



# Hazard Mitigation Plan Update

## Volume 2: Planning Partner Annexes



Public Review Draft  
January 2013



**Whitman County**  
**HAZARD MITIGATION PLAN UPDATE**  
**VOLUME 2: PLANNING PARTNER ANNEXES**

JANUARY 2013

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**Whitman County  
Hazard Mitigation Plan Update;  
Volume 2—Planning Partner Annexes**

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# **PART 1— INTRODUCTION**





# **CHAPTER 1.**

## **PLANNING PARTNER PARTICIPATION**

### **1.1 BACKGROUND**

The Federal Emergency Management Agency (FEMA) encourages multi-jurisdictional planning for hazard mitigation. Such planning efforts require all participating jurisdictions to fully participate in the process and formally adopt the resulting planning document. Chapter 44 of the Code of Federal Regulations (44 CFR) states:

“Multi-jurisdictional plans (e.g. watershed plans) may be accepted, as appropriate, as long as each jurisdiction has participated in the process and has officially adopted the plan.”  
(Section 201.6.a(4))

For the Whitman County Hazard Mitigation Plan Update, a Planning Partnership was formed to leverage resources and to meet requirements of the federal Disaster Mitigation Act of 2000 (DMA) for as many eligible local governments in Whitman County as possible. The DMA defines a local government as follows:

“Any county, municipality, city, town, township, public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government; any Indian tribe or authorized tribal organization, or Alaska Native village or organization; and any rural community, unincorporated town or village, or other public entity.”

There are two types of Planning Partners in this process, with distinct needs and capabilities:

- Incorporated municipalities (cities, towns and the County)
- Special purpose districts.

### **1.2 THE PLANNING PARTNERSHIP**

#### **1.2.1 Initial Solicitation and Letters of Intent**

The planning team solicited the participation of the County and all County-recognized municipalities and special purpose districts at the outset of this project. A meeting was held on May 11, 2011 at the Whitman County Council Chambers to identify potential participants for this process. The purpose of the meeting was to introduce the planning process to jurisdictions in the County that could have a stake in the outcome of the planning effort. All eligible local governments within the planning area were invited to attend. Various agency and citizen stakeholders were also invited to this meeting. The goals of the meeting were as follows:

- Provide an overview of the Disaster Mitigation Act.
- Outline the Whitman County plan update work plan.
- Describe the benefits of multi-jurisdictional planning.
- Solicit planning partners.
- Confirm a Steering Committee.

All interested local governments were provided with a list of planning partner expectations developed by the planning team and were informed of the obligations required for participation (see Appendix A). Local governments wishing to join the planning effort were asked to provide the planning team with a “notice of intent to participate,” agreeing to the planning partner expectations and designating a point of contact for their jurisdiction. The planning team received initial commitment from 15 planning partners, and the Whitman County Planning Partnership was formed.

Maps for each participating city are provided in the individual annex for that city. These maps will be updated periodically as changes to the partnership occur, either through linkage or by a partner dropping out due to a failure to participate.

## **1.2.2 Planning Partner Expectations**

The planning team developed the following list of planning partner expectations, which were confirmed at the kickoff meeting held on May 11, 2011:

- Each partner will provide a “Letter of Intent to Participate.”
- Each partner will support and participate in the selection and function of the Steering Committee overseeing the development of the update. Support includes allowing this body to make decisions regarding plan development and scope on behalf of the partnership.
- Each partner will provide support for the public involvement strategy developed by the Steering Committee in the form of mailing lists, possible meeting space, and media outreach such as newsletters, newspapers or direct-mailed brochures.
- Each partner will participate in plan update development activities such as:
  - Steering Committee meetings
  - Public meetings or open houses
  - Workshops and planning partner training sessions
  - Public review and comment periods prior to adoption.

Attendance will be tracked at such activities, and attendance records will be used to track and document participation for each planning partner. No minimum level of participation will be established, but each planning partner should attempt to attend all such activities.

- Each partner will be expected to perform a “consistency review” of all technical studies, plans, and ordinances specific to hazards identified within the planning area to determine the existence of plans, studies or ordinances not consistent with the equivalent documents reviewed in preparation of the County plan. For example: if a planning partner has a floodplain management plan that makes recommendations that are not consistent with any of the County’s basin plans, that plan will need to be reviewed for probable incorporation into the plan for the partner’s area.
- Each partner will be expected to review the risk assessment and identify hazards and vulnerabilities specific to its jurisdiction. Contract resources will provide jurisdiction-specific mapping and technical consultation to aid in this task, but the determination of risk and vulnerability will be up to each partner.
- Each partner will be expected to review the mitigation recommendations chosen for the overall county and determine if they will meet the needs of its jurisdiction. Projects within each jurisdiction consistent with the overall plan recommendations will need to be identified, prioritized and reviewed to determine their benefits and costs.

- Each partner will be required to create its own action plan that identifies each project, who will oversee the task, how it will be financed and when it is estimated to occur.
- Planning partners that participated in the previous hazard mitigation planning effort, must provide a reconciliation of their prior action plan from that effort.
- Each partner will be required to sponsor at least one public meeting to present the draft plan at least two weeks prior to adoption.
- Each partner will be required to formally adopt the plan.

By adopting this plan, each planning partner agrees to the plan implementation and maintenance protocol established in Volume 1. Failure to meet these criteria may result in a partner being dropped from the partnership by the Steering Committee, and thus losing eligibility under the scope of this plan.

### **1.2.3 Linkage Procedures**

Eligible local jurisdictions that did not participate in development of this hazard mitigation plan update may comply with DMA requirements by linking to this plan following the procedures outlined in Appendix B.

## **1.3 ANNEX-PREPARATION PROCESS**

### **1.3.1 Templates**

Templates were created to help the Planning Partners prepare their jurisdiction-specific annexes. Since special purpose districts operate differently from incorporated municipalities, separate templates were created for the two types of jurisdictions. The templates were created so that all criteria of Section 201.6 of 44 CFR would be met, based on the partners' capabilities and mode of operation. Each partner was asked to participate in a technical assistance workshop during which key elements of the template were completed by a designated point of contact for each partner and a member of the planning team. The templates were set up to lead each partner through a series of steps that would generate the DMA-required elements that are specific for each partner. The templates and their instructions can be found in Appendices C, D and E to this volume of the Hazard Mitigation Plan Update.

### **1.3.2 Workshop**

Workshops were held for Planning Partners to learn about the templates and the overall planning process. Topics included the following:

- DMA
- Whitman County plan background
- The templates
- Risk ranking
- Developing your action plan
- Cost/benefit review.

The sessions provided technical assistance and an overview of the template completion process. Attendance at this workshop was mandatory under the planning partner expectations established by the Steering Committee. There was 80-percent attendance of the partnership at these sessions. Planning partners that did not attend this session were removed from the partnership and are not covered by this plan.

In the risk-ranking exercise, each planning partner was asked to rank each risk specifically for its jurisdiction, based on the impact on its population or facilities. Cities were asked to base this ranking on probability of occurrence and the potential impact on people, property and the economy. Special purpose districts were asked to base this ranking on probability of occurrence and the potential impact on their constituency, their vital facilities and the facilities' functionality after an event. The methodology followed that used for the countywide risk ranking presented in Volume 1. A principal objective of this exercise was to familiarize the partnership with how to use risk assessment as a tool to support other planning and hazard mitigation processes. Tools utilized during these sessions included the following:

- The Whitman County risk assessment results
- Hazard maps for all hazards of concern
- Special district boundary maps that illustrated the sphere of influence for each special purpose district partner
- Hazard mitigation catalogs
- Federal funding and technical assistance catalogs
- Copies of partners' prior annexes, if applicable.

### **1.3.3 Prioritization**

44 CFR requires actions identified in the action plan to be prioritized (Section 201.c.3.iii). The planning team and steering committee developed a methodology for prioritizing the action plans that meets the needs of the partnership and the requirements of 44 CFR. The actions were prioritized according to the following criteria:

- **High Priority**—Project meets multiple plan objectives, benefits exceed cost, funding is secured under existing programs, or is grant eligible, and project can be completed in 1 to 5 years (i.e., short term project) once funded.
- **Medium Priority**—Project meets at least 1 plan objective, benefits exceed costs, requires special funding authorization under existing programs, grant eligibility is questionable, and project can be completed in 1 to 5 years once funded.
- **Low Priority**—Project will mitigate the risk of a hazard, benefits exceed costs, funding has not been secured, project is not grant eligible, and time line for completion is long term (5 to 10 years).

These priority definitions are dynamic and can change based on changes to a parameter such as availability of funding. For example, a project might be assigned a medium priority because of the uncertainty of a funding source, but be changed to high once a funding source is identified. The prioritization schedule for this plan will be reviewed and updated as needed annually through the plan maintenance strategy.

### **1.3.4 Benefit/Cost Review**

44 CFR requires the prioritization of the action plan to emphasize a benefit/cost analysis of the proposed actions. Because some actions may not be implemented for up to 10 years, benefit/cost analysis was qualitative and not of the detail required by FEMA for project grant eligibility under the Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation (PDM) grant program. A review of the apparent benefits versus the apparent cost of each project was performed. Parameters were established for assigning subjective ratings (high, medium and low) to costs and benefits as follows:

- Cost ratings:



- **High**—Existing funding levels are not adequate to cover the costs of the proposed action; implementation would require an increase in revenue through an alternative source (for example, bonds, grants, and fee increases).
- **Medium**—The action could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the action would have to be spread over multiple years.
- **Low**—The action could be funded under the existing budget. The action is part of or can be part of an existing, ongoing program.
- Benefit ratings:
  - **High**—The action will have an immediate impact on the reduction of risk exposure to life and property.
  - **Medium**—The action will have a long-term impact on the reduction of risk exposure to life and property or will provide an immediate reduction in the risk exposure to property.
  - **Low**—Long-term benefits of the action are difficult to quantify in the short term.

Using this approach, projects with positive benefit versus cost ratios (such as high over high, high over medium, medium over low, etc.) are considered cost-beneficial and are prioritized accordingly.

It should be noted that for many of the strategies identified in this action plan, funding might be sought under FEMA’s HMGP or PDM programs. Both of these programs require detailed benefit/cost analysis as part of the application process. These analyses will be performed on projects at the time of application preparation. The FEMA benefit-cost model will be used to perform this review. For projects not seeking financial assistance from grant programs that require this sort of analysis, the Partners reserve the right to define “benefits” according to parameters that meet their needs and the goals and objectives of this plan.

## 1.4 COMPATIBILITY WITH PREVIOUS REGIONAL HAZARD PLAN

The jurisdictions listed in Table 1-1 participated in the initial Whitman County hazard mitigation planning effort. The table lists the dates that each of these jurisdictions adopted the previous hazard mitigation plan.

The initial plan identified 175 jurisdiction-specific strategies and six county-wide strategies to address natural hazards of concern. For those participating in the plan update, initial plan participants reviewed the strategies previously identified as applicable for their annexes to determine which remain relevant for the plan update. Each strategy was identified with one of the following implementation status findings:

- The strategy has been completed (identified in the implementation status table of each jurisdiction’s annex).
- The strategy has been removed or is no longer feasible (identified in the implementation status table of each jurisdiction’s annex).
- The strategy has been carried over to the current hazard mitigation plan in one of the following ways:
  - Incorporated in the current plan’s action plan matrix exactly as presented in the initial plan (identified in the implementation table of each jurisdiction’s annex and indicated in the action plan matrix)

- Addressed by one or more actions in the current plan’s action plan matrix, but not incorporated in this plan exactly as presented in the previous plan (identified in the implementation status table of each jurisdiction’s annex).
- The strategy is considered to be addressed by the goals and objectives of the current hazard mitigation plan (this applies to all strategies in the initial annex that are not listed in the implementation status table of the current plan).

<b>TABLE 1-1. JURISDICTIONS THAT PARTICIPATED IN PREVIOUS HAZARD PLAN</b>	
<b>Jurisdiction</b>	<b>Previous Annex Adoption Date</b>
Whitman County	4/17/2006
Albion	5/2/2006
Colfax	4/17/2006
Colton	4/3/2006
Endicott	4/18/2006
Farmington	5/8/2006
Garfield	5/10/2006
Lamont	4/3/2006
LaCrosse	5/11/2006
Malden	5/10/2006
Oakesdale	4/17/2006
Palouse	4/11/2006
Pullman	4/26/2006
Rosalia	5/9/2006
St. John	4/10/2006
Tekoa	4/17/2006
Uniontown	4/4/2006
Whitman County Fire District #1	4/24/2006
Whitman County Fire District #2	5/10/2006
Whitman County Fire District #7	4/13/2006
Whitman County Hospital	4/19/2006

## **1.5 FINAL COVERAGE UNDER THE PLAN**

Table 1-2 lists the jurisdictions that submitted letters of intent and their ultimate status in this plan.

