
WALLA WALLA COUNTY FIRE DISTRICT #3, FISHOOK STATION	PRESCOTT	FIRE STATION
PRESCOTT STATION	PRESCOTT	FIRE STATION
WALLA WALLA COUNTY FIRE DISTRICT #6, LOWDEN	TOUCHET	FIRE STATION
WALLA WALLA COUNTY FIRE DISTRICT #6, TOUCHET	TOUCHET	FIRE STATION
WALLA WALLA COUNTY FIRE DISTRICT #2, WAITSBURG	WAITSBURG	FIRE STATION
WAITSBURG FIRE STATION	WAITSBURG	FIRE STATION
WALLA WALLA COUNTY FIRE DISTRICT #4, STATION 42	WALLA WALLA	FIRE STATION
WALLA WALLA COUNTY FIRE DISTRICT #4, STATION 45	WALLA WALLA	FIRE STATION
WALLA WALLA COUNTY FIRE DISTRICT #4, STATION 44	WALLA WALLA	FIRE STATION
WALLA WALLA AIRPORT FIRE DEPARTMENT	WALLA WALLA	FIRE STATION
WALLA WALLA CITY FIRE, STATION 1	WALLA WALLA	FIRE STATION

WALLA WALLA CITY FIRE, STATION 2	WALLA WALLA	FIRE STATION
WALLA WALLA COUNTY FIRE DISTRICT #4, STATION 41	WALLA WALLA	FIRE STATION
WALLA WALLA COUNTY FIRE DISTRICT #4, STATION 43	WALLA WALLA	FIRE STATION
FIRE STATION 11-1	WALLA WALLA	FIRE STATION
FIRE STATION 11-2	WALLA WALLA	FIRE STATION
WALLA WALLA COUNTY FIRE DISTRICT #5, STATION 52	WALLULA	FIRE STATION

14.3 SCHOOL DISTRICT FACILITIES

COLUMBIA HIGH SCHOOL	BURBANK	SCHOOL
COLUMBIA MIDDLE SCHOOL	BURBANK	SCHOOL
COLUMBIA ELEMENTARY SCHOOL	BURBANK	SCHOOL
WALLA WALLA UNIVERSITY	COLLEGE PLACE	SCHOOL
DAVIS ELEMENTARY SCHOOL	COLLEGE PLACE	SCHOOL
JOHN SAGER MIDDLE SCHOOL	COLLEGE PLACE	SCHOOL
COLLEGE PLACE HIGH SCHOOL	COLLEGE PLACE	SCHOOL
WALLA WALLA VALLEY ACADEMY	COLLEGE PLACE	SCHOOL
ROGERS, CLARA E. ELEMENTARY SCHOOL	COLLEGE PLACE	SCHOOL
DIXIE ELEMENTARY SCHOOL	DIXIE	SCHOOL
PRESCOTT JUNIOR SENIOR HIGH SCHOOL	PRESCOTT	SCHOOL
JUBILEE SCHOOL	PRESCOTT	SCHOOL
NUEVA ESPERANZA LEADERSHIP ACADEMY SCHOOL	PRESCOTT- BROETJE	SCHOOL
PRESCOTT ELEMENTARY SCHOOL	PRESCOTT	SCHOOL
TOUCHET ELEMENTARY SCHOOL	TOUCHET	SCHOOL
TOUCHET MIDDLE, HIGH SCHOOL	TOUCHET	SCHOOL
WAITSBURG ELEMENTARY SCHOOL	WAITSBURG	SCHOOL
WAITSBURG MIDDLE SCHOOL	WAITSBURG	SCHOOL
WAITSBURG HIGH SCHOOL	WAITSBURG	SCHOOL
WALLA WALLA SCHOOL DISTRICT	WALLA WALLA	SCHOOL
WALLA WALLA COMMUNITY COLLEGE	WALLA WALLA	SCHOOL
WALLA WALLA HIGH SCHOOL	WALLA WALLA	SCHOOL
ASSUMPTION ELEMENTARY SCHOOL	WALLA WALLA	SCHOOL
BERNEY ELEMENTARY SCHOOL	WALLA WALLA	SCHOOL
BLUE RIDGE ELEMENTARY SCHOOL	WALLA WALLA	SCHOOL
DESALES MIDDLE & HIGH SCHOOL	WALLA WALLA	SCHOOL
EDISON ELEMENTARY SCHOOL	WALLA WALLA	SCHOOL
GARRISON MIDDLE SCHOOL	WALLA WALLA	SCHOOL

GREEN PARK ELEMENTARY SCHOOL	WALLA WALLA	SCHOOL
LIBERTY CHRISTIAN SCHOOL	WALLA WALLA	SCHOOL
LINCOLN HIGH SCHOOL	WALLA WALLA	SCHOOL
PIONEER MIDDLE SCHOOL	WALLA WALLA	SCHOOL
PROSPECT POINT ELEMENTARY SCHOOL	WALLA WALLA	SCHOOL
SHARPSTEIN ELEMENTARY SCHOOL	WALLA WALLA	SCHOOL
WALLA WALLA COUNTY JUVENILE DETENTION SCHOOL	WALLA WALLA	SCHOOL
WALLA WALLA PUBLIC CHILD DEVELOPMENT CENTER (INSPIRE CENTER)	WALLA WALLA	SCHOOL
THE HUB at 3 rd EARLY HEADSTART	WALLA WALLA	SCHOOL
WHITMAN COLLEGE	WALLA WALLA	SCHOOL

14.4 MISCELLANEOUS FACILITIES

WILBUR ELLIS COMPANY	WALLA WALLA	CHEMICAL
WALLA WALLA FARMERS CO-OP	WALLA WALLA	CHEMICAL
MCGREGOR COMPANY	WALLA WALLA	CHEMICAL
WALLA WALLA COUNTY JAIL	WALLA WALLA	CORRECTIONAL INSTITUTE
WASHINGTON STATE PENITENTIARY	WALLA WALLA	CORRECTIONAL INSTITUTE
JUVENILE JUSTICE CENTER/DEPT OF COURT SERVICES	WALLA WALLA	CORRECTIONAL INSTITUTE
911 DISPATCH - EMERGENCY OPERATION CENTER	WALLA WALLA	EMERGENCY OPERATION CENTER
US VETERANS ADMIN HOSPITAL	WALLA WALLA	HOSPITAL
ST MARYS MEDICAL CENTER	WALLA WALLA	HOSPITAL
COLUMBIA HIGH SCHOOL	BURBANK	RED CROSS SHELTER
BLUE MOUNTAIN COMMUNITY CHURCH	WALLA WALLA	RED CROSS SHELTER
DE SALES HIGH SCHOOL	WALLA WALLA	RED CROSS SHELTER
LATTER-DAY SAINTS CHURCH	WALLA WALLA	RED CROSS SHELTER
NEW LIFE CHURCH	WALLA WALLA	RED CROSS SHELTER
PRESCOTT HIGH SCHOOL	PRESCOTT	RED CROSS SHELTER
SONBRIDGE COMMUNITY CENTER	PRESCOTT	RED CROSS SHELTER
TOUCHET SCHOOL DISTRICT	TOUCHET	RED CROSS SHELTER
WAITSBURG HIGH SCHOOL	WAITSBURG	RED CROSS SHELTER
WALLA WALL COMMUNITY COLLEGE	WALLA WALLA	RED CROSS SHELTER
WALLA WALLA COUNTY FAIRGROUNDS	WALLA WALLA	RED CROSS SHELTER
WESCOM	COPPEI	COMMUNICATIONS

WESCOM	HATCH GRADE/ WALLULA	COMMUNICATIONS
WESCOM	EUREKA	COMMUNICATIONS
WESCOM	JAIL	CORRECTIONAL FACILITY/COMMUNIC ATIONS
WESCOM	SKYROCKET	COMMUNICATIONS
WESCOM	PIKES PEAK	COMMUNICATIONS

14.5 DAMS

ICE HARBOR DAM	BURBANK	DAM
LOWER MONUMENTAL DAM	PRESCOTT	DAM
MILL CREEK DIVERSION DAM	WALLA WALLA	DAM
MILL CREEK STORAGE DAM	WALLA WALLA	DAM

14.6 LAW ENFORCEMENT

WWC SHERIFF'S SUBSTATION	BURBANK	LAW ENFORCEMENT
COLLEGE PLACE POLICE DEPARTMENT	COLLEGE PLACE	LAW ENFORCEMENT
WALLA WALLA COUNTY SHERIFF'S DEPT., WAITSBURG SUBSTATION	WAITSBURG	LAW ENFORCEMENT
WAITSBURG POLICE STATION	WAITSBURG	LAW ENFORCEMENT
WALLA WALLA COUNTY SHERIFF'S OFFICE	WALLA WALLA	LAW ENFORCEMENT
WALLA WALLA POLICE DEPARTMENT	WALLA WALLA	LAW ENFORCEMENT
WALLA WALLA POLICE DEPT, SPECIAL TEAMS OFFICE	WALLA WALLA	LAW ENFORCEMENT
WASHINGTON STATE PATROL	WALLA WALLA	LAW ENFORCEMENT

14.7 LOCAL GOVERNMENT BUILDINGS

COLLEGE PLACE CITY HALL	COLLEGE PLACE	LOCAL GOVERNMENT
COLLEGE PLACE PUBLIC WORKS SHOP	COLLEGE PLACE	LOCAL GOVERNMENT
PRESCOTT CITY HALL AND PUBLIC WORKS	PRESCOTT	LOCAL GOVERNMENT
WAITSBURG CITY HALL	WAITSBURG	LOCAL GOVERNMENT
WAITSBURG PUBLIC WORKS	WAITSBURG	LOCAL GOVERNMENT
WALLA WALLA COUNTY PUBLIC WORKS - NORTH SHOP	WAITSBURG	LOCAL GOVERNMENT

COUNTY COURTHOUSE	WALLA WALLA	LOCAL GOVERNMENT
WALLA WALLA CITY HALL	WALLA WALLA	LOCAL GOVERNMENT
PORT OF WALLA WALLA - STATE STAGING AREA	WALLA WALLA	LOCAL GOVERNMENT
WALLA WALLA COUNTY HALL OF RECORDS	WALLA WALLA	LOCAL GOVERNMENT
WALLA WALLA COUNTY PUBLIC HEALTH AND LEGISLATIVE BUILDING	WALLA WALLA	LOCAL GOVERNMENT
WALLA WALLA PUBLIC SERVICES BUILDING	WALLA WALLA	LOCAL GOVERNMENT
WALLA WALLA COUNTY PUBLIC WORKS	WALLA WALLA	LOCAL GOVERNMENT
CITY OF WALLA WALLA DEVELOPMENT SERVICES CENTER	WALLA WALLA	LOCAL GOVERNMENT

14.8 UTILITY FACILITIES

BPA - LOWER MONUMENTAL 500KV TRANSMISSION SUBSTATION	PRESCOTT	ELECTRICAL
PACIFIC POWER SUBSTATION	WAITSBURG	ELECTRICAL
PACIFIC POWER SUBSTATION	WALLA WALLA	ELECTRICAL
CASCADE NATURAL GAS STATION	COLLEGE PLACE	NATURAL GAS
TRANSCANADA COMPRESSOR SUBSTATION #7	PRESCOTT	NATURAL GAS
TRANSCANADA COMPRESSOR SUBSTATION #8	WALLULA	NATURAL GAS
REPEATER	PRESCOTT	REPEATER
REPEATER	WAITSBURG	REPEATER
REPEATER	WALLA WALLA	REPEATER
REPEATER	WALLULA	REPEATER
STATION #5 - SEWAGE LIFT STATION	COLLEGE PLACE	SEWER
STATION #6 - SEWAGE LIFT STATION	COLLEGE PLACE	SEWER
SEWAGE LIFT STATION #1	WALLA WALLA	SEWER
HOLIDAY INN - SEWAGE LIFT STATION	WALLA WALLA	SEWER
COTTONWOOD - SEWAGE LIFT STATION	WALLA WALLA	SEWER
FAIRWAY - SEWER LIFT STATION	WALLA WALLA	SEWER
STATION #2 - SEWAGE LIFT STATION	WALLA WALLA	SEWER
COLLEGE PLACE - WATER TREATMENT PLANT	COLLEGE PLACE	TREATMENT PLANT
WAITSBURG - WATER TREATMENT PLANT	WAITSBURG	TREATMENT PLANT
WALLA WALLA - WATER TREATMENT PLANT	WALLA WALLA	TREATMENT PLANT
WALLA WALLA – WATER STORAGE TANK	WALLA WALLA	WATER