**TABLE 1-2.  
PLANNING PARTNER STATUS**

Jurisdiction	Letter of Intent Date	Attended Workshop?	Completed Template?	Will Be Covered by This Plan?
Whitman County	1/26/2010	Yes	Yes	Yes
City of Palouse	9/2/2011	Yes	Yes	Yes
City of Pullman	5/20/2011	Yes	Yes	Yes
Town of Colton	8/9/2011	No	No	No
Town of Endicott	8/3/2011	Yes	Yes	Yes
Town of Farmington	8/3/2011	Yes	Yes	Yes
Town of Garfield	6/22/2011	Yes	Yes	Yes
Town of LaCrosse	8/30/2011	Yes	Yes	Yes
Town of Oakesdale	8/3/2011	Yes	Yes	Yes
Town of St. John	8/4/2011	Yes	Yes	Yes
Whitman County Fire District # 7	7/31/2011	Yes	Yes	Yes
Whitman County Fire District #11	8/15/2011	Yes	No	No
Pullman Regional Medical Center	6/6/2011	Yes	Yes	Yes
Whitman Hospital and Medical Center	5/12/2011	Yes	Yes	Yes

## 1.6 ACRONYMS AND ABBREVIATIONS

The planning partner annexes use numerous acronyms and abbreviations, which are defined below for ease of reference:

- AFG—Assistance to Firefighters Grant Program
- CDBG—Community Development Block Grant
- CFR—Code of Federal Regulations
- CIP—Capital Improvement Program
- DHS—Department of Homeland Security
- DMA—Disaster Mitigation Act
- EMPG—Emergency Management Performance Grant
- FCAAP—Flood Control Assistance Account Program
- FEMA—Federal Emergency Management Agency
- FMA—Flood Mitigation Assistance Program
- FPMSP—Flood plain Management Services Program
- GIS—Geographic information system
- HMGP—Hazard Mitigation Grant Program
- IBC—International Building Code

- NDOP—National Digital Orthoimagery Program
- OMC—Oakesdale Municipal Code
- PCC—Pullman City Code
- PDM—Pre-Disaster Mitigation Grant Program
- PHD—Public Hospital District
- PMC—Palouse Municipal Code
- WCFD—Whitman County Fire District
- WSDOT—Washington State Department of Transportation
- WSU—Washington State University

**PART 2—  
ANNEXES FOR MUNICIPALITIES**





## CHAPTER 2.

### UNINCORPORATED WHITMAN COUNTY ANNEX

#### 2.1 HAZARD MITIGATION PLAN POINT OF CONTACT

##### Primary Point of Contact

Fran Martin, Director  
Whitman County  
Public Health and Emergency Management  
310 N. Main  
Colfax, WA 99111  
Telephone: (509)397-6280  
e-mail Address: [franm@co.whitman.wa.us](mailto:franm@co.whitman.wa.us)

##### Alternate Point of Contact

Robin Cocking, Project Analyst  
Whitman County Emergency Management  
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Colfax, WA 99111  
Telephone: (509) 397-6280  
e-mail Address: [RobinC@co.whitman.wa.us](mailto:RobinC@co.whitman.wa.us)

#### 2.2 JURISDICTION PROFILE

The following is a summary of key information about Whitman County and its history:

- **Date of Incorporation**—Whitman County was organized by the territorial legislature on November 29, 1871 by partitioning what was then Stevens County.
- **Current Population**—5,974 as of April 1, 2012
- **Population Growth**—Based on data from the Washington State Office of Financial Management, unincorporated Whitman County has experienced a relatively flat rate of growth. The overall population decreased by 5 percent between 2000 and 2010, an average annual decrease of 0.53 percent for this time frame.
- **Location and Description**—With a total land area of 2,159 square miles, Whitman County ranks 10th in size among Washington counties. The county is in southeast Washington along the Washington-Idaho border. On the Washington side, it is bordered to the north by Spokane County, to the west by Adams County (and a small part of Franklin County at its southwest corner), and to the south by Columbia, Garfield, and Asotin counties. Whitman County is part of the Palouse, a wide and rolling prairie-like region of the middle Columbia basin.
- **Brief History**—The county is named after Marcus Whitman, a missionary killed by Cayuse in 1847, along with his wife Narcissa Prentiss Whitman and 12 others. The county has a primarily agricultural history, with an emphasis on wheat (today it ranks first in wheat production among Washington counties and second among counties in the nation); it was also known for its fruit orchards along the Snake River before the 1970s, when lakes inundated them upon completion of the Little Goose and Lower Granite dams.

The first recorded Euro-American exploration along Union Flat Creek, the birthplace of settlement for Whitman County, was in June 1859. Lieutenant John Mullan (1830-1909) of the United States Army was searching for a favorable military wagon road route between Fort Walla Walla and Fort Benton, Montana. Mullan commissioned several advance parties to scout the route, and Gustavus Sohon headed the first party, scouting Union Flat Creek along its length through central and southeastern Whitman County.

Agriculture remains a mainstay of Whitman County's economy but is no longer the driving force of the county's economy, at least in terms of employment. Production of grain crops today does not require a great deal of labor, and in 2005 agricultural employment in Whitman County was outranked by five other industries, including manufacturing, retail trade, and employment at Washington State University, which remains the county's largest employer.

- **Climate**—Whitman County's climate is semi-arid. The weather is dry and clear for much of the year, with hot, dry summers and cold, wet winters. Based on records kept from 1940 to 2005 by the Western Regional Climate Center, the county's average annual rainfall is 21 inches (530 mm) and the average annual snowfall is 28 inches (710 mm). The warmest month is August, with an average maximum temperature of 82°F; January is the coldest month, with an average minimum temperature 22.7°F. The average density of air in the Pullman area is 1.15 grams/liter; this value constantly changes because of the dry summers and wet winters and the nearness of the Cascade mountain range.
- **Governing Body Format**—The Whitman County Council is the legislative authority for Whitman County. The three members of the Council are elected to four-year terms and will assume responsibility for adoption and implementation of this plan. Each member represents a specific geographic district. The Council's duties include identifying and articulating the needs of the citizens of Whitman County and providing a framework for County administration to carry out its work efficiently, ensuring that County government responds effectively to the community's needs.

The County Council adopts and enacts ordinances, resolutions and motions; levies taxes; appropriates revenue; and adopts budgets for the County. The Commissioners are responsible for the appointment of citizen advisory committees and boards, and appoint non-elected department heads. Other responsibilities include providing oversight to the following County services:

- Roads and public works programs
  - Public health services
  - Planning and zoning of unincorporated areas
  - Emergency services or civil defense programs
  - County park and recreation systems
  - Other services and programs that are not clearly the responsibility of another elected county official.
- **Development Trends**—Based on its projected growth, the anticipated development trends for the unincorporated county are considered low to moderate, consisting primarily of residential development. Although Whitman County is not mandated to fully plan according to requirements of the State Growth Management Act, the County and its cities have adopted critical areas and resource-lands regulations pursuant to the Growth Management Act. Whitman County has mechanisms available to manage future development via regulations identified in a zoning ordinance and policies identified in a comprehensive plan.

## 2.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 2-1 lists all past occurrences of natural hazards within the jurisdiction. Repetitive loss records are as follows:

- Number of FEMA Identified Repetitive Flood Loss Properties: None

- Number of Repetitive Flood Loss Properties that have been mitigated: N/A

## **2.4 HAZARD RISK RANKING**

Table 2-2 presents the ranking of the hazards of concern.

## **2.5 CAPABILITY ASSESSMENT**

The assessment of the jurisdiction's legal and regulatory capabilities is presented in Table 2-3. The assessment of the jurisdiction's administrative and technical capabilities is presented in Table 2-4. The assessment of the jurisdiction's fiscal capabilities is presented in Table 2-5. Classifications under various community mitigation programs are presented in Table 2-6.

## **2.6 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED INITIATIVES**

Table 2-7 lists the initiatives that make up the jurisdiction's hazard mitigation plan. Table 2-8 identifies the priority for each initiative. Table 2-9 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

## **2.7 STATUS OF PREVIOUS PLAN INITIATIVES**

Table 2-10 summarizes the current status of initiatives that were adopted by the County for the previous hazard plan. Those that are directly carried over as actions in this hazard plan are also indicated as such in Table 2-7.

## **2.8 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY**

The following additional data is needed to have a better understanding of risk within the planning area:

- LIDAR data is needed to better define area topography.
- Assessor's data needs to be enhanced to include information such as area, occupancy and date of construction for all properties within the planning area. This data should be in a digital format and support GIS applications.
- Earthquake scenario maps (shake maps) are needed for the region.
- Flood study data needs to be updated

## **2.9 HAZARD AREA EXTENT AND LOCATION**

Hazard area extent and location maps for Whitman County area are included in Volume 1 of this plan update. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes.

**TABLE 2-1.  
NATURAL HAZARD EVENTS**

Type of Event	Date	Preliminary Damage Assessment
Severe storm	11/16/2010	120,000 <sup>a</sup>
Severe Winter Storm and Record and Near Record Snow (FEMA Disaster #1825)	3/2/2009	\$1,000,000 <sup>a</sup>
Wind	12/14/2006	\$207,692 <sup>a</sup>
Flood	2004	Estimate \$30,000
Flood (FEMA Disaster #1159)	12/26/1996	Information not available
Flood (FEMA Disaster #1825)	1/26/96	\$1.6 Million
Severe Weather (FEMA Disaster #1100)	3/4/1993	Information not available
Firestorm 91/Wind (FEMA Disaster #981)	October 1991	Information not available
Heavy Rains/Sheet Flooding (FEMA Disaster #822)	March, 1989	\$500,000 <sup>a</sup>
Volcanic Ash (FEMA Disaster #623)	5/21/1980	Information not available
Flood (FEMA Disaster #414)	1/25/74	Information not available
Severe Storms/Flooding (FEMA Disaster #322)	2/1/1972	Information not available
Heavy Rains and Flooding (FEMA Disaster #185)	12/29/1964	Information not available

a. Information obtained from Spatial Hazard Events and Losses Database for the United States

**TABLE 2-2.  
HAZARD RISK RANKING**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Severe Weather	3 x (6+6+2) = 42
2	Flood	3 x (3+6+1) = 30
3	Earthquake	2 x (9+4+1) = 28
4	Wildfire	3 x (3+2+1) = 18
5	Landslide	2 x (3+2+1) = 12
6	Dam Failure	1 x (3 +2+3) = 8
7	Drought	3 x (0+0+3) = 9
8	Volcano	1 x (3+2+1) = 6



**TABLE 2-3.  
LEGAL AND REGULATORY CAPABILITY**

	Local Authority	State or Federal Prohibitions	Other Jurisdictional Authority	State Mandated	Comments
<b>Codes, Ordinances &amp; Requirements</b>					
Building Code	Y	N	Y	Y	International Building Code (IBC), Adopted July, 2004, Title 17
Zoning	Y	N	N	N	Title 19, adopted 8/16/2010
Subdivisions	Y	N	N	N	Title 18, adopted 10/2003
Stormwater Management	N	N	N	N	
Post Disaster Recovery	N	N	N	N	
Real Estate Disclosure	Y	N	N	Y	Revised Code of Washington 64.06
Growth Management	Y	N	N	Y	Resource Lands Only
Site Plan Review	Y	N	N	Y	Part of IBC
Special Purpose (flood management, critical areas)	Y	N	N	N	Flood Damage Prevention Ordinance, Title 19, (19.50), Adopted March 2012  Critical Areas Ordinance, Title 9, Adopted 2006
<b>Planning Documents</b>					
General or Comprehensive Plan	Y	□□N	N	N	Initial adoption July 31, 1978, Amended October 4, 2010
Floodplain or Basin Plan	Y	N	N	N	Whitman County Hazard Mitigation Plan serves as the floodplain management plan for the County.
Stormwater Plan	N	N	N	N	
Capital Improvement Plan	N	N	N	N	
Habitat Conservation Plan	N	N	N	N	
Economic Development Plan	N	N	N	N	
Emergency Response Plan	Y	N	N	N	January 2010
Shoreline Management Plan	Y	N	N	Y	Adopted 1974
Post Disaster Recovery Plan	N	N	N	N	

**TABLE 2-4.  
ADMINISTRATIVE AND TECHNICAL CAPABILITY**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Y	One Staff Planner, two Assistant Planners
Engineers or professionals trained in building or infrastructure construction practices	Y	Mark Storey, Whitman County Engineer
Planners or engineers with an understanding of natural hazards	Y	Mark Storey, Whitman County Engineer Mark Bordsen, Director of Planning
Staff with training in benefit/cost analysis	Y	Mark Storey, Whitman County Engineer Mark Bordsen, Director of Planning
Floodplain manager	Y	
Surveyors	N	Engineering Department has two non-licensed surveyors on staff. County contracts for services when a licensed surveyor is needed.
Personnel skilled or trained in GIS applications	Y	Mark Storey, Whitman County Engineer
Scientist familiar with natural hazards in local area	Y	Fran Martin, Whitman County Emergency Management
Emergency manager	Y	Fran Martin, Whitman County Emergency Management
Grant writers	N	Can contract for this service

**TABLE 2-5.  
FISCAL CAPABILITY**

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	No
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes, but not likely
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	No
State Sponsored Grant Programs	Yes, but not likely
Development Impact Fees for Homebuyers or Developers	Yes

**TABLE 2-6.  
COMMUNITY CLASSIFICATIONS**

	Participating?	Classification	Date Classified
Community Rating System	No	—	—
Building Code Effectiveness Grading Schedule	Yes	3/3	1998
Public Protection			
Whitman County Fire District #1	Yes	9	10/1/2005
Whitman County Fire District #2	Yes	8/9*	11/1/2004
Whitman County Fire District #3	Yes	8/9*	6/1/2005
Whitman County Fire District #4	Yes	9	10/1/2005
Whitman County Fire District #5	Yes	9	10/1/2005
Whitman County Fire District #6	Yes	9	10/1/2005
Whitman County Fire District #7	Yes	8/9*	10/1/2005
Whitman County Fire District #8	Yes	9	10/1/2005
Whitman County Fire District #9	Yes	8/9*	10/1/2005
Whitman County Fire District #10	Yes	9	10/1/2005
Whitman County Fire District #11	Yes	8/9*	10/1/2005
Whitman County Fire District #12	Yes	9	10/1/2005
Whitman County Fire District #13	Yes	9	10/1/2005
Whitman County Fire District #14	Yes	9	10/1/2005
Storm Ready	Yes	Participating	—
Firewise	No	—	—

\* Higher classification applies to when subject property is located beyond 1,000 feet of a creditable fire hydrant and is within 5 road miles of a recognized fire station.

**TABLE 2-7.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative #WC-1</b> —Retrofit critical infrastructure such as roads, bridges and large culverts that are vulnerable to the impacts of flood and earthquake hazards.							
Existing	Earthquake, Flood	3, 5	Department of Public Works	High	Gas Tax, Federal Bridge Replacement Program, Bond Issues, Grant Funding: PDM/HMGP, FCAAP	Short-term, ongoing	Yes (WC-1)
<b>Initiative #WC-2</b> —Mitigate vulnerable roadways with historical erosion problems using slope-armoring, drainage improvements or roadway relocation, depending on which alternative is the most cost-beneficial.							
Existing	Flood, Dam Failure, Severe Weather	3, 5	Department of Public Works	High	County Roads Funding, Grant Funding: PDM, HMGP, FMA, FCAAP	Short-term, ongoing	Yes (WC-2)
<b>Initiative #WC-3</b> —Restore the roadside drainage capacity of vulnerable facilities by removing the erosion sediment via standard drainage facility maintenance protocol.							
New and existing	Flood, Dam Failure, Severe Weather	3, 5	Department of Public Works	Medium	Gas tax, road levy, bond issue, Grant Funding: PDM, HMGP, FMA, FCAAP	Short-term, ongoing	Yes (WC-3)
<b>Initiative #WC-4</b> —Consider the adoption of regulatory provisions that require “buffers” or “setbacks” to attenuate the impacts of flooding and erosion on development within the county.							
New and Existing	Flood, Dam Failure, Severe Weather	1, 3, 9	Department of Public Works, Planning Division	Low	County General Fund	Short-term, ongoing	Yes (WC-5)
<b>Initiative #WC-5</b> —Utilize the risk assessment data of this plan to consider appropriate higher regulatory standards that will mitigate the impacts of natural hazards through the County’s annual review of its codes and ordinances.							
New and Existing	All Hazards	1, 3, 9	Department of Public Works, Planning Division, Department of Emergency Management	Low	County General fund	Short-term, ongoing	Yes (WC-6)

**TABLE 2-7.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative #WC-6</b> —Create remote emergency response capability by developing a mobile command unit that can be utilized as an emergency operations center in isolated portions of the County during hazard events.							
New and existing	All Hazards	2, 4, 7	Department of Emergency Management	High	DHS Grant Funding	Long-term, depends on funding	Yes (WC-8)
<b>Initiative #WC-7</b> —Enhance the Whitman County emergency response plan to include: <ul style="list-style-type: none"> <li>• Identification of critical transportation routes vulnerable to impacts of natural hazards and identification of alternative routes to be used during evacuation</li> <li>• Critical facility notification procedures</li> <li>• A post-disaster action plan</li> <li>• Coordination with County planning partners to establish a regional emergency response protocol.</li> </ul>							
New and Existing	All Hazards	2, 4, 7	Department of Emergency Management	Medium	General Fund, Grant Funding: DHS/FEMA	Long-term, depends on funding	Yes (WC-9)
<b>Initiative #WC-8</b> —Utilize risk assessment data from this plan to identify (map) all structures susceptible to all hazards of concern within the entire County (including planning partners cities) to target public education and outreach on property protection and flood preparedness.							
New and Existing	All Hazards	2, 4, 7	Department of Emergency Management, Department of Public Works	Medium	General Fund, Grant Funding: PDM, HMGP, FMA, FCAAP	Short-term, ongoing	Yes (WC-10)
<b>Initiative #WC-9</b> —Maintain compliance and good standing under the National Flood Insurance Program.							
New and Existing	Flood	1, 2, 3, 7	Department of Public Works	Low	General Fund	Ongoing	No
<b>Initiative #WC-10</b> —Consider voluntary participation in programs such as the Community Rating System and Firewise programs that will provide benefits/incentives to the citizens of Whitman County for hazard mitigation.							
New and existing	Flood, Wildfire	2, 6, 7, 8	Public Works	Low	General Fund	Long-term	Yes (WC-11)
<b>Initiative #WC-11</b> —Maintain and enhance the risk assessment of this plan with best available data and science and utilize this data to support wise land use within the planning area. Establish linkages between land use plans and the hazard mitigation plan where appropriate.							
New and Existing	All Hazards	1, 2, 3, 7	Whitman County Commissioners	Low	General Fund	Long-term	No

**TABLE 2-7.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative #WC-12</b> —Obtain light detection and ranging (LIDAR) data for the planning area to support development and use of GIS applications for the County.							
New and Existing	All Hazards	2, 7	Public works, Information Technology	High	General Fund, FEMA RiskMAP, Ecology, Private Sector	Long-term, depends on funding	No
<b>Initiative #WC-13</b> —Enhance County assessor data to support future risk assessments for the planning area. Enhancements could include but are not limited to the following: <ul style="list-style-type: none"> <li>• Obtain GIS-format data on all structures within the County.</li> <li>• Capture information such as date of construction, construction class, area, occupancy class, foundation type and building permit history.</li> <li>• Collect building photographs.</li> <li>• Create map interfaces intersecting hazard information with building information.</li> </ul>							
New and Existing	All Hazards	2, 7	County Assessor	High	General Fund	Long-term, depends on funding	No
<b>Initiative #WC-14</b> —Where appropriate, support retrofitting, purchase or relocation of structures located in hazard-prone areas to protect them from future damage and ensure continuity of operations. Seek opportunities to leverage partnerships within the planning area in these pursuits.							
Existing	All Hazards	2, 3, 5, 6	Department of Public Works, Emergency Management	High	Grant Funding, Local funds	Long-term, depends on funding	No
<b>Initiative #WC-15</b> —Support the countywide initiatives identified in Volume 1 of this plan.							
New and Existing	All	All	Whitman County	Low	Local funds	Short-term, ongoing	Yes (WC-12)
<b>Initiative #WC-16</b> —Continue to support the implementation, monitoring, maintenance, and updating of this plan, as defined in Volume 1.							
New & Existing	All Hazards	All	Whitman County	Low	General Funds, FEMA Mitigation Grant Funding for 5-year update	Short-term, ongoing	No
<b>Initiative #WC-17</b> —Coordinate with local fire agencies to develop more detailed and accurate fire risk maps that address the current and proposed future wildland urban interface from the jurisdictional level. Engage resources from the Washington Department of Natural Resources to assist with this process.							
New and Existing	Wildfire	2, 7	Emergency Management	Medium	General Fund, Fire Grants	Long-term, depends on funding	No

**TABLE 2-8.  
MITIGATION STRATEGY PRIORITY SCHEDULE**

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority <sup>a</sup>
WC-1	2	High	High	Yes	Yes	Yes	High
WC-2	2	High	High	Yes	Yes	Yes	High
WC-3	2	Medium	Medium	Yes	No	Yes	High
WC-4	3	Medium	Low	Yes	No	Yes	High
WC-5	3	High	Low	Yes	No	Yes	High
WC-6	3	High	High	Yes	Yes	No	Medium
WC-7	3	High	Medium	Yes	Yes	No	Medium
WC-8	4	Medium	Low	Yes	No	Yes	High
WC-9	4	Medium	Low	Yes	No	Yes	High
WC-10	4	Medium	Low	Yes	No	No	Medium
WC-11	4	Medium	Low	Yes	Yes	No	Medium
WC-12	2	High	High	Yes	Yes	No	Medium
WC-13	2	Medium	Low	Yes	No	Yes	High
WC-14	4	High	High	Yes	Yes	No	Medium
WC-15	8	High	Low	Yes	No	Yes	High
WC-16	8	Medium	Low	Yes	Yes	Yes	High
WC-17	2	High	Medium	Yes	Yes	No	Medium

a. See Section 1.3.3 for explanation of priorities

**TABLE 2-9.  
ANALYSIS OF MITIGATION INITIATIVES**

Hazard Type	Initiative Addressing Hazard, by Mitigation Type					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	3, 4, 5, 11, 12, 13, 15, 16	1, 14	8, 12, 13, 15	4	6, 7	2
Drought	5, 11, 12, 13, 15, 16	14	8, 12, 13, 15		6, 7	
Earthquake	5, 11, 12, 13, 15, 16	1, 14	8, 12, 13, 15	4	6, 7	2
Flood	3, 4, 5, 9, 10, 11, 12, 13, 15, 16	1, 9, 10, 14	8, 9, 10, 12, 13, 15	4, 9, 10	6, 7, 9, 10	2
Landslide	5, 11, 12, 13, 15, 16	14	8, 12, 13, 15		6, 7	
Severe Weather	3, 4, 5, 11, 12, 13, 15, 16	14	8, 12, 13, 15	4	6, 7	2
Volcano	5, 11, 12, 13, 15, 16	14	8, 12, 13, 15		6, 7	
Wildfire	5, 10, 11, 12, 13, 15, 16, 17	10, 14, 17	8, 10, 12, 13, 15, 17	10, 17	6, 7, 10, 17	

## Notes:

1. Prevention: Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
2. Property Protection: Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
3. Public Education and Awareness: Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
4. Natural Resource Protection: Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
5. Emergency Services: Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
6. Structural Projects: Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.



**TABLE 2-10.  
PREVIOUS ACTION PLAN IMPLEMENTATION STATUS**

Action #	Action Status			Comments
	Completed	Carry Over to Plan Update	Removed; No Longer Feasible	
WC-1		✓		Is now initiative # WC-1
WC-2		✓		Is now initiative # WC-2
WC-3		✓		Is now initiative # WC-3
WC-4			✓	Took preliminary action. Unable to complete due to lack of funding.
WC-5		✓		Is now initiative # WC-4
WC-6		✓		Is now initiative # WC-5
WC-7			✓	Not feasible due to lack of funding
WC-8		✓		Is now initiative # WC-6
WC-9		✓		Is now initiative # WC-7
WC-10		✓		Is now initiative # WC-8
WC-11		✓		Is now initiative # WC-10
WC-12		✓		Is now initiative # WC-15
WC-13		✓		This is now covered by initiative WC-13



## CHAPTER 3. CITY OF PALOUSE ANNEX

### 3.1 HAZARD MITIGATION PLAN POINT OF CONTACT

#### Primary Point of Contact

Joyce Beeson, Treasurer  
P.O. Box 248  
Palouse, WA 99161  
Telephone: 509-878-1811  
e-mail Address: [treasurer@palouse.com](mailto:treasurer@palouse.com)

#### Alternate Point of Contact

Michael Echanove, Mayor  
P.O. Box 248  
Palouse, WA 99161  
Telephone: 509-878-1811  
e-mail Address: [echanove@palouse.com](mailto:echanove@palouse.com)

### 3.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—May 12, 1890
- **Current Population**—1,020 as of April 1, 2012
- **Population Growth**—Based on data from the Washington State Office of Financial Management, the City of Palouse has experienced a very flat rate of growth. The overall population increased by 0.78 percent between 2000 and 2010, an average annual increase of 0.8 percent for this time frame.
- **Location and Description**—The City of Palouse is located in Whitman County in the southeastern corner of Washington State. Neighboring communities are Garfield, 9 miles to the north and Pullman, 16 miles to the south. The Palouse River, which flows through the southern section of the corporate limits, is a small river that originates in the Hoodoo Mountains of Idaho to the east. Commercial and residential structures are located both north and south of the Palouse River flood plain in the central portion of the City of Palouse. Other areas of town through which the Palouse River flows are sparsely developed and used chiefly as farm and grazing land.

The topography rises above the river elevation into rolling hills. Typically the Palouse River flows through a wide flood plain in this area. However, the river is topographically restricted as it passes through Palouse exacerbating the flood potential. Vegetation along the river consists of grasses, mixed with evergreen and deciduous trees and shrubs. Area soils are medium textured soils formed from airborne loess deposits. They are well drained with moderate to slow permeability and high water holding capacity.

- **Brief History**—(Portions of this history were taken from Growing Up in the Palouse by J.B. West and Grubstaking the Palouse by Richard C. Waldbauer.)

The origin of the city's name is not certain. Local Indians were known as the Paloos. Lewis and Clark referred to them as the Pallots-Pallah Indians. Later, French missionaries may have understood the name as "pelouse" which is the French word for lawn or greensward. This word certainly describes the springtime appearance of the Palouse hills. In 1872, Colfax was chosen as the Whitman County seat. Palouse City was settled at about this time as a gateway to gold discoveries at the headwaters of the Palouse River and for the timberlands in its watershed. The first building in Palouse was James Smith's log cabin built near the site of the

present pump house on his 1873 land claim. A mill dam and grist mill built by William Breeding soon followed near the present “F” Street Bridge. Other businesses were established on the steep hillside near the mill.

As Palouse City grew, it expanded to the narrow, marshy meadow north of the river. This area was subject to flooding; therefore, the new buildings were put on blocks. The city grew slowly but steadily. The Palouse River was an important outlet for Idaho logs. Also, the ongoing mining to the east supported businesses that outfitted and supplied goods for prospectors that mined the Hoodoo District of Idaho. The Swarts House and St. Elmo Hotel were important meeting places for speculators and prospectors creating investment schemes.