WALLA WALLA- WATER STORAGE TANK	WALLA WALLA	WATER
WALLA WALLA- WATER STORAGE TANK	WALLA WALLA	WATER
WALLA WALLA – 24” PRIMARY STEEL RIVITED WATER TRANSMISSION LINE	WALLA WALLA	WATER
WATER INTER-TIE 2	COLLEGE PLACE	WATER
WATER INTER-TIE 1	COLLEGE PLACE	WATER
WATER WELL FIELD	WAITSBURG	WATER
COLLEGE PLACE - WATER TOWER	COLLEGE PLACE	WATER TOWER
COLLEGE PLACE - WATER TOWER	COLLEGE PLACE	WATER TOWER
COLLEGE PLACE - WATER TOWER	COLLEGE PLACE	WATER TOWER
PRESCOTT - WATER TOWER	PRESCOTT	WATER TOWER
WAITSBURG - WATER TOWER	WAITSBURG	WATER TOWER
WATER WELL #3	COLLEGE PLACE	WELL
WATER WELL #1	COLLEGE PLACE	WELL
WATER WELL #2	COLLEGE PLACE	WELL
WATER WELL #1	WALLA WALLA	WELL
WATER WELL #7	WALLA WALLA	WELL
WATER WELL #2	WALLA WALLA	WELL
WATER WELL #4	WALLA WALLA	WELL
WATER WELL #5	WALLA WALLA	WELL
WATER WELL #6	WALLA WALLA	WELL
WATER WELL #3	WALLA WALLA	WELL

14.9 MISCELLANEOUS TRANSPORTATION FACILITIES

WALLA WALLA REGIONAL AIRPORT	WALLA WALLA	AIRPORT
MARTIN AIRFIELD	WALLA WALLA	AIRPORT
UNION PACIFIC RAILROAD - JOSO BRIDGE	PRESCOTT	TRANSPORTATION
VALLEY TRANSIT TRANSFER CENTER	WALLA WALLA	TRANSPORTATION
VALLEY TRANSIT OFFICE	WALLA WALLA	TRANSPORTATION
UNION PACIFIC (FORMERLY RAILEX LLC)	WALLULA	TRANSPORTATION
RAILEX WINE SERVICES	WALLULA	TRANSPORTATION

14.10 BRIDGES

SR 12/MCNARY BRIDGE	BURBANK	
SR 12 BRIDGE	BURBANK	
SR 12/DRY CR 2 BRIDGE	DIXIE	
PETTYBONE BRIDGE	DIXIE	
THIRD STREET BRIDGE	DIXIE	
SR 12/DRY CR 3 BRIDGE	DIXIE	
SR 124/WINNETT CANYON BRIDGE	PRESCOTT	

HARVEY SHAW BRIDGE	PRESCOTT	
SR 125/TOUCHET RIVER BRIDGE	PRESCOTT	
DELL SHARP BRIDGE	PRESCOTT	
HART BRIDGE	PRESCOTT	
ARCH BRIDGE	PRESCOTT	
SMITH BRIDGE	PRESCOTT	
WHETSTONE BRIDGE	PRESCOTT	
MIKE THOMAS BRIDGE	PRESCOTT	
ERWIN C P BRIDGE	PRESCOTT	
CUNDIFF BRIDGE	PRESCOTT	
HARVEY BRIDGE	PRESCOTT	
SAXTON BRIDGE	PRESCOTT	
STAR SCHOOL BRIDGE	PRESCOTT	
PSHIGODA BRIDGE	PRESCOTT	
PETERSON BRIDGE	PRESCOTT	
GROVER BRIDGE	PRESCOTT	
SR 124/WHETSTONE CR BRIDGE	PRESCOTT	
WINNETT CANYON BRIDGE	PRESCOTT	
DRY HOLLOW BRIDGE	PRESCOTT	
BROWN BRIDGE	PRESCOTT	
McFEELY BRIDGE	PRESCOTT	
HERRING BRIDGE	PRESCOTT	
KEN NOBLE BRIDGE	PRESCOTT	
SKYROCKET BRIDGE	PRESCOTT	
DE RUWE BRIDGE	PRESCOTT	
WINANS BRIDGE	PRESCOTT	
HARSHAW BRIDGE	PRESCOTT	
NORTH HART BRIDGE	PRESCOTT	
ED KELLY BRIDGE	PRESCOTT	
DUNN BRIDGE	PRESCOTT	
MUNNS BRIDGE	PRESCOTT	
LAMAR C P BRIDGE	PRESCOTT	
GAS PLANT BRIDGE	PRESCOTT	
BERRYMAN STATION BRIDGE	PRESCOTT	
ESTES C P BRIDGE	PRESCOTT	
ANDERSON C P BRIDGE	PRESCOTT	
BENSON C P BRIDGE	PRESCOTT	
ED COCHRAN BRIDGE	PRESCOTT	
SR 124/OVERPASS BRIDGE	PRESCOTT	
NINE MILE CANYON BRIDGE	TOUCHET	

CUMMINS BRIDGE	TOUCHET	
JOHNSON BRIDGE	TOUCHET	
SAND PIT BRIDGE	TOUCHET	
PEMBERTON BRIDGE	TOUCHET	
PINE CREEK #1 BRIDGE	TOUCHET	
LOWDEN BRIDGE	TOUCHET	
WEAVER BRIDGE	TOUCHET	
LENFESTY BRIDGE	TOUCHET	
SCHAEFFER BRIDGE	TOUCHET	
DITCH HOUSE BRIDGE	TOUCHET	
BAUMANS BRIDGE	TOUCHET	
RAINES BRIDGE	TOUCHET	
FREDRICKSON BRIDGE	TOUCHET	
HELLBERG BRIDGE	TOUCHET	
LOCHER BRIDGE	TOUCHET	
SR 12/DRY CR BRIDGE	TOUCHET	
SR 12/WOODWARD CANYON BRIDGE	TOUCHET	
SR 12/TOUCHET RIVER BRIDGE	TOUCHET	
SR 12/WALLA WALLA RIVER BRIDGE	TOUCHET	
DUNDAS BRIDGE	TOUCHET	
HAWLEY BRIDGE	TOUCHET	
FROG HOLLOW BRIDGE	TOUCHET	
BASS SWAIN BRIDGE	TOUCHET	
PLUCKER BRIDGE	TOUCHET	
REESE STATION BRIDGE	TOUCHET	
OVER PASS BRIDGE	TOUCHET	
DIVIDE BRIDGE	TOUCHET	
SR 12/UP RAILROAD BRIDGE	TOUCHET	
SARANTO BRIDGE	TOUCHET	
VAN VOORST C P BRIDGE	TOUCHET	
WOODS C P BRIDGE	TOUCHET	
WOODS NORTH C P BRIDGE	TOUCHET	
JOHNSON SOUTH BRIDGE	TOUCHET	
DODD C P BRIDGE	TOUCHET	
GRANT C P BRIDGE	TOUCHET	
STROHMAIER C P BRIDGE	TOUCHET	
ESTES BRIDGE	TOUCHET	
SR 12/SPRING BRIDGE	TOUCHET	
DRY CREEK #2 BRIDGE	WAITSBURG	
DRY CREEK #3 BRIDGE	WAITSBURG	

PFLUGRAD BRIDGE	WAITSBURG	
SR 12/SPRING CR BRIDGE	WAITSBURG	
SR 12/DRY CR 1 BRIDGE	WAITSBURG	
McCOWN BRIDGE	WAITSBURG	
PIERRE BRIDGE	WAITSBURG	
3RD N COPPEI BRIDGE	WAITSBURG	
4TH N COPPEI BRIDGE	WAITSBURG	
MEINBURG BRIDGE	WAITSBURG	
SR 124/TOUCHET RIVER BRIDGE	WAITSBURG	
SR 124/COPPEI CR BRIDGE	WAITSBURG	
COPPEI CREEK - 7TH ST BRIDGE	WAITSBURG	
WAITSBURG CEMETERY BRIDGE	WAITSBURG	
HUGHES BRIDGE	WAITSBURG	
5TH N COPPEI BRIDGE	WAITSBURG	
DRY CREEK #1 BRIDGE	WAITSBURG	
TOUCHET RIVER - MAIN ST BRIDGE	WAITSBURG	
GARDEN STREET BRIDGE	WAITSBURG	
ALDRIDGE BRIDGE	WAITSBURG	
SPRING CREEK BRIDGE	WAITSBURG	
SR 12/PRESTON BRIDGE	WAITSBURG	
BOLLES BRIDGE	WAITSBURG	
HUNGATE BRIDGE	WAITSBURG	
SUB STATION BRIDGE	WAITSBURG	
SPRING VALLEY BRIDGE	WAITSBURG	
MIKKELSON BRIDGE	WAITSBURG	
ZUGER BRIDGE	WAITSBURG	
NOTDOT BRIDGE	WAITSBURG	
SR 12/COPPEI CR BRIDGE	WAITSBURG	
GANGUET BRIDGE	WAITSBURG	
STONECIPHER BRIDGE	WAITSBURG	
MEINBURG C P BRIDGE	WAITSBURG	
MYRA BRIDGE	WALLA WALLA	
RUSTIC PLACE BRIDGE	WALLA WALLA	
CHASE AT GARRISON CR BRIDGE	WALLA WALLA	
THIRD AT GARRISON CR BRIDGE	WALLA WALLA	
HOWARD-BRYANT @ GARRISON BRIDGE	WALLA WALLA	
9TH AT MILL CR BRIDGE	WALLA WALLA	
6TH AT MILL CR BRIDGE	WALLA WALLA	
5TH AT MILL CR BRIDGE	WALLA WALLA	
4TH AT MILL CR BRIDGE	WALLA WALLA	

ROSE AT MILL CR BRIDGE	WALLA WALLA	
2ND AT MILL CR BRIDGE	WALLA WALLA	
COLVILLE AT MILL CR BRIDGE	WALLA WALLA	
MAIN AT MILL CR BRIDGE	WALLA WALLA	
SPOKANE AT MILL CR BRIDGE	WALLA WALLA	
PALOUSE AT MILL CR BRIDGE	WALLA WALLA	
PARK AT MILL CR BRIDGE	WALLA WALLA	
OTIS AT MILL CR BRIDGE	WALLA WALLA	
MERRIAM AT MILL CR BRIDGE	WALLA WALLA	
CLINTON AT MILL CR BRIDGE	WALLA WALLA	
DIVISION AT MILL CR BRIDGE	WALLA WALLA	
BLUE CREEK BRIDGE	WALLA WALLA	
MILL CREEK BRIDGE	WALLA WALLA	
KLICKE MOUNTAIN BRIDGE	WALLA WALLA	
SEVEN MILE BRIDGE	WALLA WALLA	
MAXON BRIDGE	WALLA WALLA	
HOOD SCHOOL BRIDGE	WALLA WALLA	
PAUL SCHOOL BRIDGE	WALLA WALLA	
PAST RAINES BRIDGE	WALLA WALLA	
PHILLIPS BRIDGE	WALLA WALLA	
ANKENY BRIDGE	WALLA WALLA	
WHITMAN BRIDGE	WALLA WALLA	
HUGHES FARM BRIDGE	WALLA WALLA	
BUCKLEY BRIDGE	WALLA WALLA	
TALBOTT BRIDGE	WALLA WALLA	
SWEGLE BRIDGE	WALLA WALLA	
MUD CREEK BRIDGE	WALLA WALLA	
SR 125/DRY CR BRIDGE	WALLA WALLA	
COLLINS BRIDGE	WALLA WALLA	
SR 12/WOODWARD CANYON BRIDGE	WALLA WALLA	
HANSON BRIDGE	WALLA WALLA	
LUCKENBILL BRIDGE	WALLA WALLA	
CORDINER BRIDGE	WALLA WALLA	
CAMERON BRIDGE	WALLA WALLA	
NINTH ST BRIDGE	WALLA WALLA	
VALLEY GROVE BRIDGE	WALLA WALLA	
VAN AUSDLER BRIDGE	WALLA WALLA	
EVANS BRIDGE	WALLA WALLA	
VALLEY CHAPEL BRIDGE	WALLA WALLA	
LAST CHANCE BRIDGE	WALLA WALLA	

BLUE MOUNTAIN BRIDGE	WALLA WALLA	
KENNEDY MEMORIAL BRIDGE	WALLA WALLA	
BUSSELL BRIDGE	WALLA WALLA	
YELLOWHAWK BRIDGE	WALLA WALLA	
McINROES BRIDGE	WALLA WALLA	
WALLULA BRIDGE	WALLA WALLA	
GOSE BRIDGE	WALLA WALLA	
HUSSEY BRIDGE	WALLA WALLA	
KOOSKOOSKIE BRIDGE	WALLA WALLA	
DRUMHELLER BRIDGE	WALLA WALLA	
SR125/WALLA WALLA RIVER BRIDGE	WALLA WALLA	
SR 125/YELLOWHAWK CR BRIDGE	WALLA WALLA	
DOWLING BRIDGE	WALLA WALLA	
BERNEY #1 BRIDGE	WALLA WALLA	
SCHOOL BRIDGE	WALLA WALLA	
PLEASANT BRIDGE	WALLA WALLA	
PROSPECT POINT BRIDGE	WALLA WALLA	
PROSPECT BRIDGE	WALLA WALLA	
FERN AVE BRIDGE	WALLA WALLA	
DUFF BRIDGE	WALLA WALLA	
TUTTLE BRIDGE	WALLA WALLA	
THREE MILE BRIDGE	WALLA WALLA	
DAVIS BRIDGE	WALLA WALLA	
KERNS BRIDGE	WALLA WALLA	
WILBUR ST NORTH BRIDGE	WALLA WALLA	
13TH AT MILL CR BRIDGE	WALLA WALLA	
ROOSEVELT AT MILL CR BRIDGE	WALLA WALLA	
FOURTH AT GARRISON CR BRIDGE	WALLA WALLA	
STURM AVE BRIDGE	WALLA WALLA	
MCDONALD BRIDGE	WALLA WALLA	
GRANDVIEW BRIDGE	WALLA WALLA	
FIVE MILE BRIDGE	WALLA WALLA	
MAUZEY BRIDGE	WALLA WALLA	
RESER BRIDGE	WALLA WALLA	
SWEGLE/MILL CR BRIDGE	WALLA WALLA	
DEPPING BRIDGE	WALLA WALLA	
HEADGATE BRIDGE	WALLA WALLA	
PEPPERS BRIDGE	WALLA WALLA	
MCKAY BRIDGE	WALLA WALLA	
SCENIC LOOP BRIDGE	WALLA WALLA	