By 1888, the year the railroad arrived in Palouse, homesteaders in the region knew the area could successfully produce grain, livestock and fruit. The railroad provided the means to transport these products to national and world-wide markets. The “Village of Palouse City” incorporated early in the same year. Like many other cities of the west, Palouse suffered a fire that destroyed many of the pioneer buildings on Main Street, east of Bridge Street, on May 17, 1888. Much of downtown was rebuilt using local clay and locally fired bricks. By 1890, the population of the immediate area had reached 1,000 people. The “Boomerang” weekly newspaper was first published in 1882. The first public school was built in 1883. A city well was dug in 1890. The following year, H. W. Bassett received a franchise to furnish electricity to the city. Automobiles arrived in 1905.

Palouse continued as a farm and lumber product processing and shipping center through the early 1900s. Through the early part of this century, the city supported several hotels and a wide variety of businesses and trades. The lumber industry declined after Frederick Weyerhaeuser built his mill at Potlatch, Idaho. Since then, the Palouse region has grown from a frontier grassland, with timber and mining interests, into one of most productive wheat and grain areas of the United States.

The City of Palouse continues to have a rich agricultural heritage, while providing a unique, small-town quality of life.

- **Climate**—The climate of the Palouse basin is influenced by a mix of continental and marine air masses. Marine Polar air masses from the north Pacific predominate in the winter producing relatively mild, wet conditions. Occasionally, outbreaks of very cold continental polar air, originating in north central Canada, cross the continental divide. The mid-winter average temperature is 30 degrees. Mean annual precipitation in Palouse is about 25 inches. From December through February, precipitation generally occurs as snow. Summers are usually warm and dry with average high temperatures in the low to mid 80s.
- **Governing Body Format**—The City of Palouse is a 2nd class city with mayor-council form of government, consisting of seven elected council members and an elected mayor. This governing body will assume responsibility for adoption and implementation of this plan. Services provided by the City include police, fire, and water and sewer services managed by a Department of Public Works.
- **Development Trends**—Based on its projected growth, the anticipated development trends for the City of Palouse are considered to be low to moderate, consisting of primarily residential development. Whitman County is not mandated under the State Growth Management Act to fully plan according to requirements of the law. The County and its cities have adopted critical areas and resources lands regulations pursuant to the Growth Management Act. Whitman County does have mechanisms available to managed future development via regulations identified in a zoning ordinance and policies identified in a comprehensive plan.

### **3.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY**

Table 3-1 lists all past occurrences of natural hazards in the county. Repetitive loss records are as follows:

- Number of FEMA Identified Repetitive Flood Loss Properties: None
- Number of Repetitive Flood Loss Properties that have been mitigated: None

### **3.4 HAZARD RISK RANKING**

Table 3-2 presents the ranking of the hazards of concern.

### **3.5 CAPABILITY ASSESSMENT**

The assessment of the jurisdiction's legal and regulatory capabilities is presented in Table 3-3. The assessment of the jurisdiction's administrative and technical capabilities is presented in Table 3-4. The assessment of the jurisdiction's fiscal capabilities is presented in Table 3-5. Classifications under various community mitigation programs are presented in Table 3-6.

### **3.6 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED INITIATIVES**

Table 3-7 lists the initiatives that make up the jurisdiction's hazard mitigation plan. Table 3-8 identifies the priority for each initiative. Table 3-9 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

### **3.7 STATUS OF PREVIOUS PLAN INITIATIVES**

Table 3-10 summarizes the current status of initiatives that were adopted by the County for the previous hazard plan. Those that are directly carried over as actions in this hazard plan are also indicated as such in Table 3-7.

### **3.8 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY**

The following data/science is needed to support future assessment of risk in Palouse:

- LIDAR data
- Assessor's data needs to be enhanced to include data such as area, occupancy and date of construction on all properties within the planning area. This data should be in a digital format and support GIS applications.
- Earthquake scenario maps (Shake maps) are needed for the region.
- Flood study data needs to be updated

### **3.9 HAZARD AREA EXTENT AND LOCATION**

Hazard area extent and location maps for the City of Palouse are included at the end of this chapter. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes.

**TABLE 3-1.  
NATURAL HAZARD EVENTS**

Type of Event	Date	Preliminary Damage Assessment
Flood	March, 2012	Not yet assessed
Wildland Fire	August, 2005	Information not available
Flood (FEMA Disaster #1159)	12/26/1996	Information not available
Flood (FEMA Disaster #1100)	1/26/1996	\$1.6 Million
Severe Weather (FEMA Disaster #980)	3/4/1993	Information not available
Volcanic Ash (FEMA Disaster #623)	5/21/1980	Information not available
Flood (FEMA Disaster #414)	1/25/74	Information not available

**TABLE 3-2.  
HAZARD RISK RANKING**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Severe Weather	3 x (9+4+1) = 42
2	Flood	3 x (3+4+1) = 24
3	Wildfire	2 x (3+4+2) = 18
4	Earthquake	2 x (6+2+1) = 18
5	Landslide	2 x (3+2+1) = 12
6	Drought	3 x (0+0+3) = 9
7	Volcano	1 x (3+2+1) = 6
8	Dam Failure	1 x (0+0+ 3) = 3

**TABLE 3-3.  
LEGAL AND REGULATORY CAPABILITY**

	Local Authority	State or Federal Prohibitions	Other Jurisdictional Authority	State Mandated	Comments
<b>Codes, Ordinances &amp; Requirements</b>					
Building Code	Y	N	N	Y	PMC Title 15 adopts WA State Building Code (IBC). 12/28/2010
Zoning Code	Y	N	N	N	PMC Title 17, 12/28/2010
Subdivisions	Y	N	N	N	PMC Title 18, 12/28/2010
Post Disaster Recovery	N	N	N	N	
Real Estate Disclosure	N	N	N	N	
Growth Management	Y	N	N	Y	Revised Code of Washington 64.06
Site Plan Review	Y	N	N	N	Critical Areas and resource lands only. PMC title 17.26, 12/28/2010
Special Purpose (flood management, critical areas)	Y	N	N	N	For commercial projects > \$100,000
<b>Planning Documents</b>					
General Plan	Y	N	N	N	City of Palouse Comprehensive Plan Adopted 1998
Comprehensive Plan	Y	N	N	N	City of Palouse Flood Mitigation Plan, Adopted 12/16/1996
Floodplain or Basin Plan	N	N	N	N	
Stormwater Management	Y	N	N	N	6 year CIP for water, sewer and transportation, updated annually
Capital Improvement Plan	N	N	N	N	
Habitat Conservation Plan	N	N	N	N	
Economic Development Plan	Y	N	Y	Y	Under jurisdiction of Whitman County Emergency Response Plan
Emergency Response Plan	Y	N	N	Y	Washington State Comprehensive Emergency Management Plan
Shoreline Management Plan	N	N	N	N	
Post Disaster Recovery Plan	Y	N	N	N	City of Palouse Comprehensive Plan, Adopted 1998

**TABLE 3-4.  
ADMINISTRATIVE AND TECHNICAL CAPABILITY**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	No planners/engineers on Staff. Can/do contract for services.
Engineers or professionals trained in building or infrastructure construction practices	Yes	No planners/engineers on Staff. Can/do contract for services.
Planners or engineers with an understanding of natural hazards	Yes	No planners/engineers on Staff. Can contract for services.
Staff with training in benefit/cost analysis	No	
Floodplain manager	No	Mayor is designated as the Floodplain Administrator by ordinance.
Surveyors	Yes	No surveyors on staff. Can contract for services as needed.
Personnel skilled or trained in GIS applications	No	
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Police Chief
Grant writers	No	

**TABLE 3-5.  
FISCAL CAPABILITY**

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes, depending on allocation
Capital Improvements Project Funding	Yes, when applicable
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes, water and sewer only
Incur Debt through General Obligation Bonds	Yes, but not likely
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No (Could, but not likely)
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Other	FEMA sponsored grant funding: PDM, HMGP, FMA



**TABLE 3-6.  
COMMUNITY CLASSIFICATIONS**

	Participating?	Classification	Date Classified
Community Rating System	No	—	—
Building Code Effectiveness Grading Schedule	Yes	6/6	2001
Public Protection	Yes	7/9*	—
Storm Ready	No	—	—
Firewise	No	—	—
* Higher classification applies to when subject property is located beyond 1,000 feet of a creditable fire hydrant and is within 5 road miles of a recognized fire station.			

**TABLE 3-7.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative #Pa-1</b> —Continue to implement the actions identified in the <i>City of Palouse Flood Hazard Mitigation Plan</i> .							
New and Existing	Flood	1, 2, 3, 5, 8, 9, 10	Palouse City Council	High	General Fund, State and Federal grant programs	Short-term, ongoing	Yes #1
<b>Initiative #Pa-2</b> —Continue to maintain compliance a good standing with the minimum requirements of the National Flood Insurance Program.							
New and Existing	Flood	1, 2, 3, 7	Palouse City Council	Low	General Fund	Short-term, ongoing	No
<b>Initiative #Pa-3</b> —Consider voluntary participation in programs such as the Community Rating System, Firewise and Storm Ready programs that will provide benefits/incentives to the Citizens of Palouse for hazard mitigation.							
New and existing	Flood, Severe Weather, wildfire	2, 6, 7, 8	Palouse City Council	Low	General Fund	Long-term	Yes, #10
<b>Initiative #Pa-4</b> —Where appropriate, support retrofitting, purchase or relocation of structures located in hazard-prone areas to protect them from future damage and ensure continuity of operations. Seek opportunities to leverage partnerships within the planning area in these pursuits.							
Existing	All Hazards	2, 3, 5, 6	Palouse City Council	High	Grant Funding, Local funds	Long-term, depends on funding	No

**TABLE 3-7.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative #Pa-5</b> —Support the continuity of operations of the City’s critical functions through the development of a post disaster recovery plan.							
New and Existing	All Hazards	3, 4, 6	Palouse City Council	Medium	General Fund, DHS, EMPG grant funding	Long-term, depends on funding	No
<b>Initiative #Pa-6</b> —Retrofit the City owned footbridge across the Palouse River to provide increased conveyance and eliminate blockage of stream flow in high water events. Project would also provide seismic protection to the bridge which was not constructed according to any seismic standards							
Existing	Flood	3, 5	Palouse Department of Public Works	High	Bond Issue, CIP funding. Grant Funding: FEMA-HMGP, PDM, FMA. FCAAP	Long-term, depends on funding	Yes, #5
<b>Initiative #Pa-7</b> —Consider the adoption of higher regulatory standards appropriate for the hazards for which Palouse has vulnerability and within the City’s capabilities							
New and existing	All Hazards	1, 3, 9	Palouse City Council	Low	General Fund	Short-term	Yes, #6
<b>Initiative #Pa-8</b> —Due to the age and type construction of City owned buildings such as City Hall, the Police Station and Fire Station, the City will consider a seismic analysis of these properties to determine their vulnerability to seismic events and possible mitigation measures.							
Existing	Earthquake	2, 4, 7	Palouse City Council	High	Grant funding. FEMA/DHS	Long-term, depends on funding	Yes #7
<b>Initiative #Pa-9</b> —Seek flood control alternatives that will provide the highest degree of flood protection to the City of Palouse that enhance/attenuate the natural and beneficial functions of the floodplain.							
New and existing	Flood	1, 2, 5, 3, 6	Palouse City Council	High	General fund, Bonds, Grant Funding: FEMA, U.S. Corps of Engineers, FCAAP	Long-term, depends on funding	Yes, #8
<b>Initiative #Pa-10</b> —Continue to coordinate and work with Whitman County Emergency Management in disaster response and preparedness. This level of coordination should include: updates to the Emergency response plan, development of a post disaster action plan, training and support							
New and Existing	All Hazards	2, 4, 6	Palouse City Council	Staff Time/ Low	General fund	Short-term ongoing	Yes, #11

**TABLE 3-7.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative #Pa-11</b> —Support the countywide initiatives identified in Volume 1 of this plan.							
New and Existing	All Hazards	All	Palouse City Council	Low	Local funds	Short-term Ongoing	Yes, #9
<b>Initiative #Pa-12</b> —Continue to support the implementation, monitoring, maintenance, and updating of this plan, as defined in Volume 1.							
New & Existing	All Hazards	All	Palouse City Council	Low	General Funds, FEMA Mitigation Grant Funding for 5-year update	Short-term Ongoing	No

**TABLE 3-8.  
MITIGATION STRATEGY PRIORITY SCHEDULE**

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant- Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority <sup>a</sup>
Pa-1	7	High	High	Yes	Yes	No	High
Pa-2	4	Medium	Low	Yes	No	Yes	High
Pa-3	4	Medium	Low	Yes	No	No	Medium
Pa-4	4	High	High	Yes	Yes	No	Medium
Pa-5	3	High	Medium	Yes	Yes	No	Medium
Pa-6	2	High	High	Yes	Yes	No	Medium
Pa-7	3	High	Low	Yes	No	Yes	High
Pa-8	3	High	High	Yes	Yes	No	Medium
Pa-9	4	High	High	Yes	Yes	No	Medium
Pa-10	3	High	Low	Yes	Yes	Yes	High
Pa-11	10	High	Low	Yes	Yes	Yes	High
Pa-12	10	High	Low	Yes	Yes	Yes	High

a. See Section 1.3.3 for explanation of priorities

**TABLE 3-9.**  
**ANALYSIS OF MITIGATION INITIATIVES**

Hazard Type	Initiative Addressing Hazard, by Mitigation Type					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	5, 7, 12	4	11, 12		5, 10	
Drought	5, 7, 12	4	11, 12		5, 10	
Earthquake	5, 7, 12	4, 8	11, 12		5, 10	
Flood	1, 2, 3, 5, 7, 12	1, 2, 3, 4, 6	1, 2, 3, 11, 12	1, 2, 3, 9	1, 2, 3, 5, 10	1, 9
Landslide	5, 7, 12	4	11, 12		5, 10	
Severe Weather	3, 5, 7, 12	3, 4	3, 11, 12	3	3, 5, 10	
Volcano	5, 7, 12	4	11, 12		5, 10	
Wildfire	3, 5, 7, 12	3, 4	3, 11, 12	3	3, 5, 10	

Notes:

1. Prevention: Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
2. Property Protection: Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
3. Public Education and Awareness: Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
4. Natural Resource Protection: Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
5. Emergency Services: Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
6. Structural Projects: Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.

**TABLE 3-10.  
PREVIOUS ACTION PLAN IMPLEMENTATION STATUS**

Action #	Action Status			Comments
	Completed	Carry Over to Plan Update	Removed; No Longer Feasible	
Pa-1		✓		Pa-1
Pa-2	✓			Response plan adopted 12/2007
Pa-3	✓			Mobile Home Park was acquired and removed in 2008. Area is now a native vegetation trail. Acquisition of car wash is pending
Pa-4	✓			Action completed 11/2012
Pa-5		✓		Pa-6
Pa-6		✓		Pa-7
Pa-7		✓		Pa-8
Pa-8		✓		Pa-9
Pa-9		✓		Pa-11
Pa-10		✓		Pa-3
Pa-11		✓		Pa-10

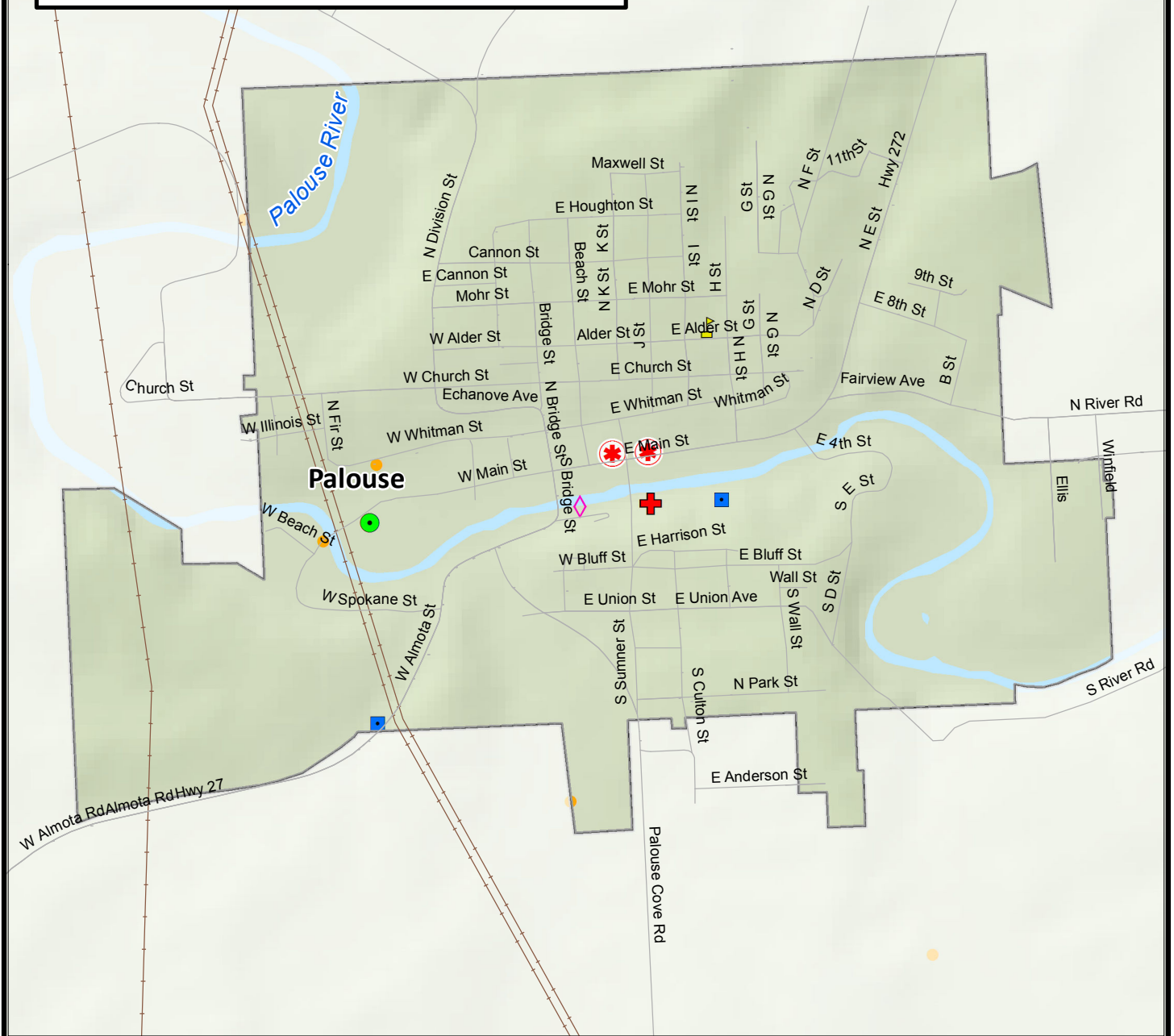
# CITY OF PALOUSE

## CRITICAL FACILITIES

- |                 |              |
|-----------------|--------------|
| ● Bridge        | ◇ Other      |
| ▲ Communication | 🏫 School     |
| ⛔ Protective    | ● Wastewater |
| ⚡ Hazmat        | ■ Water      |
| ✚ Medical       |              |









0 0.25 0.5  
Miles



# CITY OF PALOUSE

## 100 YEAR PROBABILISTIC EARTHQUAKE PEAK GROUND ACCELERATION

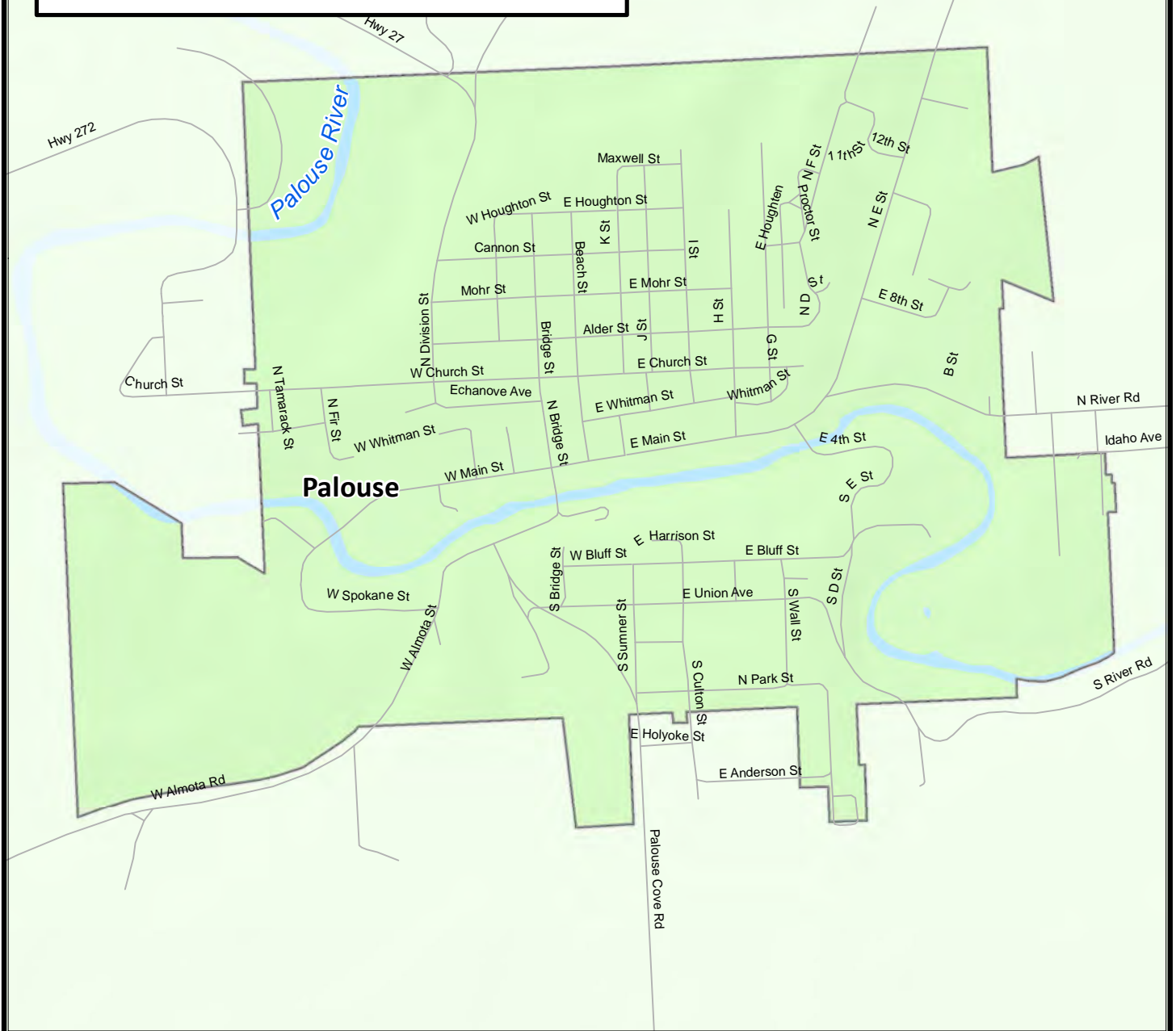
### Mercalli Scale, Potential Damage

- |  |  |
|--|--|
|  IV, Little to None |  VII, Moderate        |
|  V, Very Light      |  VIII, Moderate-Heavy |
|  VI, Light          |  IX, Heavy            |

Data Sources  
FEMA Hazus MH Version 2.1  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)








0 0.25 0.5  
Miles



# TOWN OF PALOUSE

## 500 YEAR PROBABILISTIC EARTHQUAKE PEAK GROUND ACCELERATION

### Mercalli Scale, Potential Damage

 IV, Little to None	 VII, Moderate
 V, Very Light	 VIII, Moderate-Heavy
 VI, Light	 IX, Heavy

Data Sources  
FEMA Hazus MH Version 2.1  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)



0 0.25 0.5  
Miles

Palouse River

Palouse


Palouse Cove Rd



# CITY OF PALOUSE

## LATAH CREEK FAULT PLANNING SCENARIO PEAK GROUND ACCELERATION 6.0 MAGNITUDE

### Mercalli Scale, Potential Damage

- |  |  |
|--|--|
|  III, None          |  VII, Moderate        |
|  IV, Little to None |  VIII, Moderate-Heavy |
|  V, Very Light      |  IX, Heavy            |
|  VI, Light          |  |

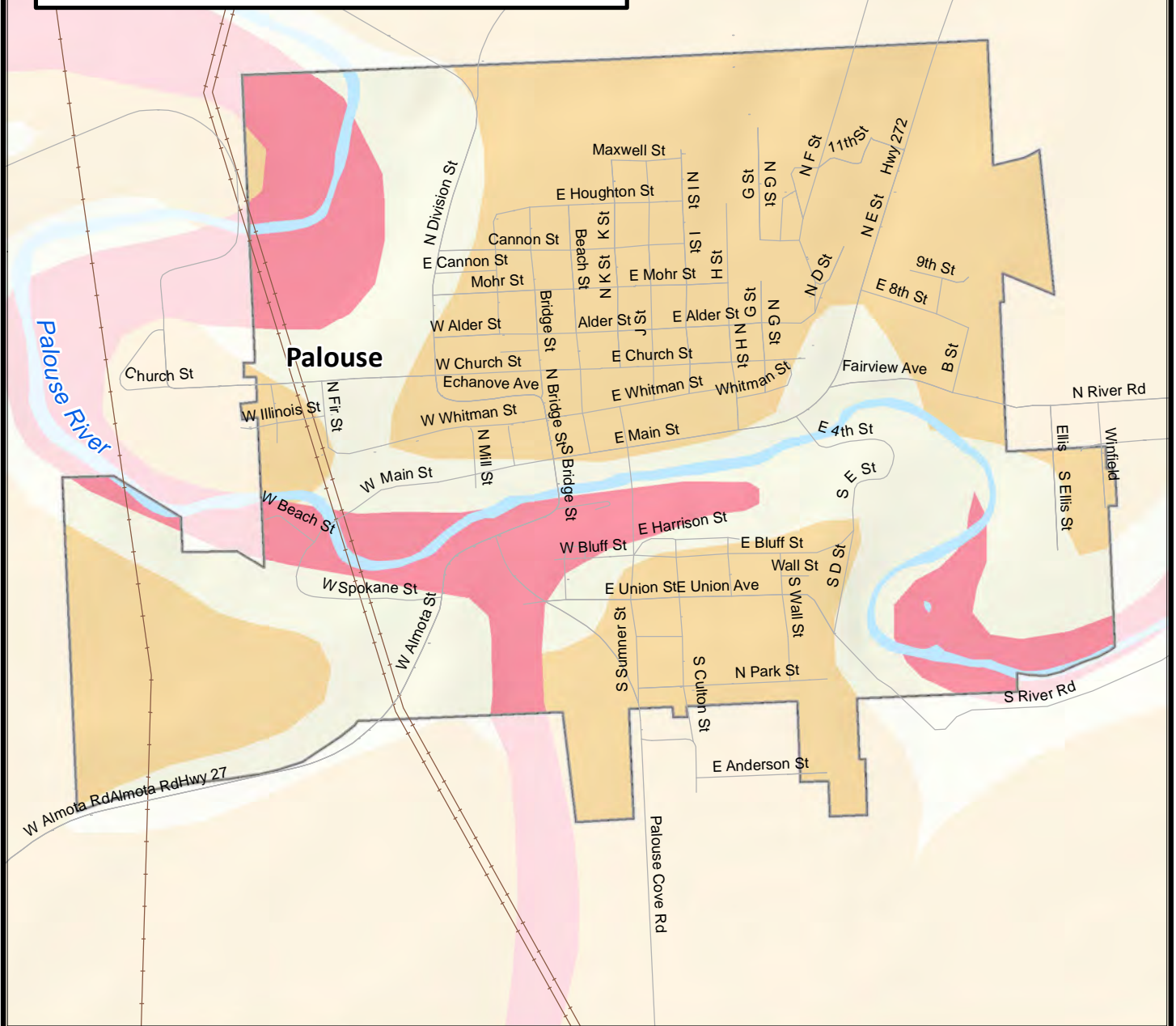
Data Sources  
WA Department of Natural Resources  
Whitman County  
FEMA's Hazus MH 2.1