MILL CR BRANCH BRIDGE	WALLA WALLA	
RUSSELL SIDING C P BRIDGE	WALLA WALLA	
BERNEY #2 BRIDGE	WALLA WALLA	
DAGUE BRIDGE	WALLA WALLA	
ANGELL BRIDGE	WALLA WALLA	
MARTIN BRIDGE	WALLA WALLA	
LUCKENBILL #2 BRIDGE	WALLA WALLA	
COCHRAN BRIDGE	WALLA WALLA	
MAGNOLIA BRIDGE	WALLA WALLA	
RUSSELL SIDING BRIDGE	WALLA WALLA	
BERGER BRIDGE	WALLA WALLA	
RUSSELL CREEK BRIDGE	WALLA WALLA	
LEVIN BRIDGE	WALLA WALLA	
DEBOER BRIDGE	WALLA WALLA	
SIMON C P BRIDGE	WALLA WALLA	
SIMONS BRIDGE	WALLA WALLA	
COX YEEND BRIDGE	WALLA WALLA	
SANDERS #1 BRIDGE	WALLA WALLA	
SANDERS #3 BRIDGE	WALLA WALLA	
SANDERS #2 BRIDGE	WALLA WALLA	
THIEL STATION BRIDGE	WALLA WALLA	
COLLARD BRIDGE	WALLA WALLA	
YOX BRIDGE	WALLA WALLA	
VALLEY GROVE RR BRIDGE	WALLA WALLA	
SR 730/SPRING GULCH BRIDGE	WALLULA	
SR 12/VANSYCLE CANYON BRIDGE	WALLULA	
SR 12/WALLA WALLA RIVER BRIDGE	WALLULA	
SR 12/RR 2 BRIDGE	WALLULA	
SR 12/RR 1 BRIDGE	WALLULA	
SR 12/RR 3 BRIDGE	WALLULA	
ENNIS BRIDGE	PRESCOTT	RESTRICTED
HADLEY STATION BRIDGE	PRESCOTT	RESTRICTED
GARDENA BRIDGE	TOUCHET	RESTRICTED
HASSLER BRIDGE	TOUCHET	RESTRICTED
GOBLE BRIDGE	TOUCHET	RESTRICTED
PINE CREEK #2 BRIDGE	TOUCHET	RESTRICTED
GARDENA SOUTH BRIDGE	TOUCHET	RESTRICTED
McENTYRE BRIDGE	WAITSBURG	RESTRICTED
CORKRUM BRIDGE	WAITSBURG	RESTRICTED
PAXTON BRIDGE	WALLA WALLA	RESTRICTED

WALTER BRIDGE	WALLA WALLA	RESTRICTED
MARBACH CORNER BRIDGE	WALLA WALLA	RESTRICTED
PEPPERS NORTH BRIDGE	WALLA WALLA	RESTRICTED

APPENDIX B: MEETING MINUTES, SIGN-IN SHEETS, AND PARTICIPATION



Walla Walla County

Emergency Management Department

27 N. 2nd Avenue
Walla Walla, Washington 99362
Phone: (509) 524-2900 • Fax: (509) 524-2910
www.wwemd.info

LIZ JESSEE
Director

PATRICK PURCELL
Coordinator

**HAZARD MITIGATION PLAN UPDATE
KICKOFF MEETING**
WALLA WALLA COUNTY FIRE DISTRICT 4
2251 S. HOWARD, WALLA WALLA, WA
FEBRUARY 21, 2018, 10:00 AM

AGENDA

Introductions

Steering Committee and Northwest Management, Inc.

Tasks

- Review current HMP;
- Identify document areas needing updated;
- Begin updating general information;
- Highlight areas needing steering committee info/additions;
- Intergrade recent CWPP (*discuss the desired look with the Steering Committee*);
- Draft all document sections and plan public meetings;
- Present plan overview and highlight updates to public (NMI PowerPoint);
- Gather feedback and make additional updates/changes following public notice;
- Present full draft HMP for committee and legal review;
- Present full near-final draft to FEMA for approval.

Tentative Project Schedule

- Intro meeting Feb 20th, 2018
- Identify update areas and complete general updates (*March 21st, 2018??*);
- Integrate CWPP and add in steering committee feedback (*May 2nd, 2018??*);
- Full draft document and two days public meetings (*May 30th and 31st, 2018??*);
- Incorporate public feedback and present full document to Steering Committee (*July 25th, 2018??*);
- Any final edits and document submitted to FEMA (*August 22nd, 2018??*).

Set Next Meeting Date

Adjourn

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LIZ JESSEE
Director

PATRICK PURCELL
Coordinator

SIGN IN SHEET

Hazard Mitigation Plan Kick-off Meeting, February 21, 2018
Fire District 4 - Station 41, 2251 S. Howard Street,
Walla Walla, WA 99362

NAME (PLEASE PRINT)	ORGANIZATION	EMAIL ADDRESS
Jacquelyn Meier	Walla Walla Community College	Jacquelyn.meier@wwcc.edu
Brad Morris	WWFD	bmorris@wallawallawa.gov
Nabiel Shawla	City of Walla Walla	nshawla@wallawallawa.gov
Michael Francis	US Army Corps of Engineers	MICHAEL.FRANCIS@USACE.Armr.mil
Marilyn Lohmann	National Weather Service	marilyn.lohmann@noaa.gov
Barbara Clark	City of WW	bclark@wallawallawa.gov
Susan Leathers	PSMMC	susan.leathers@providence.org
Mark Coarad	Northwest Light Inc.	MCOARAD@NWLI2.com
Rob Brandstetter	INA OOD FeVurs	ROBRANDSTETTER@idgillows.us
Mike Rizzitello	CIVIC CP	MRIZZITELLO@CPWA.org
DAVID WINTER	CPFD	
Kate Mann	Regency at the Fork	KMANN@regencypacific.com
Harvey Crowder	CP	
Jim Johnson	WW County	
Fred Miller	Whitman	millerf1@whitman.edu

Emergency Management...Always Working for a Disaster Prepared and Resilient Community

How do I review the current Hazard Mitigation Plan (2010)?

Type www.wwemd.info in your browser. This will take you to our Home Page: <http://www.co.walla-walla.wa.us/Departments/EMD/index.shtml>

Click on **Hazard Identification and Vulnerability Analysis (HIVA)** and **Hazard Mitigation Plan (HMP)**:

Emergency Management

Liz Jessee, Director
27 N. 2nd Avenue
Walla Walla, WA 99362

Contact Information
Phone 509-524-2900
Fax 509-524-2910
E-mail emdc@co.walla-walla.wa.us

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PUBLIC SAFETY. PUBLIC TRUST

*Emergency Management
Walla Walla County*

Department Links
[EMD Home](#) | [Family Preparedness](#) | [Comprehensive Emergency Management Plan](#) | [Hazard Identification and Vulnerability Analysis \(HIVA\) and Hazard Mitigation Plan \(HMP\)](#) | [Hazard Mitigation](#) | [Exercise, Training and Workshops](#) | [Emergency Management Executive Board \(EMEB\)](#) | [Local Emergency Management Planning Committee \(LEPC\)](#) | [Radiological Information for Farmers \(Spanish Language Version\)](#) | [Emergency Preparedness for Nuclear Facilities \(Spanish Language Version\)](#) | [Recent Earthquakes](#) | [National Weather Service](#) | [Wildfire Vulnerability Study](#) | [FIREWISE](#) | [Community Wildfire Protection Plan \(CWPP\)](#)

Now click on **Walla Walla County HMP 2010** to open the document:

Walla Walla County Hazard Identification and Vulnerability Analysis (HIVA) and Hazard Mitigation Plan (HMP)

BACKGROUND: The Hazard Identification and Vulnerability Analysis provides a summary of risk to Walla Walla County from a variety of different hazards. The Hazard Mitigation Plan provides guidance to local public safety officials on projects that could help mitigate the effects of potential hazards such as severe storms, earthquakes, wildfire, and flooding.

In 2009-2010 Walla Walla County Emergency Management worked with other county officials and the cities of College Place, Prescott, Walla Walla and Walla Walla to update the 2004 HMP and HIVA. The Mill Creek Flood Control Zone District and Walla Walla Public Schools were also active partners in this update. Other local, state and federal agencies, including fire districts, irrigation districts, and utility companies, also contributed to the revision and update.

DOCUMENTS:

- [Walla Walla County HIVA 2010](#)
- [Walla Walla County HMP 2010](#)
- [Critical Facilities Map 1 Walla Walla County](#)
- [Critical Facilities Map 2 Burbank](#)
- [Critical Facilities Map 3 College Place](#)
- [Critical Facilities Map 4 Dode](#)
- [Critical Facilities Map 5 Lowden](#)
- [Critical Facilities Map 6 Prescott](#)
- [Critical Facilities Map 7 Touchet](#)
- [Critical Facilities Map 8 Walla Walla](#)
- [Critical Facilities Map 9 Walla Walla](#)
- [Critical Facilities Map 10 Wallula](#)
- [Hazard Map 1 Walla Walla County Fire History](#)
- [Hazard Map 2 Walla Walla County Wildfire Risk Assessment WUI Boundary and Survey](#)
- [Hazard Map 3 Walla Walla County Faults](#)
- [Hazard Map 4 Walla Walla County Liquefaction Susceptibility](#)
- [Hazard Map 5 Walla Walla County Earthquake History](#)
- [Hazard Map 6 Bennington Inundation Area](#)
- [Hazard Map 7 Walla Walla County Floodplain Analysis](#)

Hard copies are available for the cost of production from the Emergency Management Department.

The other documents on this page support the 2010 plan.



Walla Walla County

Emergency Management Department

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Phone: (509) 524-2900 • Fax: (509) 524-2910

HMGP Steering Committee Planning Meeting
Walla Walla County Fire District #4, Station 41
2251 S. Howard Street
Walla Walla, WA 99362
March 21, 2018

Present:

Liz Jessee, Walla Walla County Emergency Management Department
Mark Corrao, Northwest Management, Inc.
Patrick Purcell, Walla Walla County Emergency Management Department
Marilyn Lohmann, National Weather Service
William Herrington, American Red Cross
Dixie Ferguson, American Red Cross
Barbara Clark, Mayor, City of Walla Walla
Mori Struve, Public Works, City of Walla Walla
Tony Garcia-Morales, Public Works, Walla Walla County
Steve Potter, Police Department, City of Walla Walla
Mike Kay, Walla Walla Public School District
John Turner, Walla Walla County Sheriff

Minutes:

Call to order: Meeting was called to Order by Liz Jessee at 10:02.

Introductions: Liz introduced herself and requested that those in attendance please introduce themselves to the group. Those present are listed above.

Hazard Mitigation Plan Update Overview:

Mark Corao of Northwest Management Inc. introduced himself and described his organization to the committee. Mark began a quick overview of the plan update process and highlighted the following areas.

- Purpose of the Hazard Mitigation Plan
- Current Hazards listed on the Plan
- FEMA requirements specific to Hazard Mitigation plans.
- Major document components of the Plan
- Tracking of the in-kind match
- Types of risk reduction projects which might be included in the plan
- Geographic Information Services. (GIS) and how it will be used
- Critical Structures Lists
- Review and approval process
- Public involvement/outreach

- Finished products to be provided by NWI
- Proposed planning schedule and tentative completion date. (October 2018)
- Next Steps. Committee responsibilities -v- Northwest Management Inc.

Questions/Discussion:

Barbara Clark asked if the updated plan will cover public information and how the public will be able to access that information. Barbara also asked if the plan will have an educational piece to educate the public on where they can find information to remain informed during an emergency or natural disaster. Liz spoke on the current planning and means used to provide the public with information. Liz explained that the Hazard Mitigation Plan's specific purpose was to identify Hazards in Walla Walla County and develop suggested projects for mitigation. Plans already in place are adequate in defining dissemination of public information during emergencies.

Mark Corao confirmed that the primary purpose of the Hazard Mitigation Plan is to identify hazard mitigation projects to justify funding from FEMA. Mitigation projects should be stated in broad terms that would make it possible for mitigation or post-disaster FEMA funding.

Mori Struve asked if we could include a brief section which identifies where the public can refer to plans already in existence for information on means and methods used to keep the public informed during emergencies. Both Liz and Mark agreed that this was something which could be included in the plan update.