Hypothetical event located  
10 miles north of Steptoe Butte



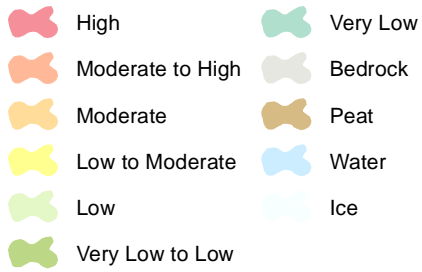
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Miles





# CITY OF PALOUSE

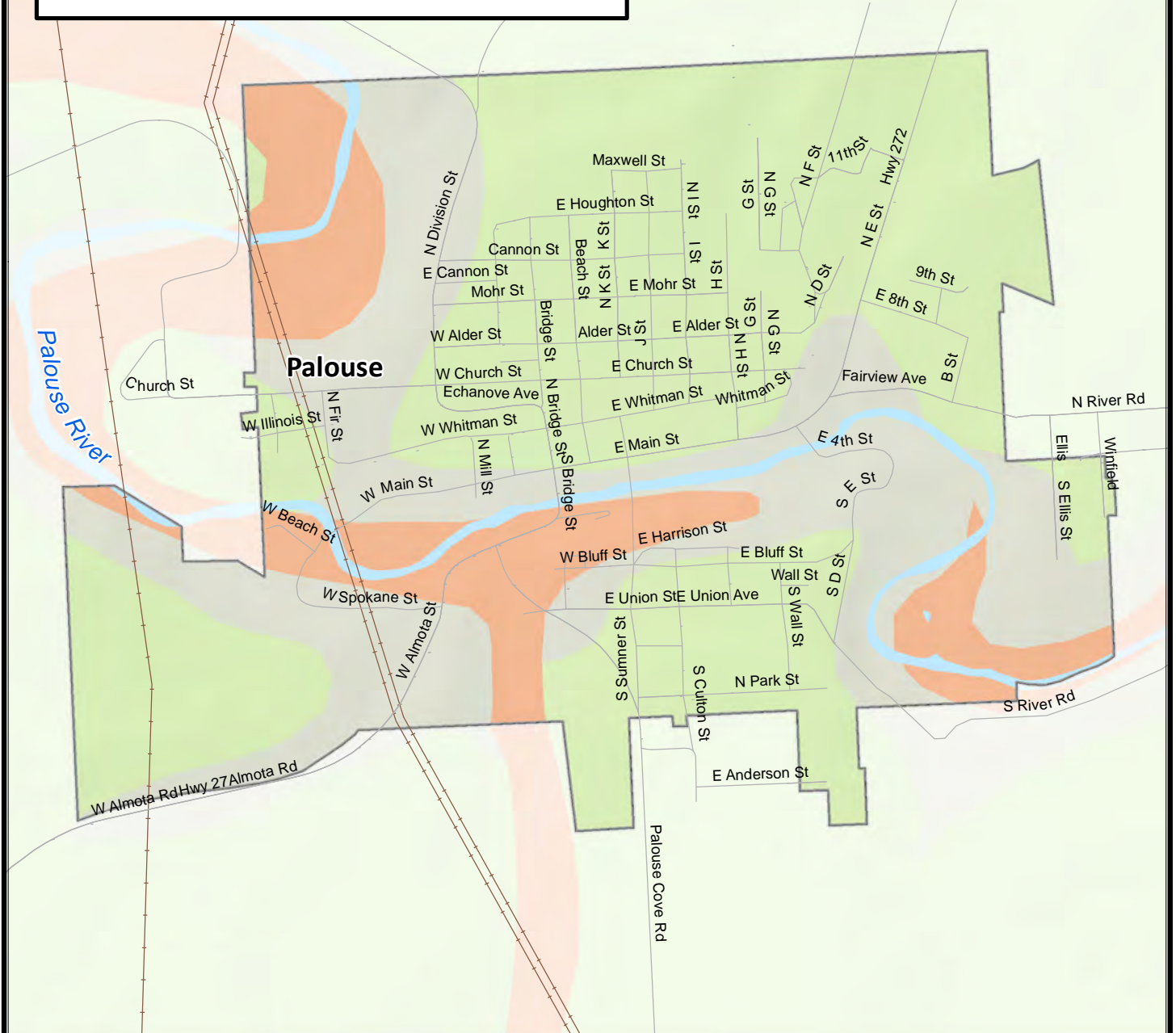
## LIQUEFACTION SUSCEPTIBILITY



Data Sources  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)





0 0.25 0.5  
Miles





# CITY OF PALOUSE

## FEMA FLOOD HAZARD AREAS

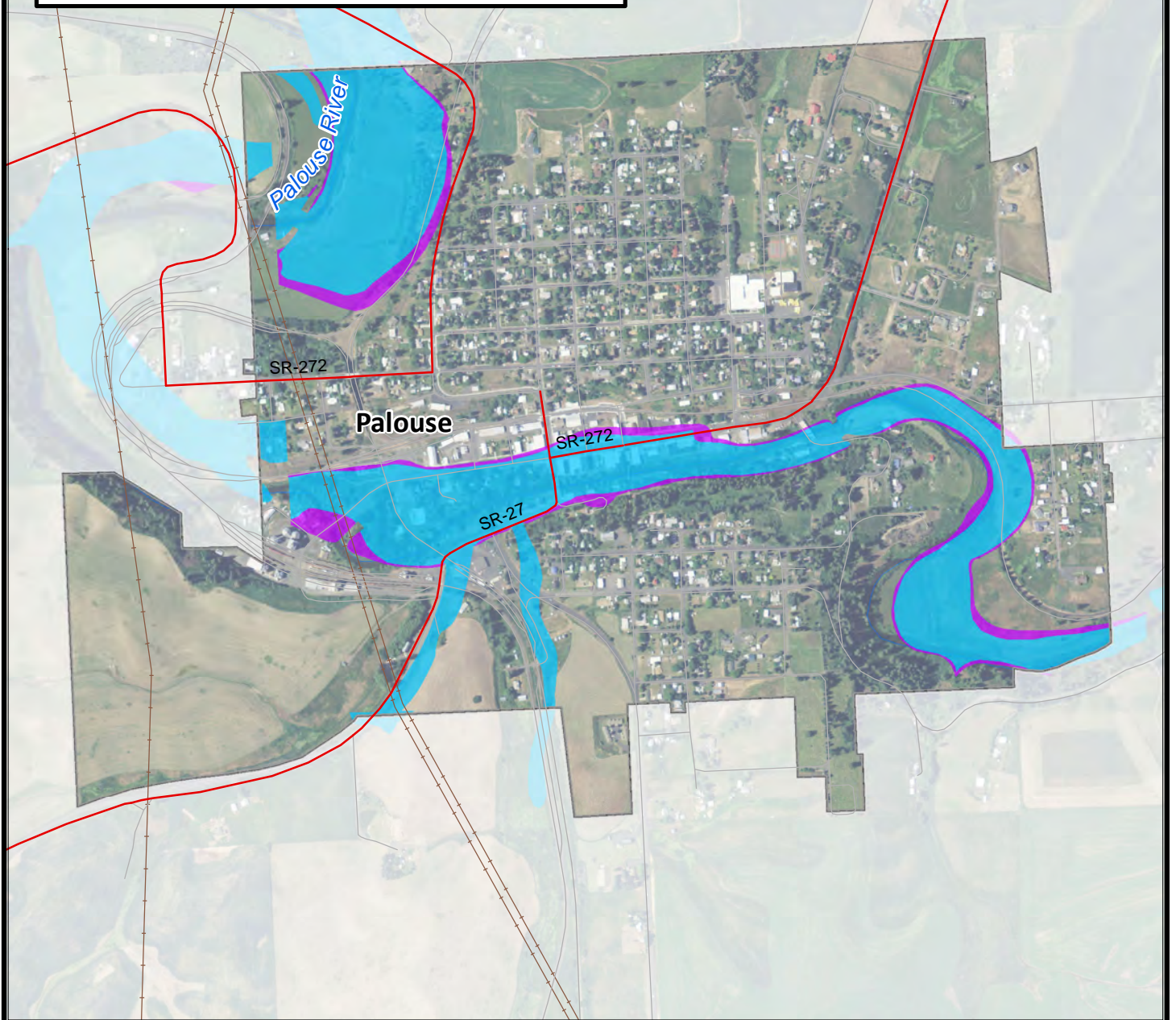
-  1 Percent Annual Chance Special Flood Hazard (100 Year)
-  0.2 Percent Annual Chance Special Flood Hazard (500 Year)

Data Sources  
FEMA Flood Insurance Rate Maps (Q3)

Whitman County  
WA Department of Natural Resources  
United States Geological Survey (USGS)




0 0.25 0.5  
Miles





# CITY OF PALOUSE

## HAZUS GENERATED FLOOD HAZARD AREA

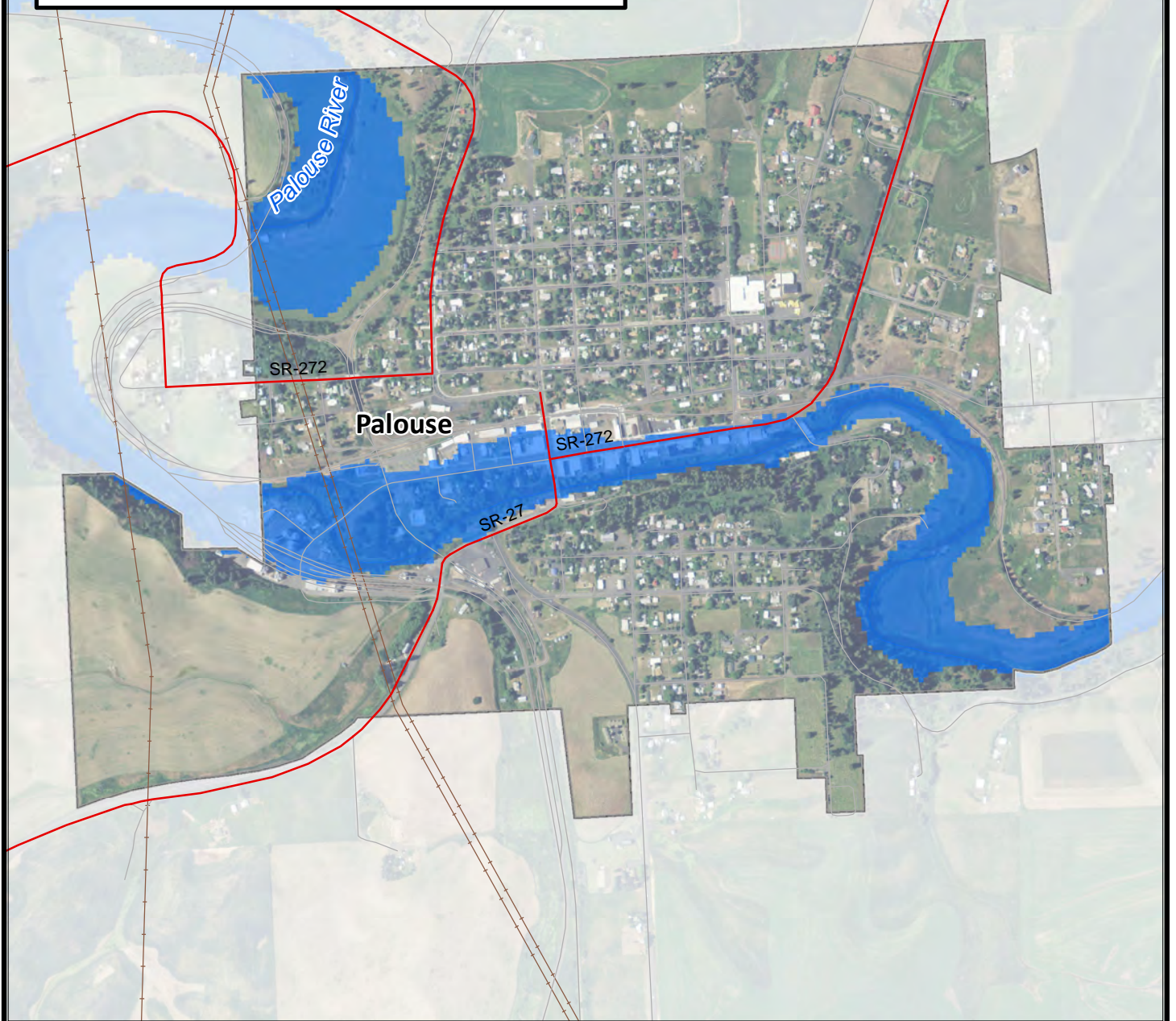
 Hazus 1 Percent Annual Chance  
Flood Hazard Area (100 Year)

Data Sources  
Hazus Generated Flood Area Using 10 Meter DEM

Whitman County  
WA Department of Natural Resources  
United States Geological Survey (USGS)  
2009 NAIP Imagery



0 0.25 0.5  
Miles





# CITY OF PALOUSE

## LANDSLIDE HAZARD AREAS

STEEP SLOPES, NEHRP SOFT SOILS



15-30 percent slope, NEHRP D and E Soils



Greater than 30 percent slope, NEHRP D and E Soils

### Data Sources

Slope based on 10 Meter DEM  
WA Department of Natural Resources  
Earthquake Soils  
Whitman County  
United States Geological Survey (USGS)

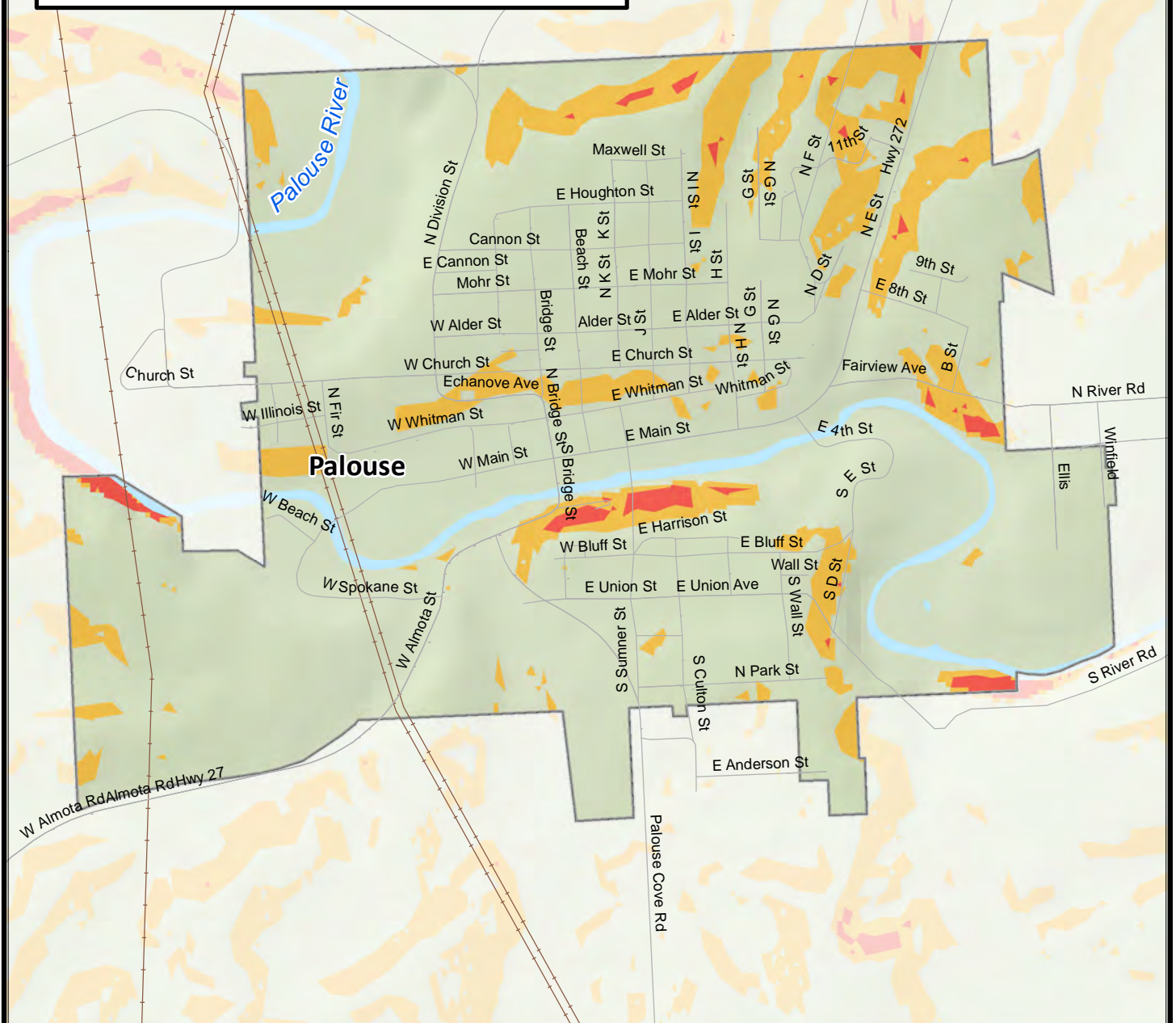


0

0.25

0.5

Miles



## CHAPTER 4. CITY OF PULLMAN ANNEX

### 4.1 HAZARD MITIGATION PLAN POINT OF CONTACT

#### Primary Point of Contact

Mark Workman, Public Works Director  
325 SE Paradise Street  
Pullman, WA 99163  
Telephone: 509-338  
e-mail Address: mark.workman@pullman-wa.gov

#### Alternate Point of Contact

Kevin Gardes, Deputy Public Works Director  
325 SE Paradise Street  
Pullman, WA 99163  
Telephone: 509-338-3217  
e-mail Address: kevin.gardes@pullman-wa.gov

### 4.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—1886
- **Current Population**—31,000 as of April 1, 2012
- **Population Growth**—Based on data from the Washington State Office of Financial Management, the City of Pullman has experienced a consistent rate of growth. The overall population increased by 16.3 percent between 2000 and 2010, an average annual increase of 1.8 percent for this time frame. This represents the majority of the growth that has occurred in Whitman County.
- **Location and Description**—Pullman is the largest city in Whitman County, located in the southeast portion of the county, 8 miles from the Idaho border. Situated at the junction of Washington State Highway 270 and U.S. Route 195, Pullman is serviced by a local airport, the Pullman-Moscow Regional Airport, which also serves the neighboring city of Moscow, Idaho (6 miles to the east). Other communities close to Pullman include Colfax (to the north), and Lewiston, Idaho (to the south). The city of Spokane is located 76 miles to the north.

A distinct feature of Pullman is the four hills that surround it, playing a large part in the way the town has been developed. To the southwest is Sunnyside Hill. To the southeast is Pioneer Hill, originally known as Methodist Hill. The hill to the northeast, now College Hill, was known as Mechanics Hill before and after the new college, Washington Agriculture College and School of Science opened the doors of its first building, Crib, in 1892. To the northwest lies Military Hill, given its name from the Military Academy, Pullman's prep school of 1891. The school served the educational needs of Pullman's young men for four years, after which it burned to the ground. Three streams flow through Pullman with Missouri Flat Creek and Dry Fork Creek joining with the South Fork of the Palouse River in downtown Pullman.

- **Brief History**—Pullman became a town in roughly 1877, then known as "Three Forks." The name was given from a geographical perspective because Missouri Flat Creek, Dry Fork Creek, and the South Fork of the Palouse Rivers joined together at this point. In 1881, three settlers, Daniel McKenzie, Bolin Farr, and Orville Steward, applied for a postal permit under the name "Pullman." One theory is that the adopted name came from George Pullman, the king of the great railroad sleeping-car. Pullman soon became known for its artesian wells which lured newcomers to the area. The community grew with six businesses and

professional men who pushed the growth that brought Washington State College, the State's land grant educational institution, to Pullman in 1890. Opening in 1892 with 21 students, Washington State College is now Washington State University with an enrollment of nearly 17,000 students at the Pullman campus alone.

Pullman was originally incorporated as a village of 250 people in 1888 and is now a city of over 31,000 residents. Agriculture, particularly dry-land wheat and lentil farming, has historically been a major economic driver for the community. As the home of Washington State University, the major employer by far in Pullman as well as for the surrounding area is the University. In the last 10 years or so, technology-based industry, led by Schweitzer Engineering with approximately 2,000 employees locally, has also become a major factor for Pullman.

- **Climate**—Pullman area climate is semi-arid, features dry and clear for much of the year, with hot, dry summers and cold, wet winters. Based on records kept from 1940 to 2005 by the Western Regional Climate Center, Pullman's average annual rainfall is 21 inches (530 mm) while the average annual snowfall is 28 inches (710 mm). The warmest month is August with 82 degrees the average maximum temperature, while January is the coldest month with 22.7 degrees the average minimum temperature. The average density of air in the Pullman vicinity is approximately 1.15 grams/liter. However, this value constantly changes because of Pullman's dry summers and wet winters. The nearness of the Cascade mountain range also contributes to Pullman's changing air density
- **Governing Body Format**—In 1971, Pullman became a non-chartered code city under the Mayor-Council form of government. The city has an elected mayor with an elected seven-member council and an appointed administrative officer, the city supervisor. In its most simplistic sense, administration means the act of carrying out the policy directives of the city council. The city supervisor is in charge of the day-to-day operations. The city of Pullman places a strong emphasis on maintaining free and open communications. This governing body will assume responsibility for adoption of this plan. Services provided by the City of Pullman include: Police and Fire Departments, Public Works (which includes planning and building services), Parks and Recreation, public transit and a public library.
- **Development Trends**—Based on its projected growth, the anticipated development trends for the City of Pullman are considered to be moderate to high, consisting of primarily residential and light commercial development. Pullman is currently experiencing a growth spurt in terms of housing expansion primarily to the west, multifamily primarily to the northeast, and commercial primarily to the south. Whitman County is not mandated under the State Growth Management Act to fully plan according to requirements of the law. The County and its cities have adopted critical areas and resources lands regulations pursuant to the Growth Management Act. Whitman County does have mechanisms available to managed future development via regulations identified in a zoning ordinance and policies identified in a comprehensive plan.

## 4.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 4-1 lists all past occurrences of natural hazards in the county. Repetitive loss records are as follows:

- Number of FEMA Identified Repetitive Flood Loss Properties: 4
- Number of Repetitive Flood Loss Properties that have been mitigated: 0



#### **4.4 HAZARD RISK RANKING**

Table 4-2 presents the ranking of the hazards of concern.

#### **4.5 CAPABILITY ASSESSMENT**

The assessment of the jurisdiction's legal and regulatory capabilities is presented in Table 4-3. The assessment of the jurisdiction's administrative and technical capabilities is presented in Table 4-4. The assessment of the jurisdiction's fiscal capabilities is presented in Table 4-5. Classifications under various community mitigation programs are presented in Table 4-6.

#### **4.6 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED INITIATIVES**

Table 4-7 lists the initiatives that make up the jurisdiction's hazard mitigation plan. Table 4-8 identifies the priority for each initiative. Table 4-9 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

#### **4.7 STATUS OF PREVIOUS PLAN INITIATIVES**

Table 4-10 summarizes the current status of initiatives that were adopted by the County for the previous hazard plan. Those that are directly carried over as actions in this hazard plan are also indicated as such in Table 4-7.

#### **4.8 HAZARD AREA EXTENT AND LOCATION**

Hazard area extent and location maps for the City of Pullman are included at the end of this chapter. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes.

**TABLE 4-1.  
NATURAL HAZARD EVENTS**

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Winter storm	1825	2009	\$63,928.67
Flood	n/a	1998	Information not available
Flood	1159	12/26/1996	Less than \$1 million, all Public Assistance
Flood	1100	01/26/1996	Information not available
Volcanic Ash	623	05/21/1980	Information not available

**TABLE 4-2.  
HAZARD RISK RANKING**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Flood	36
2	Severe Storm	24
3	Volcano	10
4	Landslide	7
5	Earthquake	6
6	Wildland Fire	5
7	Drought	5
8	Dam Failure	3

**TABLE 4-3.  
LEGAL AND REGULATORY CAPABILITY**

	Local Authority	State or Federal Prohibitions	Other Jurisdictional Authority	State Mandated	Comments
<b>Codes, Ordinances &amp; Requirements</b>					
Building Code	Yes	No	No	Yes	Adopted IBC 07/2010; PCC Title 2, Ordinance # 10-8
Zoning Code	Yes	No	No	No	Adopted 06/06; PCC Title 17, Ordinance # 87-9
Subdivisions	Yes	No	No	No	Adopted 06/03/1980; PCC Title 13, Ordinance # 80-42
Stormwater Management	Yes	No	No	Yes	Stormwater Utility Adopted 06/09, Ordinance # 09-2  Illicit Discharge & Detection Adopted 07/10, Ordinance #09-2  Stormwater Construction Regulation Adopted 11/11, Ordinance #11-1
Post Disaster Recovery	No	No	No	No	
Real Estate Disclosure	No	No	Yes	Yes	Revised Code of Washington 64.06
Growth Management	No	No	No	No	Critical Areas and resource lands only
Site Plan Review	Yes	No	No	No	PCC 17.135. This is a separate zoning code and design standards.
Special Purpose (flood management, critical areas)	Yes	Yes	No	Yes	Flood Plain Ordinance = PCC 17.100; Adopted 07/2010  Critical Areas Ordinance = PCC 16.50; Adopted 1984 (Resource lands only)
<b>Planning Documents</b>					
General or Comprehensive Plan	Yes	No	No	No	Comprehensive Plan Adopted 03/19/1999
Floodplain or Basin Plan	Yes	No	Yes	No	Comprehensive Flood Hazard Management Plan; Adopted 06/10/2003; PCC Title 17.100
Stormwater Plan	No	No	No	No	
Capital Improvement Plan	Yes	No	No	No	Six-YEAR CIP Adopted annually for roads, water, sewer, wastewater, and transit.
Habitat Conservation Plan	No	No	No	No	
Economic Development Plan	No	No	No	No	
Emergency Response Plan	Yes	No	Yes	Yes	City of Pullman Emergency Response Plan
Shoreline Management Plan	Yes	No	No	Yes	Shorelines Ordinance = 8-1963 Adopted 06/01/1974
Post Disaster Recovery Plan	No	No	No	No	