Barbara noted that Social Media requires electricity and asked if any thought had been given to developing a means to broadcast information through some type of locally managed and run radio station. Liz explained that during development of the previous Hazard Mitigation Plan that this idea had been explored. Primary reason it had been set aside was because of cost and lack of manpower. It simply could not be supported under current budget constraints. Liz also explained that KONA radio is still the current official station for emergency management information and would broadcast information as required during an emergency.

Barbara asked if public information/education could be covered in the mitigation part of the plan for monetary consideration. Mark explained that this was outside the purview of the plan.

Tony Garcia asked for clarification on whether this plan could be used to help request financial support during an emergency. Liz and Mark explained that this was a large part of the plans intended purpose.

There was general discussion among the committee on the specific purpose and scope of the plan to help committee members better understand the intended purpose of the Hazard Mitigation Plan. Mark explained to the committee that he had nothing more for the group at this point. He informed the committee that specific requests for information would be forthcoming from his office through the Emergency Management office to committee members and partner agencies and that all communications regarding the update should go through Emergency Management.

Adjourned:

Meeting was concluded and adjourned at 10:47.

Respectfully Submitted,
Patrick B. Purcell



Walla Walla County

Emergency Management Department

27 N. 2nd Avenue
Walla Walla, Washington 99362
Phone: (509) 524-2900 • Fax: (509) 524-2910

LIZ JESSEE
Director

PATRICK PURCELL
Coordinator

SIGN IN SHEET

HAZARD MITIGATION PLAN UPDATE

STEERING COMMITTEE MEETING

WALLA WALLA COUNTY FIRE DISTRICT 4
2251 S. HOWARD, WALLA WALLA, WA
March 21, 2018, 10:00 AM

NAME (PLEASE PRINT)	ORGANIZATION	EMAIL ADDRESS
Patrick Purcell	WWEMD	ppurcell@co.walla-walla.wa.us
Liz Jessee	WWEMD	ljesssee@co.walla-walla.wa.us
Marilyn Lohmann	National Weather Service	marilyn.lohmann@noaa.gov
William Herrington	A Red Cross	ayv80r77@yahoo.com
Mark Corrad	Norwest Management Inc	MCORRAD@NMI2.com
Barbara Clark	City of WW	bclark@wallawallawa.gov
Steve Potter	WWPD	spotter@wallawallawa.gov
Mike Kay	WWPS	mkay@wwps.org
Jack Turner	WWSO	JTURNER@CO.WALLA-WALLA.WA.US
Dixie Ferguson	Red Cross	dixiefer@yahoo.com
Tony Garcia Morales	Walla Walla Co	Tgarcia@WWCountyRoads.com

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Walla Walla County

Emergency Management Department

27 N. 2nd Avenue
Walla Walla, Washington 99362
Phone: (509) 524-2900 • Fax: (509) 524-2910
www.wwemd.info

LIZ JESSEE
Director

PATRICK PURCELL
Coordinator

HAZARD MITIGATION PLAN UPDATE

Steering Committee Meeting

WALLA WALLA COUNTY FIRE DISTRICT 4
2251 S. HOWARD, WALLA WALLA, WA
May 3, 2018 - 1000

AGENDA

1. Introductions

2. Tasks

- Review of updated DRAFT plan.
- NMI to discuss CWPP insertion update.
- Request/Discussion on write-up of a half page narrative covering details of the Blue Creek Fire.
- Request/Discussion with NOAA about weather narrative covering significant/Key weather events since 2010.
- Request/Discussion with NOAA, Steering Committee, detailing flooding events throughout the County since 2010.
- Review Public Notice Announcement Draft and decide on a date to release it for the next meeting date (TBD) and kickoff of public notice period (30 days).

3. Set Next Meeting Date

4. Adjourn



Walla Walla County

Emergency Management Department

27 N. 2nd Avenue

Walla Walla, Washington 99362

Phone: (509) 524-2900 • Fax: (509) 524-2910

LIZ JESSEE

Director

PATRICK PURCELL

Coordinator

SIGN IN SHEET

Hazard Mitigation Plan Kick-off Meeting, May 3, 2018

Fire District 4 - Station 41, 2251 S. Howard Street,

Walla Walla, WA 99362

NAME (PLEASE PRINT)	ORGANIZATION	EMAIL ADDRESS
JEFF STIDHAM	USACE	JEFFERY.L.STIDHAM@USACE.ARMY.MIL
Rich Cannon	USACE	richard.e.cannon@usace.army.mil
Randy Hinchliffe	Wentworth	
Maek Corrao	NMI	MICORRAO@NMI2.COM
Lisa Stearns	NWCCD	lisa.stearns@nwccd.net
Jodi Ferguson	NWCDett	jodiferguson@co.walla.walla.wa.us
Tony Garcia	Walla Walla Co. PW	tgarcia@wallawallacountyroads.com
Mike Kay	WWPS	mkay@wwps.org
MORI STRAUVE	CITY OF WW	mstrauve@wallawalla.wa.gov
MARK HIGGINS	WWPS	mhiggs.mr@wwps.org
Dixie Ferguson	Red Cross	dixiefer@yahoo.com

Walla Walla County

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LIZ JESSEE

Director

PATRICK PURCELL

Coordinator



HAZARD MITIGATION PLAN UPDATE

Steering Committee Meeting

WALLA WALLA COUNTY FIRE DISTRICT 4

2251 S. HOWARD, WALLA WALLA, WA

May 3, 2018 - 1000

AGENDA

1. Introductions

2. Tasks

- Review of updated DRAFT plan.
- NMI to discuss CWPP insertion update.
- Request/Discussion on write-up of a half page narrative covering details of the Blue Creek Fire.
- Request/Discussion with NOAA about weather narrative covering significant/Key weather events since 2010. *NEWS MARILYN?*
- Request/Discussion with NOAA, Steering Committee, detailing flooding events throughout the County since 2010. *as/news*
- Review Public Notice Announcement Draft and decide on a date to release it for the next meeting date (TBD) and kickoff of public notice period (30 days). *3-3 page*

3. Set Next Meeting Date

4. Adjourn

- PAGE NUMBERS
- Public Notice of Steering Meeting MAY 31st 10AM TBD
- Public meetings May 31st 7pm WMA Dist #4
June 1st 10AM County Legislative Building
(Public Notice June 1st June 30th)

Emergency Management...Always Working for a Disaster Prepared and Resilient Community

A5

How to safeguard your
privacy from your Echo

A8

Credit card companies
hone their targeting

WALLA WALLA

Union~Bulletin

Monday, May 28, 2018



75¢

Meetings set for hazard planning in WW County

By the Walla Walla Union-Bulletin

Two public meetings later this week will seek public input on worst-case scenarios and what can be done to deal with them.

The evening meetings on Thursday and Friday are part of a project to update Walla Walla County's Hazard Mitigation Plan, which addresses floods, earthquakes, severe weather, wildfires, volcanic ash fall and other events.

Sudden, severe storms such as one that struck Walla Walla in 2008 with hurricane force winds and major wildfires in recent years are a good examples why planning is needed, said Liz Jessee, county Emergency Management Department director.

"This plan addresses what emergencies we can expect and what we can do about them," she said.

Local agencies and organizations in the county have created a committee to complete the required five-year updates of the plan, Jessee said. A planning committee meeting will be held at 10 a.m. Thursday at

the Walla Walla County Fire Dist. 4 headquarters, 2251 S. Howard St. in Walla Walla before the public meetings.

The planning effort is part of the Federal Emergency Management Agency Pre-Disaster Mitigation program and the National Fire Plan and Healthy Forests Restoration Act. The update will include information and results of the Walla

Walla County Community Wildfire Protection Plan which was completed last year.

One of the goals of the planning process is to increase the eligibility of local governments for grants to help minimize the risk and potential impact of disaster events, Jessee said. An example is the Firewise Communities program that helps protect people and property from wildfires by proactive measures, such as creating firebreaks around homes.

The planning update project is being funded through a grant from the Federal Emergency Management Agency, Jessee said.

HAZARD PLANNING MEETINGS

Two public outreach meetings will be held Thursday and Friday on Walla Walla County's Hazard Mitigation Plan.

The meeting Thursday will begin at 7 p.m. and the Friday meeting will be at noon. Both will be on the second floor of the Walla Walla County Public Health and Legislative Building, 314 W. Main St., in Walla Walla.

People are asked to use the entrance at the back of the building accessible from the Rose Street parking lot for the meetings.



Walla Walla County – Public Comment & Review Requested

Walla Walla County Hazard Plan DRAFT Initial Public Review

The Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan (HMP) update, has been completed in draft form and is available to the public for review and comment at the locations listed below. Comments from opportunities below will be incorporated into the plan, as appropriate, and a month-long review process will begin for review of the revised plan. Details for the month-long review will be distributed later.

Walla Walla County Fire District 4 May 31, 10:00 AM to 11:30	2251 South Howard, Walla Walla, WA
Walla Walla County Public Health and Legislative Training Room May 31, 2018 7:00 PM June 1, 2018 at 12 PM (noon)	314 West Main St. Walla Walla, WA 99362

The purpose of the Walla Walla County HMP is to reduce the impact of hazards such as flooding, severe weather, wildfire, earthquake and volcanic ash fall on County residents, landowners, businesses, communities, local governments, and state and federal agencies while maintaining appropriate emergency response capabilities and sustainable natural resource management policies. The HMP identifies high risk areas as well as structures and infrastructure that may have an increased potential for loss due to a hazard event. The document also recommends specific projects that may help prevent disasters from occurring altogether or, at the least, lessen their impact on residents and property. The HMP is being developed by a committee of city and county elected officials, departments, local and state emergency response representatives, land managers, highway district representatives, and others.

The Walla Walla County HMP includes risk analysis at the community level with predictive models for where disaster risks are likely to occur. This plan will continue to enable the County and its communities to be eligible for grant dollars to implement the projects and mitigation actions identified by the committee. Although not regulatory, the HMP will provide valuable information as we plan for the future.

Comments on the HMP should be submitted to the attention of Liz Jessee, Walla Walla Emergency Management Director at ljesssee@co.walla-walla.wa.us or mailed to 27 N. 2nd Ave., Walla Walla, WA 99362.



Walla Walla County

Emergency Management Department

27 N. 2nd Avenue
Walla Walla, Washington 99362
Phone: (509) 524-2900 • Fax: (509) 524-2910
www.wwemd.info

LIZ JESSEE
Director

PATRICK PURCELL
Coordinator

HAZARD MITIGATION PLAN UPDATE

Steering Committee Meeting

WALLA WALLA COUNTY FIRE DISTRICT 4
2251 S. HOWARD, WALLA WALLA, WA
May 31, 2018 - 1000

AGENDA

1. Introductions

2. Tasks

- NMI Led review and discussion of proposed updates to the first six chapters of the Hazard Mitigation Plan.
- NMI identifies data/information requirements for HMP completion.
- Review of agenda for public information meetings May 31, and June 1st.
- Discuss timeline of HMP Draft document public comment and review.

3. Set Next Meeting Date

4. Adjourn



Walla Walla County

Emergency Management Department

27 N. 2nd Avenue
Walla Walla, Washington 99362
Phone: (509) 524-2900 • Fax: (509) 524-2910

LIZ JESSEE

Director

PATRICK PURCELL

Coordinator

SIGN IN SHEET

Hazard Mitigation Plan Public Outreach, May 31, 2018
Walla Walla County Legislative Bld, 314 W. Main
Walla Walla, WA 99362

NAME (PLEASE PRINT)	ORGANIZATION	EMAIL ADDRESS
Craig Cooper	ARES, Search & Rescue	ki7aan@gmail.com
Mikel Potts	ARES	mikelpotts@mc.com
NATHAN ZANE	ARES	KH6IHB@ARRL.NET
KEITH CARLIN	ARES EMERG. COORD.	KTACW@ARRL.NET
MARK CRIDER	WWSO	mcrider@co.walla-walla.wa.us
Mark Corrado	NMI	MCCRADO@NMI2.COM
Timber Burton	ARES	TIMBERBURTON@HOTMAIL.COM
Anne Rodriguez	ARES	ARCHANGEL13@ARRL.NET
Davena Burton	ARES	ppswalla@live.com
Evan Burton	ARH ARES	EvanBurton99@hotmail.com
RICHARD HOFFMAN		RICMANW@LIVE.COM
Eric Wiessner	ARES	dreic@visionsource-ww.com
DAKE SAEKCE	FEMA Reservist	smelcer@bmi.net
Liz Jessee	WWE	ljessie@co.walla-walla.wa.us
Patrick Purcell	WWE	ppurcell@co.walla-walla.wa.us

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Walla Walla County

Emergency Management Department

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Walla Walla, Washington 99362
Phone: (509) 524-2900 • Fax: (509) 524-2910

LIZ JESSEE
Director

PATRICK PURCELL
Coordinator

SIGN IN SHEET

Hazard Mitigation Plan Steering Committee Meeting July 25, 2018
Fire District 4 - Station 41, 2251 S. Howard Street,
Walla Walla, WA 99362

NAME (PLEASE PRINT)	ORGANIZATION	EMAIL ADDRESS
Mark Corrao	NWMT	MCORRAO@NWMT2.COM
Marilyn Lehmann	NWS-Pendleton	marilyn.lehmann@nwsa.gov
Patrick Purcell	WWEMO	ppurcell@co.walla-walla.wa.us
Liz Jessee	WWEMP	ljjessee
Bill Herrington	Amer Red Cross	AYV80R77@yahoo.com
Romy Luch/ro	City of Walla Walla	r.luch@ci.wallawalla.wa.us
Tony Garcia	Walla Walla Co.	tgarcia@wwcountyrads.com
Muri Struve	City of WW	mstruve@wallawalla.wa.gov
Renee M Hadley	WW Co. Conservation District	renee.hadley@wwcd.net
MARK HIGGINS	WWPS	mhiggins@wwps.org
Jack Ferguson	WWCDCH	jferguson@co.walla-walla.wa.us

Facebook Post for your records

County Hazard Plans/Walla Walla x

Liz Jessee

Jun 7

to mcorrao, Patrick



Walla Walla County Emergency Management

Published by em.d@co.walla-walla.wa.us (?) · Just now ·

Hard-copies of our Draft Walla Walla County Hazard Mitigation Plan are now available county-wide at public libraries. Please go to our website, www.wwemd.info, for details.



www.wwemd.info

WWEMD.INFO

Liz Jessee

Emergency Management Director

Walla Walla County

main: 509.524.2900 direct: 509.524.2902

cell: 509.520.2222 fax: 509.524.2910

27 N. 2nd Ave., Walla Walla, WA 99362

www.wwemd.info | www.facebook.com/wallawallaEM

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HMP Public Notice June for Facebook.docx

County Hazard Plans/Walla Walla x



Liz Jessee

Jun 1

Reply

to mcorrao, Patrick

Notice that will be placed on Facebook after our noon meeting.

...



Click here to [Reply](#), [Reply to all](#), or [Forward](#)

On Fri, Jun 1, 2018 at 10:22 AM, Liz Jessee <LJessee@co.walla-walla.wa.us<mailto:LJessee@co.walla-walla.wa.us>>> wrote:

Thank you for taking the time to review the plan. I've cc'd my contractor so that he can make the changes.

Liz Jessee, Director
Emergency Management Dept.
Walla Walla County

From: Steve Ruley <sruley@wallawallawa.gov<mailto:sruley@wallawallawa.gov>>>
Sent: Friday, June 1, 2018 10:20 AM
To: Liz Jessee <LJessee@co.walla-walla.wa.us<mailto:LJessee@co.walla-walla.wa.us>>>
Cc: Scott Bieber <sbieber@wallawallawa.gov<mailto:sbieber@wallawallawa.gov>>>; Stephanie Young <SYoung@wallawallawa.gov<mailto:SYoung@wallawallawa.gov>>>
Subject: RE: Draft Walla Walla HMP for public input and updates

Liz:



I have reviewed the draft Walla Walla HMP, and, under Appendix A additional critical facilities should be included. Specifically, all of the WESCOM system remote sites (COPPEI, HATCH GRADE/WALLULA, EUREKA, JAIL (listed only as a correctional facility), SKYROCKET, and PIKES PEAK (although it is technically over the border in Oregon). Each of these are critical infrastructure which directly impact the public safety throughout Walla Walla County. You have a current listing of the sites and geographic locations.

SRR

Steven R. Ruley, Manager
Support Services Division
Public Safety Communications
Walla Walla Police Department
27 N. 2nd Avenue<<https://maps.google.com/?q=27+N.+2nd+Avenue+%0D%0A+Walla+Walla,+WA.+99362&entry=gmail&source=g>>
Walla Walla, WA.<<https://maps.google.com/?q=27+N.+2nd+Avenue+%0D%0A+Walla+Walla,+WA.+99362&entry=gmail&source=g>> 99362<<https://maps.google.com/?q=27+N.+2nd+Avenue+%0D%0A+Walla+Walla,+WA.+99362&entry=gmail&source=g>>

 **Jodi Ferguson** <jferguson@co.walla-walla.wa.us>

 Jun 6 

 Reply 

to Liz, mcorrao 

Liz and Mark,
I have a few small edits....looking good!
Thanks Jodi

Jodi Ferguson

Walla Walla County Department of Community Health

Oral Health and Preparedness Coordinator

314 W. Main St. (Rose St. entry)

PO Box 1753

Walla Walla, WA 99362

509-524-2657 Office

509-524-2678 Fax



 **Liz Jessee**

Jun 5 ★

 Reply ▾

to mcorrao, Patrick ▾

Historic Flood Photos: <http://wallawalladrazanphotos.blogspot.com/search/label/floods>January 2008 Windstorm: <http://wallawalladrazanphotos.blogspot.com/2018/01/windstorm-of-jan-4th-2008-photos-of.html>

Liz Jessee, Director
Emergency Management Dept.
Walla Walla County

From: Joe Drazan <skippycat3@charter.net>
Sent: Jun 4, 2018 7:45 PM
To: Liz Jessee <LJessee@co.walla-walla.wa.us>
Subject: Re: Use of photographs

Hi Liz,

You didn't say where you found the Windstorm photos. I did give a CD with hundreds of them on it to Jim Dumont in Parks Dept; Andy Coleman should have those now. Is that the batch you saw? or did you see a selection on my blog website "Bygone WW" which has dozens posted to it in 3 batches.

Either way yes, feel free to copy them for your purposes.

Also on the website are dozens of the 1931 flood; it would be easiest for you to copy the ones you want from there. Click to enlarge them first then copy to get full size image. I couldn't tell if you had seen these or not.

Credit like so for those you use; "courtesy of Joe Drazan's **Bygone Walla Walla Project**"

Thanks for asking,

Joe

RE: Draft Walla Walla HMP for public input and updates



County Hazard Plans/Walla Walla x



Liz Jessee

Jun 4 ☆

↩ Reply ▼

to Mori, mcorrao, Bob ▾

Thank you Mori. We'll let you know if we have any questions.

Liz Jessee, Director
Emergency Management Dept.
Walla Walla County

From: Mori Struve <mstruve@wallawallawa.gov>
Sent: Friday, June 1, 2018 11:18 AM
To: Liz Jessee <LJessee@co.walla-walla.wa.us>; Mark Corrao <mcorrao@consulting-foresters.com>
Cc: Bob Yancy <byancey@wallawallawa.gov>
Subject: FW: Draft Walla Walla HMP for public input and updates
Importance: High

I don't have any comments for Chapter 7 or 8-13.

Mori Struve
Public Works Operations Manager
Office: 509-527-4463
mstruve@wallawallawa.gov

City of Prescott

P.O. Box 27, 108 So. D Street
Prescott, WA 99348-0027
Ph: 509-849-2262 - Fax: 509-849-2762

April 10, 2018

Ms. Liz Jesse, Director
Emergency Management Dept.
Walla Walla County
27 North 2nd
Walla Walla, WA 99362

Dear Ms. Jesse:

This letter is in response to your request for written input regarding the City of Prescott's section of the HMP update. I was sorry to miss seeing you at the office this afternoon, also.

At our council meeting yesterday on the 9th, I asked for Council's concerns about potential hazards facing the City. Their primary concerns related to chemical leaks of ammonia from local farm supply businesses and for potential explosions of grain storage facilities. Patrick indicated today, however, that this project relates only to natural disasters.

In light of that information, and after reviewing the Prescott chapter of the 2010 plan you provided today, it appears that the information included then is still applicable, and that the goals stated in that plan have been only partially met. It would seem appropriate that we include that same information and the mitigation goals from the 2010 plan in the 2018 update.

Thank you for your assistance. If you need further information from us, please let us know.

Sincerely yours,



Steven Heimbigner, Mayor

**Liz Jessee**

Jun 4 ☆

Reply

to Renee, mcorrao

Thanks for your feedback. I've cc'd Mark Corrao for him to make the adjustment.

Take Care,
Liz

Liz Jessee, Director
Emergency Management Dept.
Walla Walla County

From: Renee Hadley <renee.hadley@wwccd.net>
Sent: Monday, June 4, 2018 11:23 AM
To: Liz Jessee <LJessee@co.walla-walla.wa.us>
Subject: HMP review chapter 7-8

Liz, No comments on Chapter 7. Chapter 8 page 8-6 under the Flood Damage Prevention Standards, second component from bottom of page... "elevated to or **above one foot above** base flood elevation..." The above one foot above reads odd. Should it be similar to the last component on the same page "...elevated to the level of one foot above the base flood elevation...". Page 8-8 CO-3, Is this update not part of the near complete (end of June 2018) Comp Plan update? Regarding CO-8 "Conduct public outreach to provide systems to notify County Public Works if culverts need maintenance" I know large municipalities in WA state have a website dedicated to such things like "identify a pothole" in which the public can click on the location on a map, provide some brief comments and contact information then this info is sent to the Public Works Dept. for prioritization of maintenance. Things to consider. Section 8.7 Wildfire, first paragraph second line "This area is outlined in **Error!Reference source not found.**" I am assuming this will be fixed before the final. Page 8-10 first full paragraph... "It is anticipated that the County will adopt the 2009 IFC in July 2010..." Should this be changed to past tense? Same with 3rd bulleted paragraph on the same page. Page 8-11 Earthquakes... CO-11; CO-12 & CO-13 should this be revised from 2010-2015 planning cycle to 2018-2022 cycle? Page 6-10 and page 8-11 refer to the 2012 damage costs. The # on page 6-10 for flooding is just over a grand with wind \$1.3M. Is the flooding \$# right? Is it missing some zeros? If the 2012 total was near \$16M, the addition doesn't quite add up right...

Chapter 1 page 1-3 and possibly elsewhere... references Walla Walla Public Schools (multiple Districts)... As discussed during the Thursday May 31 meeting at 10 am, we understand this will be edited to state something like the following... school districts in Walla Walla County (including Walla Walla Public Schools District #140, 6 other public school districts, and private schools)
I apologize. I should have done these in track changes but I didn't remember until the last comment. Let me know if you need these comments in track changes.

Renee M. Hadley
District Manager
Walla Walla County Conservation District
509-522-6347 ext. 110 or 509-956-3756
renee.hadley@wwccd.net

 **Liz Jessee**

 May 31 

 Reply 

to mcorrao, Patrick 

Here is the information about Mill Creek Channel ownership from Renee Hadley, Conservation District.

Liz Jessee

Emergency Management Director

Walla Walla County

main: 509.524.2900 direct: 509.524.2902

cell: 509.520.2222 fax: 509.524.2910

27 N. 2nd Ave., Walla Walla, WA 99362

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
RE: Draft Walla Walla HMP for public input and updates



County Hazard Plans/Walla Walla x

 **Liz Jessee**

 May 31 

 Reply 

to Patrick, Mark, Barbara, Bret, Cody, David, Dixie, Elizabeth, Harvey, Herb, Jeffrey, Jodi, 

Good afternoon Steering Committee Members. For those of who were unable to attend this morning's meeting, I wanted to follow-up on my email from this morning with some tasks that we identified that need to be completed during the public review comment period, ending June 29.

- Scan through/read Chapters 1 – 6 if you haven't already done so,
- Review and comment on Chapter 7,
- **Most importantly, and required by each jurisdiction to complete the document, review and provide input for your jurisdiction specific chapter (8 – 13), This includes updating your jurisdiction's mitigation projects. We brought the projects forward from the 2010 plan. Have any of your jurisdiction's projects been completed? Which should remain in the 2018 plan? What new mitigation projects have you identified?**
- Go through Appendix A: Critical Facilities and advise of any facilities that should be removed or added. **For this task I've added some law enforcement/WESCOM/Fire who are not on the Steering Committee to the 'Cc...line' of this message who may have some input for this portion of the plan. They may also feel free to review other portions and provide their input.**

As before, if you have any changes, please make them to the Word version of the document with Track Changes on.

We've also decided to add photographs to the document. If you have any good resolution photos (1 MG size or greater) that you think relate to your jurisdiction/the document, please email them to me.

-
The Draft Hazard Mitigation Plan will be placed on our website for public review and comment, www.wwemd.info.

Again, the review period will end on June 29th. Comments, and your copy of the document with changes (if applicable), should be returned to me via email by then.

FW: MARK YOUR CALENDARS! Initial Public Review of DRAFT Hazard Mitigation Plan



County Hazard Plans/Walla Walla x



Liz Jessee

May 29

Reply

to WWUB

Thank you very much for highlighting our project and putting the article on the front page. I really appreciate it. I did notice that the article states that there are two evening appointments. Actually there is one, on Thursday, and the Friday meeting is at Noon. Can you put a blurb in the paper noting the times (below)?

Thanks Again!
Liz

From: Liz Jessee

Sent: Thursday, May 10, 2018 1:38 PM

To: 'Stidham, Jeffery L CIV USARMY CENWW (US)' <Jeffery.L.Stidham@usace.army.mil>

Cc: Patrick Purcell <ppurcell@co.walla-walla.wa.us>

Subject: RE: MARK YOUR CALENDARS! Initial Public Review of DRAFT Hazard Mitigation Plan

Thanks Jeff!

From: Stidham, Jeffery L CIV USARMY CENWW (US) <Jeffery.L.Stidham@usace.army.mil>

Sent: Thursday, May 10, 2018 12:11 PM

To: Gilbert, Troy A CIV USARMY CENWW (US) <Troy.A.Gilbert@usace.army.mil>; Stegall, Justin R CIV USARMY CENWW (US)

<Justin.R.Stegall@usace.army.mil>; Hammond, Alex CIV USARMY CENWW (US) <Alex.J.Hammond@usace.army.mil>; Walters, Bret L CIV USARMY

CENWW (US) <Bret.L.Walters@usace.army.mil>; Kalamasz, Rebecca L CIV USARMY CENWW (US) <Rebecca.L.Kalamasz@usace.army.mil>

Cc: Bogdanowitz, Val P (Val) CIV USARMY CENWW (US) <Val.P.Bogdanowitz@usace.army.mil>; Frost, Michelle D CIV USARMY CENWW (US)

<Michelle.D.Frost@usace.army.mil>; Cannon, Richard E CIV USARMY CENWW (US) <Richard.E.Cannon@usace.army.mil>; Howard, Jamie N

<Jamie.N.Howard@usace.army.mil>; Hartl, Joy G CIV USARMY CENWW (US) <Joy.G.Hartl@usace.army.mil>; Palmer, Marcus D CIV USARMY CENWW

(US) <Marcus.D.Palmer@usace.army.mil>

Subject: FW: MARK YOUR CALENDARS! Initial Public Review of DRAFT Hazard Mitigation Plan

For your information.

Jeff Stidham

 **Liz Jessee**

to Mark ▾

May 25 ☆

↩ Reply ▾

Here are the comments from the County Public Works Dept.

Liz Jessee, Director
Emergency Management Dept.
Walla Walla County

From: Tony Garcia <tgarcia@wwcountyroads.com>
Sent: May 25, 2018 2:08 PM
To: Liz Jessee <LJessee@co.walla-walla.wa.us>
Subject: RE: Hazard Mitigation Plan Update

This e-mail has attached file(s) that have been converted to links due to their size ? please use the link(s) at the bottom of this email to retrieve them.

Hi Liz,

We reviewed the six sections of the plan update and have no comments.

As requested, here are our significant events for the last 10 years and their associated approximate costs (some picture attached):

- 2008 windstorm – approx. \$500,000
- 2012 Flash Flood (around Luckenbill Rd, Yox Rd, Woodward Canyon Rd) – approx. \$2,000,000
- Winter 2016/2017 – approx. \$500,000
- Winter 2017/2018 – approx. \$1,000,000

Besides the significant events shown above, we typically spend over \$100,000 every year on winter weather events.

Have a great weekend,

Tony Garcia Morales, P.E.
Walla Walla County Public Works

From: Stidham, Jeffery L CIV USARMY CENWW (US) <Jeffery.L.Stidham@usace.army.mil>
Sent: Thursday, May 3, 2018 2:11 PM
Subject: FW: Hazard Mitigation Plan Update Planning Team Meeting

Good afternoon!

Richard Cannon and I attended today's steering committee meeting, and they had specific requests for Walla Walla District, concerning areas that we have the best information on.

If you could take some time to do the write up, and send it to Liz Jesse, Walla Walla Emergency Management Director by 28 May 2018, that would be great. I've copied Liz as a CC.

Please use the attached MS Word document, with TRACK CHANGES turned on. The areas are under the "Flooding" hazard, as follows:

Dam Safety (Alex): A description of the current DSAC ratings for USACE projects in Walla Walla County, i.e., Ice Harbor, Mill Creek/Bennington Lake, and a summary of the potential impacts to the population at risk in the event of a failure. This is currently not in the draft AHMP.

Levee Safety (Troy): A description of the current risk characteristics, as they are available, for the Mill Creek and Waitsburg levee systems. If available (and ready for release), an executive summary of the levee screening reports might be the better approach. There is very little concerning the levees in the AHMP, and they are a significant mitigation effort for two major communities in the county.

Mill Creek (Justin): Please review and recommend changes to the content regarding Mill Creek, as it pertains to USACE operations. That basin is frequently mentioned, but there is little regarding USACE authorities and operations. A history of flood events would be a good idea. This would also be a good place to document how flood control operations at Bennington are planned, coordinated, and conducted. I suggest a short summary of the joint communications plan as well.

Also brought up in the meeting: City and County officials are lobbying Congress for funds to study the Mill Creek channel through the city of Walla Walla, by the Mill Creek Coalition. This appears to be a General Investigation study, on the order of \$3 million over 3 years. That will be going into the AHMP, so I have copied Planning Branch (Brett and Rebecca) for their information.

Please note that Walla Walla County has a plan writer for this document, and he will do most of the roll up. If there are any questions from the planner, I will work with Liz to get them answered.

Thank you for your cooperation!
Jeff Stidham

Disaster Response Manager
Walla Walla District

FW: Walla Walla County HMP Chps 1-6 DRAFT 2018

County Hazard Plans/Walla Walla x



 **Liz Jessee** <LJessee@co.walla-walla.wa.us>
to mcorrao ▾

 May 22 ☆

 Reply ▾

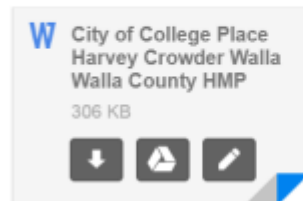
Please see attached.


Liz Jessee, Director
Emergency Management Dept.
Walla Walla County

From: Harvey Crowder <HCrowder@cpwa.us>
Sent: Tuesday, May 22, 2018 10:11 AM
To: Liz Jessee <LJessee@co.walla-walla.wa.us>
Subject: Walla Walla County HMP Chps 1-6 DRAFT 2018

A few embedded comments.

HRC



 **Liz Jessee** <LJessee@co.walla-walla.wa.us> May 24  Reply to mcorrao, Patrick 

Please see attached.

Liz Jessee

Emergency Management Director

Walla Walla County

main: 509.524.2900 direct: 509.524.2902

cell: 509.520.2222 fax: 509.524.2910

27 N. 2nd Ave., Walla Walla, WA 99362www.wwemd.info | www.facebook.com/wallawallaEM*Always Working for a Disaster Prepared and Resilient Community* **EMD Walla Walla
County HMP Chps 1-6
DRAFT 2018.docx**
392 KB

RE: Flood Section of Hazard Mitigation Plan

County Hazard Plans/Walla Walla x



Liz Jessee <LJessee@co.walla-walla.wa.us>

May 21

Reply

to Marilyn, mcorrao, Tony

Thanks for capturing this information. I have some amazing photos, more than I can send in an email. I can create a shared folder if you're interested in looking at them Mark.

I hope that the county is capturing this event in their report.

Liz Jessee, Director
Emergency Management Dept.
Walla Walla County

From: Marilyn Lohmann - NOAA Federal <marilyn.lohmann@noaa.gov>

Sent: Monday, May 21, 2018 2:50 PM

To: mcorrao@nmi2.com; Liz Jessee <LJessee@co.walla-walla.wa.us>

Subject: Flood Section of Hazard Mitigation Plan

I have these additions for the flood section.

Thanks,
Marilyn Lohmann
National Weather Service Pendleton
541-276-7832

2 Attachments



W Flash Flooding Input-
WW Hazard Mitigation
Plan.docx

13 KB





FEMA Map Specialist (FMIX) <FEMAMapSpecialist@riskmapcds.com>

6:55 AM (24 minutes ago) ☆

↩ Reply ▾

to Mark ▾

We are responding as a representative of the Department of Homeland Security, Federal Emergency Management Agency (FEMA), to your email message sent to FEMAMapSpecialist@riskmapcds.com.

The most current, effective Flood Insurance Rate Maps (FIRMs) for Walla Walla County, Washington are dated 01/18/2002. The FEMA Flood Map Service Center (MSC) is the official public source for flood hazard information produced in support of the National Flood Insurance Program. To view the mapped flood zones for your area of interest, you may search by street address or place on the MSC at <https://msc.fema.gov/portal/search>. The search results will display the best map information for the location entered and will note if digital flood hazard data is available for your area of interest.

Alternatively, if you wish to view the range of products available for a community, you may use the Search All Products option at <https://msc.fema.gov/portal/advanceSearch>. Using the Jurisdiction search option, choose the appropriate drop down selections that correspond with your area of interest. Pressing the Search button below will display a list of product types, and clicking on any of the highlighted folders will allow you to view available mapping products (FIRM Panels, FIS Reports, LOMC, and NFHL data). Select the desired regulatory product status and type of mapping product to display a list of items to view or download.

According to our records, the last Community Assistance Visit (CAV) for the City of Walla Walla was 05/13/2014. The last CAV for the Town of Prescott was 06/19/2007. The last CAV for the City of Waitsburg was 10/19/2017, while the last CAV for the City of College Place was 12/07/2006.

We hope this information has addressed the concerns raised in your email. If you need additional information or assistance, please reply to this message. You may also contact the FEMA Map Information eXchange (FMIX) by telephone, toll-free, at (877)336-2627, option 1, or by chat at http://www.floodmaps.fema.gov/fhm/fmx_main.html.

----- Original Message -----

From: "FEMA-ContactUs" <fema-contactus@fema.dhs.gov>

Received: 6/26/2018 10:11 AM (Eastern Daylight Time)

To: "Fema Map Specialist" <FEMAMapSpecialist@riskmapcds.com>

Subject: [FMS] - FloodMapping Question: 180626 - 568899 | ref:_00DF0Bqlq_500t0Aypnf:ref

Case # 180626 - 568899

Contact Name: Mark Corrao

Email: mcorrao@nmi2.com

State: Idaho

Topic: Flood Insurance, Maps and Information

Sub-Topic: Flood Mapping / Zones

Case Comment/Question Thread – I am working with the County of Walla Walla Washington to complete an update to their County Hazard Mitigation Plan. In doing so we are looking for the most recent FIRM maps for the county (looks like 1998 mapping efforts presented 9/30/2014 are the most current?). Additionally, we are looking for the dates of the last CAVs within the County for the towns of Walla Walla, Prescott, Waitsburg, and College Place. Any assistance or links your team could provide would be greatly appreciated. Thank you - Mark

Flood Section of Hazard Mitigation Plan

County Hazard Plans/Walla Walla x



Marilyn Lohmann - NOAA Federal <marilyn.lohmann@noaa.gov>

May 21 ☆

Reply

to mcorrao, Liz

I have these additions for the flood section.

Thanks,
Marilyn Lohmann
National Weather Service Pendleton
541-276-7832



RE: Hazard Mitigation Plan Update

County Hazard Plans/Walla Walla x



Liz Jessee <LJessee@co.walla-walla.wa.us>

May 21 ☆

Reply

to Randy, Mark

It's fine if you didn't find anything. We'll note that you reviewed the document and that your addition of the City of Waitsburg Flood Plan was the only change.

Thanks Randy!

Liz Jessee, Director
Emergency Management Dept.
Walla Walla County

From: Randy Hinchliffe <rjhinch@gotvc.net>
Sent: Monday, May 21, 2018 2:29 PM
To: Liz Jessee <LJessee@co.walla-walla.wa.us>
Cc: 'Mark Corrao' <mcorrao@nmi2.com>
Subject: RE: Hazard Mitigation Plan Update

I didn't really see any to comment on. I did insert our Flood Response plan adoption date under the City of Waitsburg section.

From: Steve <steve.h42@hotmail.com>
Sent: Thursday, May 17, 2018 10:10 AM
To: Liz Jessee <LJessee@co.walla-walla.wa.us>
Cc: Jared Hawkins <jared@hawklaw.biz>; Linda Vannoster, Clerk <cityofprescottclerk@columbiainet.com>
Subject: Fw: Hazard Mitigation Plan Update

Good morning Liz,

I've reviewed this portion of the plan draft, and the Prescott-specific information seems to be accurate. At our Monday meeting, Council had the opportunity to review and comment on the draft of the opening chapters of the plan update and on the 2010 Prescott Jurisdiction Chapter. They offered no additional comments for either document. I also don't have any specific comments to add.

Our attorney, Jared Hawkins, has reviewed both attached documents and has made a few suggestions for some minor changes to the Prescott chapter. Those are highlighted in the attachment.

If you need further information or have questions, please let us know. Thank you for your assistance on this project.

Steve Heimbigner, Mayor

City of Prescott

FW: HMP track changes edits from WWCCD

County Hazard Plans/Walla Walla x



 **Liz Jessee** <LJessee@co.walla-walla.wa.us>

May 10

 Reply

to mcorrao, Patrick

Please see attached.

Liz Jessee, Director
Emergency Management Dept.
Walla Walla County

From: Renee Hadley <renee.hadley@wwccd.net>

Sent: Thursday, May 10, 2018 10:56 AM

To: Liz Jessee <LJessee@co.walla-walla.wa.us>

Subject: HMP track changes edits from WWCCD

Liz, I have attached WWCCD suggestions/edits for the HMP. Most are minor but there are a few new paragraphs in Chapter 6 about page numbers 48 and 54. Let me know if you need anything else.

Renee M. Hadley
District Manager
Walla Walla County Conservation District
509-522-6347 ext. 110 or 509-956-3756
renee.hadley@wwccd.net



Re: RE: Draft Walla Walla HMP for public input and updates - American Red Cross Comments



 Inbox x

 **William Herrington** <ayv8or77@yahoo.com>

Jun 24 (3 days ago)

 Reply

to Liz, Mark, Dixie

Ms. Jessee,

Please find attached comments from the American Red Cross review of the **June 2018 Draft document**. We understand you desired proposed changes be made to the WORD document, however the nature of our comments make it difficult to submit as such. Hopefully you can insert and word them where they make the most sense.

Thank you for the opportunity to review and comment,

Bill Herrington
American Red Cross
509-539-9768

RE: Agenda



County Hazard Plans/Walla Walla x



Rocky Eastman <reastman@wwfire4.com>

May 8



Reply



to Mark

Hi Mark,

Attached is a description of the Blue Creek and the Dry Creek fires.
Thank you,

Rocky

Rocky Eastman- Fire Chief
Walla Walla County Fire District #4
2251 South Howard
Walla Walla, WA 99362
reastman@wwfire4.com
509-529-1282

From: Mark Corrao [mailto:mcorrao@nmi2.com]
Sent: Tuesday, May 01, 2018 5:21 AM
To: Liz Jessee
Cc: Patrick Purcell; Rocky Eastman
Subject: Re: Agenda

Rocky,

To give you a little background before we talk on thursday I have included some of the descriptions of fires from the past (attached). I am hoping you could improve on these or at the least draft a paragraph on the BLue Creek fire and maybe one other fire of significance within Walla Walla County that has occurred since 2010.

Thank you for any description and let me know if you have questions.
Mark

 **Liz Jessee** <LJessee@co.walla-walla.wa.us>

May 4

 Reply

to Andy, Mark, Patrick

Please see attached Public Notice. If possible I'd like it in the Sunday paper on the 6th. I understand from talking to Connie Vinti that you currently out of the office. If that means that cannot get the notice in the paper on the 6th, please publish it on the 13th of May.

Thank you,
Liz

Liz Jessee
Emergency Management Director

Walla Walla County
main: 509.524.2900 direct: 509.524.2902
cell: 509.520.2222 fax: 509.524.2910
27 N. 2nd Ave., Walla Walla, WA 99362
www.wwemd.info<<http://www.wwemd.info>> | www.facebook.com/wallawallaEM<<http://www.facebook.com/wallawallaEM>>

Always Working for a Disaster Prepared and Resilient Community



Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan Meetings

PUBLIC NOTICE

From: Liz Jessee, Walla Walla County Emergency Management Department
Date: May 4, 2018
RE: Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan Update

Walla Walla County Set to Update Hazard Risk Plan

Walla Walla, WA. Walla Walla County has launched a project to update the 2010 Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan (HMP). This update will include the information and results of the recently completed Walla Walla County Community Wildfire Protection Plan (2017). Local agencies and organizations in Walla Walla County have created a committee to complete the required 5-year updates of this document as part of the FEMA Pre-Disaster Mitigation program and National Fire Plan and Healthy Forests Restoration Act. The project is being funded through a grant from FEMA.

The planning update will include information on risk analyses, vulnerability assessments, and mitigation recommendations for the hazards of flood, earthquake, severe weather, wildland fire, volcanic ash fall, and others.

Northwest Management, Inc. has been retained by Walla Walla County to provide risk assessments, hazard mapping, field inspections, interviews, and to collaborate with the planning committee to update the HMP. The committee includes representatives from local communities, rural and wildland fire districts, State and Federal agencies, highway districts, private landowners, area businesses, school districts and various other Walla Walla County departments, and entities.

One of the goals of the planning process will be to increase the participating jurisdictions' eligibility for additional grants that will help minimize the risk and potential impact of disaster events. The planning team will be conducting public meetings in the coming months to discuss preliminary findings and to seek public input on the Plans' information and recommendations. A notice of the dates and locations of these meetings will be posted in local newspapers. Once completed, the updated draft plan will also be available for public review and comment.

A planning committee meeting is scheduled for May 31st at 10:00 am, at 2251 South Howard in the Walla Walla County Fire District #4 building, in Walla Walla. This meeting will be followed by two (2) public outreach meetings:

- (1) May 31st at 7pm, at the Walla Walla County Public Health and Legislative Building, 314 West Main Street, 2nd Floor, Walla Walla, WA
- (2) June 1st at 12 pm (noon) Walla Walla County Public Health and Legislative Building, 314 West Main Street, 2nd Floor, Walla Walla, WA

Please use the entrance at the back of the building accessible from the Rose Street parking lot for the meetings.

For additional information on the Walla Walla HMP draft document or the update please join us at these public meetings or contact Walla Walla Emergency Management at 509-524-2900 or emd@co.walla-walla.wa.us. Following these meetings there will be a public comment period through June 30th.

RE: Public notice drafts



County Hazard Plans/Walla Walla x



Liz Jessee <LJessee@co.walla-walla.wa.us>

May 4 ☆

Reply ▾

to Mark, Patrick ▾

Mark,

We have a designated newspaper for Public Notices, the Walla Walla Union Bulletin. I'll get the notice posted. I've booked the Legislative Building Training Room on the 1st but I'll have to check with WWFD about the 31st.

I've attached some of the PowerPoint I mentioned that we use for presentations; it has some stats in it and a couple of pictures. I've also attached the one with just pictures from local events. Sorry to say the second only goes through 2013, but I can add some more recent incidents before our next meeting.

Liz Jessee, Director
Emergency Management Dept.
Walla Walla County

SHELDUS data for Walla Walla, WA



County Hazard Plans/Walla Walla x



Melanie Gall <mgall2@asu.edu>

May 3 ☆

Reply ▾

to Mark ▾

Mark,

Attached are three zip files containing SHELDUS data aggregated by hazard type.

The difference between each zip file is that one is only aggregated by

- a) hazard (giving you totals by hazard across all years),
- b) hazard and year (giving you hazard totals by year), and
- c) hazard and month (giving you monthly hazard totals).

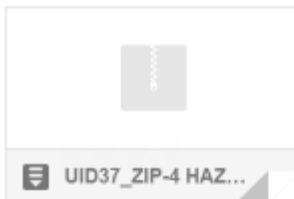
Option C is the finest aggregation that we offer. Please note that only months are included where a loss event was recorded.

Hope this is what you needed. The invoice is attached as well.

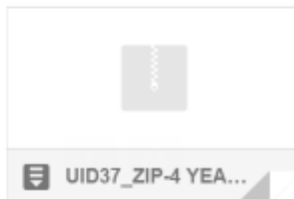
Best,
Melanie

>

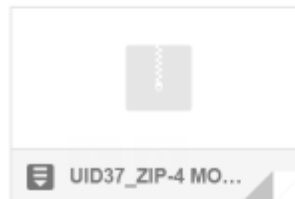
4 Attachments



UID37_ZIP-4 HAZ...



UID37_ZIP-4 YEA...



UID37_ZIP-4 MO...

 **Liz Jessee** <LJessee@co.walla-walla.wa.us> Apr 26  Reply to Marilyn, Mark 

Unfortunately I can't recall if I reached out to you about weather history. I can't find a sent message, so unfortunately I probably haven't. For our updated Hazard Mitigation Plan, we identified that instead of a detailed chronological list (as was in the 2010 plan) that should identify key events for the County and some measures of frequency and size. Can you work on putting something together for us?

Liz Jessee, Director
Emergency Management Dept.
Walla Walla County

From: Mark Corrao <mcorrao@nmi2.com>

Sent: Thursday, April 26, 2018 8:41 AM

To: Liz Jessee <LJessee@co.walla-walla.wa.us>; Patrick Purcell <ppurcell@co.walla-walla.wa.us>

Subject: Weather info for plan?

Liz,

I was wondering if you had been in contact with the NOAA gal at the last meeting and if she might be working up the storm event data since the last plan? We had briefly spoken at the last meeting about not needing to do a chronological list as was in the 2010 plan but rather just identify the key events for the County and present some measures of frequency and size. This will support other parts of the plan the best.

I am envisioning adapting the current 2010 plan information into whatever updated format the new information comes in to make it all a bit more succinct. We are open to formatting and organization suggestions as anyone sees valuable.

Let me know if there are any questions or if I can provide additional explanation.

Thank you,
Mark

Mark Corrao, Ph.D., P.H. <<http://www.thenmiway.com/mark-corrao/>>
Northwest Management, Inc. - Partner
University of Idaho - Adjunct Faculty
Moscow, ID | Deer Park & Colville, WA | Helena, MT
208.310.6732 Cell | 208.883.4488 Ext 129 Office

RESOLUTION NO. 2018-91

A RESOLUTION APPROVING AND ADOPTING THE UPDATED WALLA WALLA COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN (HMP)

WHEREAS, 42 U.S.C. § 5165 requires local governments to adopt hazard mitigation plans; and

WHEREAS, the City of Walla Walla approved and adopted a Multi-Jurisdictional Hazard Management Plan by City Resolution 2011-13 (Jan. 26, 2011); and

WHEREAS, the Walla Walla County Emergency Management Department has prepared and presented an updated Walla Walla County Multi-Jurisdictional Hazard Management Plan; and

WHEREAS, the Walla Walla County Board of Commissioners adopted the Walla Walla County Multi-Jurisdictional Hazard Management Plan by County Resolution 18 208 on August 20, 2018; and

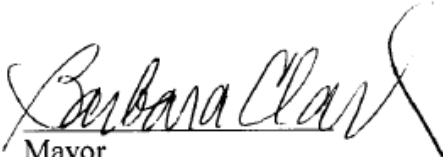
WHEREAS, the Walla Walla County Multi-Jurisdictional Hazard Management Plan has been presented to the City of Walla Walla for adoption; and

WHEREAS, the Walla Walla City Council has considered this matter during a regularly and duly called public meeting of said Council, has given said matter careful review and consideration, and finds that good government and the best interests of the City of Walla Walla will be served by passage of this resolution;

NOW THEREFORE, the City Council of the City of Walla Walla do resolve as follows:

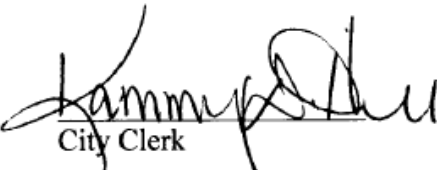
Section 1: The updated Walla Walla County Multi-Jurisdictional Hazard Management Plan (HMP) is hereby approved and adopted by the City of Walla Walla.

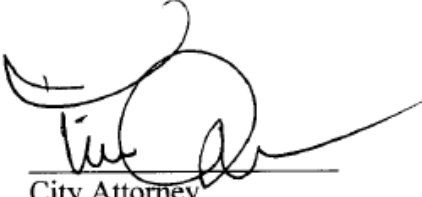
PASSED by the City Council of the City of Walla Walla, Washington, August 22nd, 2018.


Mayor

Attest:

Approved as to form:


City Clerk


City Attorney

RESOLUTION # 2018 – 687

**A Resolution of the Council of the City of Waitsburg approving an update to the
Walla Walla County Hazard Mitigation Plan**

WHEREAS, the Federal Disaster Mitigation Act of 2000 requires local government agencies to develop and submit a hazard mitigation plan (HMP) in order to receive future mitigation project grant funds; and

WHEREAS, the County has knowledge and experience that certain natural and man-made hazards pose threats to lives and cause damages to property within Walla Walla County; and

WHEREAS, the County, led by Emergency Management Department, along with Northwest Management Inc. (contractor) served as the lead agency in developing the HMP update and reached out to local, state, and federal agencies in an effort to conduct the most comprehensive planning effort possible; and

WHEREAS, the Cities of College Place, Prescott, Waitsburg and Walla Walla, the Mill Creek Flood Control Zone District, and Walla Walla Public Schools joined with the County as active participants in the process; and

WHEREAS, the HMP update builds on the 2010 plan and formalizes the County's comprehensive efforts to make the County safer by providing guidance for hazard mitigation within Walla Walla County, and by identifying mitigation goals, objectives and projects that will reduce or prevent injury or damage from hazards; and

WHEREAS, Walla Walla County its planning partners provided several opportunities for public participation in the planning process by providing public notice, holding public meetings and reaching out to interested parties; and

BE IT HEREBY RESOLVED that the City Council for the City of Waitsburg does hereby adopt the Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan in accordance with the Federal Disaster Mitigation Act of 2000 thereby meeting the eligibility requirements for the potential receipt of mitigation project grant funds.

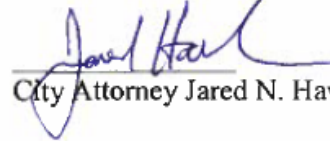
PASSED, ADOPTED AND APPROVED this 17th day of September 2018.

APPROVED:



Mayor Marty Dunn

APPROVED AS TO FORM:



City Attorney Jared N. Hawkins

ATTEST:



City Clerk Randy Hinchliffe

City of College Place, Washington

RESOLUTION NO. 18-026

**A RESOLUTION BY THE CITY COUNCIL OF THE CITY OF COLLEGE PLACE, WASHINGTON
ADOPTING THE WALLA WALLA COUNTY HAZARD MITIGATION PLAN.**

Whereas, the City of College Place is a non-charter code city governed by the rules and regulations of RCW 35A; and

Whereas, the Federal Disaster Mitigation Act of 2000 requires local government agencies to develop and submit a hazard mitigation plan (HMP) in order to receive future mitigation project grant funds; and

Whereas, the County has knowledge and experience that certain natural and man-made hazards pose threats to lives and cause damages to property within Walla Walla County; and

Whereas, the County, led by Emergency Management Department, along with Northwest Management Inc. (contractor) served as the lead agency in developing the HMP update and reached out to local, state, and federal agencies in an effort to conduct the most comprehensive planning effort possible; and

Whereas, the Cities of College Place, Prescott, Waitsburg and Walla Walla, the Mill Creek Flood Control Zone District, and Walla Walla Public Schools joined with the County as active participants in the process; and

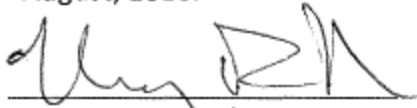
Whereas, the HMP update builds on the 2010 plan and formalizes the County's comprehensive efforts to make the County safer by providing guidance for hazard mitigation within Walla Walla County, and by identifying mitigation goals, objectives and projects that will reduce or prevent injury or damage from hazards; and

Whereas, Walla Walla County its planning partners provided several opportunities for public participation in the planning process by providing public notice, holding public meetings and reaching out to interested parties; and

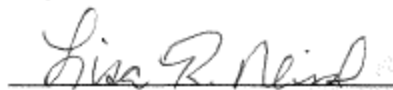
Now therefore, be it Resolved that the City Council of the City of College Place does hereby adopt the Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan in accordance with the Federal Disaster Mitigation Act of 2000 thereby meeting the eligibility requirements for the potential receipt of mitigation project grant funds.

Effective Date. This resolution shall take effect and be in full force upon its passage as provided by law.

PASSED by the City Council of the City of College Place, Washington, this 14th day of August, 2018.


Harvey R. Crowder, Mayor

Attest:


Lisa R. Neissl, City Clerk

BOARD OF COUNTY COMMISSIONERS
WALLA WALLA COUNTY, WASHINGTON

IN THE MATTER OF ADOPTING
WALLA WALLA COUNTY MULTI-
JURISDICTIONAL HAZARD
MITIGATION PLAN

RESOLUTION NO. **18 208**

WHEREAS, the Federal Disaster Mitigation Act of 2000 requires local government agencies to develop and submit an hazard mitigation plan (HMP) in order to receive future mitigation project grant funds; and

WHEREAS, the County has knowledge and experience that certain natural and man-made hazards pose threats to lives and cause damages to property within Walla Walla County; and

WHEREAS, the County, led by Emergency Management Department, served as the lead agency in developing the HMP update and reached out to local, state, and federal agencies in an effort to conduct the most comprehensive planning effort possible; and

WHEREAS, the Cities of College Place, Prescott, Waitsburg and Walla Walla, the Mill Creek Flood Control Zone District, Walla Walla Conservation District and Walla Walla Public Schools joined with the County as active participants in the process; and

WHEREAS, the HMP update builds on the 2010 plan and formalizes the County's comprehensive efforts to make the County safer by providing guidance for hazard mitigation within Walla Walla County, and by identifying mitigation goals, objectives and projects that will reduce or prevent injury or damage from hazards; and

WHEREAS, Walla Walla County and its planning partners provided several opportunities for public participation in the planning process by providing public notice, holding public meetings and reaching out to interested parties; and

WHEREAS, the HMP update has been reviewed by all relevant departments, boards, committees and the Washington State Emergency Management Division; and


BE IT HEREBY RESOLVED that the Board of Walla Walla County Commissioners does hereby adopt the Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan in accordance with the Federal Disaster Mitigation Act of 2000 thereby meeting the eligibility requirements for the potential receipt of mitigation project grant funds.

Passed this 20th day of **August, 2018** by Board members as follows: 2 Present or 0 Participating via other means, and by the following vote: 2 Aye 0 Nay 0 Abstained 1 Absent.

Attest:


Connie R. Vinti, Clerk of the Board


James K. Johnson, Chairman, District 1


Todd L. Kimball, Commissioner, District 2


James L. Duncan, Commissioner, District 3

Constituting the Board of County Commissioners
of Walla Walla County, Washington

RESOLUTION NO. 2018-09-R

**A RESOLUTION OF THE CITY COUNCIL FOR THE CITY OF PRESCOTT IN THE
MATTER OF APPROVING AND ADOPTING THE WALLA WALLA COUNTY
MULTI-JURISDICTIONAL MITIGATION PLAN (HMP)**

WHEREAS, each year in the United States, disasters take the lives of hundreds of people and injure thousands more; and

WHEREAS, nationwide, taxpayers pay billions of dollars annually to help communities, organizations, businesses, and individuals recover from disasters; and

WHEREAS, monies expended to respond to disasters only partially reflect the true cost of disasters because additional expenses to insurance companies and nongovernmental organizations are not reimbursed by tax dollars; and

WHEREAS, many disasters are predictable, and much of the damage caused by these events can be alleviated or even eliminated; and

WHEREAS, hazard mitigation planning is the process through which hazards that threaten communities are identified, likely impacts of those hazards are determined, mitigation goals are set, and appropriate strategies to lessen impacts are established, prioritized, and implemented; and

WHEREAS, the Walla Walla County Multi-jurisdictional Hazard Mitigation Plan (HMP) was prepared to provide guidance for hazard mitigation within Walla Walla County and documents the planning process employed by the Planning Team; and

WHEREAS, the lead entity developing this plan, Walla Walla County Emergency Management Department ("Emergency Management Department"), sought input from local cities, fire districts, schools, flood control districts, other interested jurisdictions throughout the County, state agencies, federal agencies, and many others; and

WHEREAS, the Emergency Management Department significantly updated the 2010 HMP to create a draft 2018 HMP which complies with applicable federal requirements, including 44 CFR 201.6 and 44 CFR 79.6; and

WHEREAS, the City Council recognizes the importance of planning for disasters; and

WHEREAS, the Emergency Management Department has prepared the 2018 Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan (HMP) and has requested that the City of Prescott adopt and approve the plan; and

WHEREAS, the City Council has discussed the merits of the HMP and believes it to be in the best interest of the City of Prescott to adopt said HMP.

RESOLUTION #10-2018
November 20, 2018

**Walla Walla County Multi-Jurisdictional
Hazard Mitigation Plan Renewal**

WHEREAS, the Federal Disaster Mitigation Act of 2000 requires local government agencies to develop and submit a hazard mitigation plan (HMP) in order to receive future mitigation project grant funds; and

WHEREAS, the County has knowledge and experience that certain natural and man-made hazards pose threats to lives and cause damages to property within Walla Walla County; and

WHEREAS, the County, led by Emergency Management Department, served as the lead agency in developing the HMP update and reached out to local, state, and federal agencies in an effort to conduct the most comprehensive planning effort possible; and

WHEREAS, the Cities of College Place, Prescott, Waitsburg and Walla Walla, the Mill Creek Flood Control Zone District, and Walla Walla Public Schools joined with the county as active participants in the process; and

WHEREAS, the HMP update builds on the 2010 plan and formalizes the County's comprehensive efforts to make the County safer by providing guidance for hazard mitigation within Walla Walla County, and by identifying mitigation goals, objectives and projects that will reduce or prevent injury or damage from hazards; and

WHEREAS, the HMP update has been reviewed by all relevant departments, boards, committees and the Washington State Emergency Management Division; and

WHEREAS, the Walla Walla County its planning partners provided several opportunities for public participation in the planning process by providing public meetings and reaching out to interested parties; and

WHEREAS, FEMA Region 10 completed a pre-adoption review of the HMP update on November 5, 2018 and concluded that the plan meets the requirements of 44 CFR Part 201, and has committed to approve the plan upon County adoption; now therefore

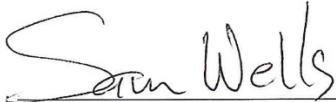
BE IT RESOLVED that the Walla Walla School District does hereby adopt the Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan in accordance with the Federal Disaster Mitigation Act of 2000 thereby meeting the eligibility requirements for the potential receipt of mitigation project grant funds.

WALLA WALLA SCHOOL DISTRICT NO. 140
Walla Walla County, Washington

BOARD OF DIRECTORS

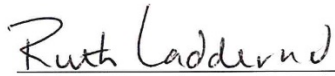


Derek Sarley, President

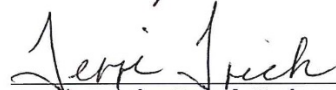


Sam Wells, Vice President

Dr. David Hampson, Board Member

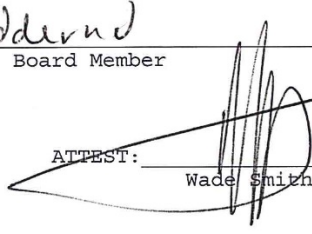


Ruth Ladderud, Board Member



Terri Trick, Board Member

ATTEST:



Wade Smith, Secretary of the Board

Adopted at a regular meeting of the Board of Directors November 20, 2018



Walla Walla County Conservation District

325 North 13th Avenue, Walla Walla, WA 99362-9526

Phone (509) 956-3777

Resolution #2018-4 to

“Adopt the *Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan (2018)*”

Date: December 10, 2018

WHEREAS, the Federal Disaster Mitigation Act of 2000 requires local government agencies to develop and submit a hazard mitigation plan (HMP) in order to receive future mitigation project grant funds; and

WHEREAS, the County has knowledge and experience that certain natural and man-made hazards pose threats to lives and cause damages to property within Walla Walla County; and

WHEREAS, the County, led by Emergency Management Department, along with Northwest Management Inc. (contractor) served as the lead agency in developing the HMP update and reached out to local, state, and federal agencies in an effort to conduct the most comprehensive planning effort possible; and

WHEREAS, the Cities of College Place, Prescott, Waitsburg and Walla Walla, the Mill Creek Flood Control Zone District, and Walla Walla Public Schools joined with the County as active participants in the process; and

WHEREAS, the HMP update builds on the 2010 plan and formalizes the County’s comprehensive efforts to make the County safer by providing guidance for hazard mitigation within Walla Walla County, and by identifying mitigation goals, objectives and projects that will reduce or prevent injury or damage from hazards; and

WHEREAS, Walla Walla County its planning partners provided several opportunities for public participation in the planning process by providing public notice, holding public meetings and reaching out to interested parties; and

WHEREAS, the U.S. Department of Homeland Security’s Federal Emergency Management Agency (FEMA) Region 10, approved on October 31, 2018 the *Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan (2018)* as a multi-jurisdictional local plan as outlined in Code of Federal Regulations Title 44 Part 201, now therefore

BE IT RESOLVED that the Walla Walla County Conservation District adopts the Walla Walla County Multi-Jurisdictional Hazard Mitigation Plan in accordance with the Federal Disaster Mitigation Act of 2000 thereby meeting the eligibility requirements for the potential receipt of mitigation project grant funds.

Walla Walla County Conservation District Board of Supervisors

Pat McConnell, Chair

Ed Chvatal, Supervisor

Jim Kent, Supervisor

Todd Kimball, Supervisor

Jeff Schulke, Supervisor

CONSERVATION - DEVELOPMENT - SELF-GOVERNMENT

APPENDIX C: RECORD OF REVISIONS

Section	Revision	Page	Date
Appendix C: Record of Revisions	Added	192	8/5/2020
Chapter 1, Subsection 1.7 Plan Updates, Mitigations and Prioritization, Chapter 12 Updates	<p>Added comments about new mitigations goals for the City of Walla Walla</p> <ul style="list-style-type: none"> • New goal of completing seismic upgrades to the above ground water storage tank connections (3) to create earthquake resistance. • New goal of replacing 22,000 linear feet of 24" water main due to age (1924) and material (steel riveted) that is highly susceptible to earthquake damage. 	14	8/5/2020
Chapter 12, Subsection 12.7 Earthquakes	Added new mitigation measures referenced in Chapter 1, Subsection 1.7 revision (page 14)	119	8/5/2020
Appendix A: Critical Facilities, Subsection 14.8 Utility Facilities	Added City of Walla Walla water towers and water transmission pipeline.	133	8/5/2020
Various locations throughout document	Walla Walla County updated their website; corrections made in the document to reflect new website address for Walla Walla County Emergency Management Department.		8/5/2020
Chapter 1, Subsection 1.7 Plan Updates, Mitigations and Prioritization, Chapter 11 Updates	<p>Added comments about new mitigation goal for City of Waitsburg.</p> <ul style="list-style-type: none"> • Improve flood monitoring and warning systems for Coppei Creek and the Touchet River, support installation of river gauge near Dayton on Coppei Creek, south of the city limits. This measure is continued in the 2018 plan. The 2010 plan contained a general project to "improve flood monitoring and warning systems." The Planning Team identified this mitigation measure as a specific project during the update and refined it to specify a particular location. 	13	9/1/2020
Chapter 11, Subsection 11.1 Flooding	Added new mitigation measures referenced in Chapter 1, Subsection 1.7 revision (page 14)	111	9/1/2020