**TABLE 4-4.  
ADMINISTRATIVE AND TECHNICAL CAPABILITY**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Public Works and Planning staff 2 Planners, 3 Licensed Engineers, 3 Technicians
Engineers or professionals trained in building or infrastructure construction practices	Yes	Public Works staff 3 Building Inspectors
Planners or engineers with an understanding of natural hazards	Yes	Public Works and Planning staff
Staff with training in benefit/cost analysis	No	
Floodplain manager	Yes	Public Works Director
Surveyors	Yes	Public works staff, but most surveying is outsourced due to workload
Personnel skilled or trained in GIS applications	Yes	Public Works staff
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Police Chief
Grant writers	Yes	Public Works and Planning staff

**TABLE 4-5.  
FISCAL CAPABILITY**

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes – water, sewer, and stormwater
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Other	FEMA sponsored grant funding: PDM, HMGP, FMA

**TABLE 4-6.  
COMMUNITY CLASSIFICATIONS**

	Participating?	Classification	Date Classified
Community Rating System	No	—	—
Building Code Effectiveness Grading Schedule	Yes	2/2	2007
Public Protection	Yes	4/7*	—
Storm Ready	Yes	Participating	08/2005
Firewise	No	—	—

\* Higher classification applies to when subject property is located beyond 1,000 feet of a creditable fire hydrant and is within 5 road miles of a recognized fire station.

**TABLE 4-7.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative #PI-1 – Implement the flood mitigation strategies and emergency action plans for flood events identified in the City of Pullman Comprehensive Flood Hazard Management Plan</b>							
Yes	Flood	1, 2, 3, 5, 8, 9, 10	Department of Public Works	2,000,000	General Fund Grant Funding: (PDM, HMGP, FCAAP, FMA)  WSDOT, Ecology 319 Funding	Short Term, ongoing	Yes
<b>Initiative #PI-2 – Missouri Flat Creek property acquisition. This project would acquire and remove the carwash property located at Stadium Way</b>							
Yes	Flood	3, 5	Department of Public Works	1,000,000	General Fund, Grant Funding: (PDM, HMGP, FCAAP, FMA) Ecology 319 Funds	Long Term, depends on funding	Yes

**TABLE 4-7.**  
**HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative #PI-3</b> – Acquire University Trailer Park located along the south Fork of the Palouse River and convert to open space area which is contiguous with a parcel currently in an open space use. This project would remove habitable structures from a high risk area that includes mapped floodway. Open space would be utilized for flood storage and habitat enhancement.							
Yes	Flood	3, 5, 9	Department of Public Works	750,000	General Fund Conservative Futures Fund  Grant Funding: (PDM, HMGP, FCAAP, FMA)	Long Term, depends on funding	Yes
<b>Initiative #PI-4</b> – Raise Park Street to an elevation that will not be inundated during flooding events. The importance of this roadway is that it is a vital link to the City’s Operation and Maintenance facility and Wastewater treatment Plan.							
Yes	Flood	4, 5	Department of Public Works	350,000	CIP, WSDOT funding  Grant Funding: (PDM, HMGP, FCAAP, FMA)	Long Term	Yes
<b>Initiative #PI-5</b> – Retrofit Spring Street and Kamiaken Street Bridges to provide increased channel conveyance in the Palouse River and provide seismic protection to these critical infrastructure elements.							
Yes	Flood Earthquake	4, 5	Department of Public Works	4,000,000	CIP, WSDOT funding  Grant Funding: (PDM, HMGP, FCAAP, FMA)	Long Term	Yes
<b>Initiative #PI-6</b> – Consider the adoption of higher regulatory standards appropriate for the hazards for which Pullman has vulnerability and within the City’s capabilities.							
No	All Hazards	1, 3, 5, 9, 10	Department of Public Works	n/a	General Fund	Short Term	Yes
<b>Initiative #PI-7</b> – Support countywide initiatives that promote the education of the public on the impacts of natural hazards within Whitman County, and the preparedness for and the mitigation of those impacts. This support will be in the form of dissemination of appropriate information to the residents of Pullman and continuing support/participation in the Whitman County Natural Hazards Mitigation Planning Partnership.							
No	All Hazards	2, 6, 7	City of Pullman Office of the City Supervisor	n/a	General Fund	Ongoing, Short Term	Yes

**TABLE 4-7.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative #PI-8</b> – Consider voluntary participation in programs such as the Community Rating System, Firewise and Storm Ready programs that will provide benefits/incentives to the Citizens of Pullman for hazard mitigation							
No	Flood Wildfire	2, 6, 7, 8	City of Pullman Office of the City Supervisor	n/a	General Fund	Short Term	Yes
<b>Initiative #PI-9</b> – Continue to coordinate and work with Whitman County Emergency Management in disaster response and preparedness. This level of coordination should include: updates to the Emergency response plan, development of a post disaster action plan, training and support.							
No	All Hazards	2, 4, 6	City of Pullman Office of the City Supervisor	n/a	General Fund	Ongoing, Short Term	Yes
<b>Initiative #PI-10</b> – Grand at Missouri Flat Creek Secondary Culvert to construct a secondary box culvert adjacent to the existing box culvert conveying Missouri Flat Creek under Grand Avenue to provide additional capacity to convey flood flows. The single, existing culvert is an obstruction to high flood flows, causing overtopping of the stream bank to Grand Avenue.							
Yes	Flood	3, 4, 6	Department of Public Works	500,000	CIP, WSDOT  Grant Funding: (PDM, HMGP, FCAAP, FMA)	Long Term	No
<b>Initiative #PI-11</b> – Remove trees and built up sediment from 1 mile of channel of the South Fork of the Palouse River to regain lost hydraulic capacity, including mitigation. The existing reduced hydraulic capacity causes high floodwaters to overtop the stream bank to Bishop Boulevard, Professional Mall Boulevard, Riverview Street, and Spring Street to developed commercial property, developed residential property, and park and recreational facilities.							
Yes	Flood	3, 4, 5	Department of Public Works	1,000,000	CIP  Grant Funding: (PDM, HMGP, FCAAP, FMA)	Long Term	No
<b>Initiative #PI-12</b> – Stadium Way Flood Walls. Construct structural flood wall supports or flood walls along both sides of Missouri Flat Creek upstream from the bridge at Stadium Way to confine flood waters to the creek channel as opposed to overflowing to Grand Avenue.							
No	Flood	3, 4, 6	Department of Public Works	500,000	CIP  Grant Funding: (PDM, HMGP, FCAAP, FMA)	Long Term	No

**TABLE 4-8.  
MITIGATION STRATEGY PRIORITY SCHEDULE**

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority <sup>a</sup>
P1-1	7	Med	Med	Yes	Yes	Yes	High
P1-2	2	High	High	Yes	Yes	No	High
P1-3	3	High	High	Yes	Yes	No	High
P1-4	2	Med	Med	Yes	Yes	Yes	Medium
P1-5	2	High	High	Yes	Yes	No	Medium
P1-6	5	Med	Low	Yes	No	Yes	Medium
P1-7	3	Low	Low	Yes	Yes	Yes	High
P1-8	4	Low	Low	Yes	No	Yes	Medium
P1-9	3	High	Low	Yes	No	Yes	Medium
P1-10	3	High	High	Yes	Yes	Yes	Medium
P1-11	3	High	High	Yes	Yes	Yes	Medium
P1-12	3	High	Medium	Yes	Yes	Yes	Medium

a. See Section 1.3.3 for explanation of priorities



**TABLE 4-9.  
ANALYSIS OF MITIGATION INITIATIVES**

Hazard Type	Initiative Addressing Hazard, by Mitigation Type					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Flood	6, 8, 9	2, 3, 12	1, 7, 9	1, 11	1	1, 4, 5, 10, 11, 12
Severe Storm			1, 7, 9			
Volcano			1, 7, 9			
Landslide			1, 7, 9			
Earthquake			1, 7, 9			
Wildland Fire			1, 7, 9			
Drought			1, 7, 9			

Notes:

1. Prevention: Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
2. Property Protection: Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
3. Public Education and Awareness: Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
4. Natural Resource Protection: Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
5. Emergency Services: Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
6. Structural Projects: Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.

**TABLE 4-10.  
PREVIOUS ACTION PLAN IMPLEMENTATION STATUS**

Action #	Action Status			Comments
	Completed	Carry Over to Plan Update	Removed; No Longer Feasible	
PI-1		✓		There are many strategies and action plans in the Comprehensive Flood Hazard Management Plan. Some have been completed, others await funding.
PI-2		✓		Missouri Flat Creek widened and trestle removed. Car wash not acquired due to high cost.
PI-3	✓			
PI-4		✓		Not acquired due to high cost.
PI-5		✓		Funding not secured.
PI-6		✓		Funding not secured.
PI-7	✓			
PI-8		✓		There is no current support for more restrictive regulations.
PI-9	✓			Directed to Whitman County Hazard Mitigation Plan
PI-10		✓		Ongoing
PI-11		✓		Insufficient staff time available to address this.
PI-12		✓		Ongoing

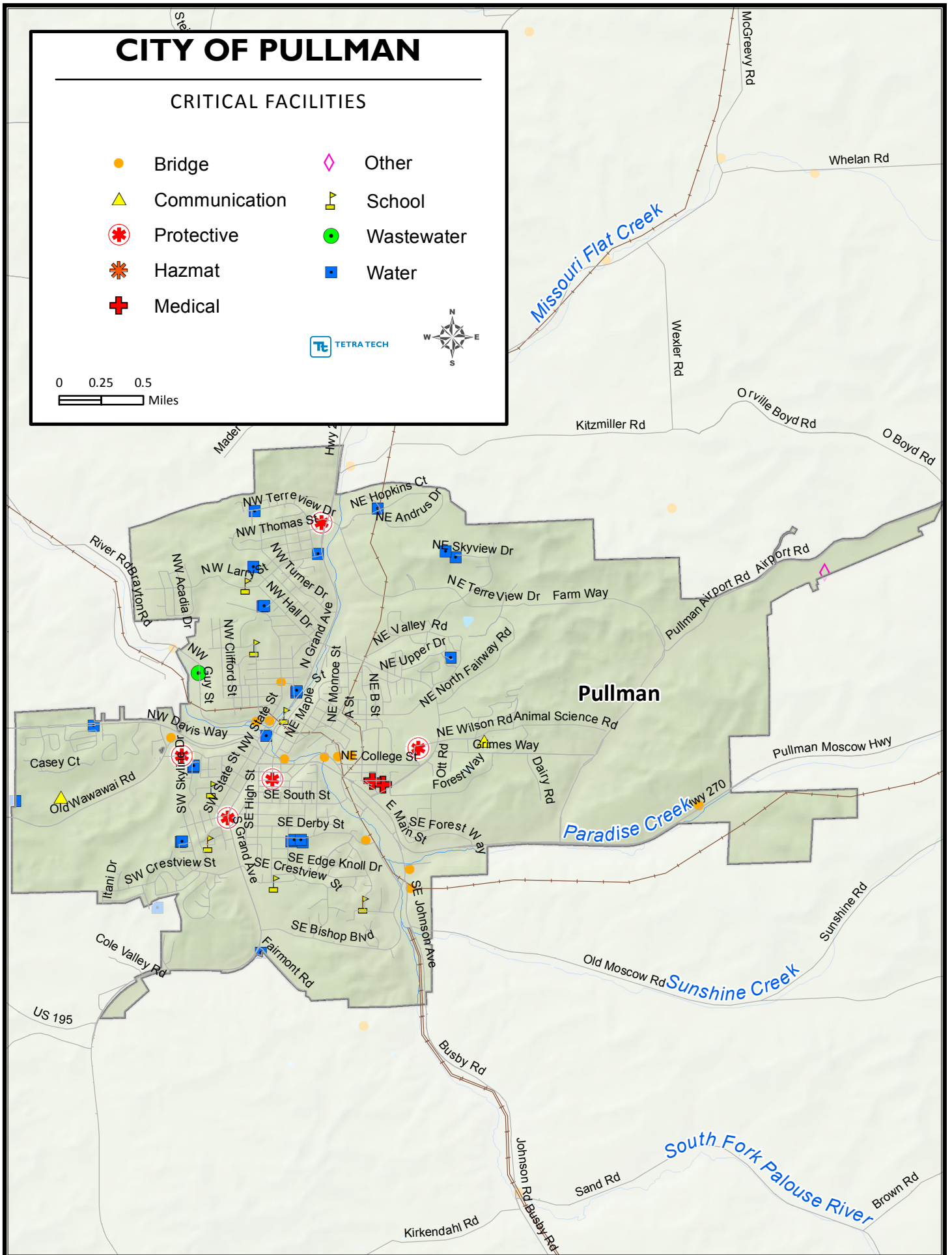
# CITY OF PULLMAN

## CRITICAL FACILITIES

- |                 |              |
|-----------------|--------------|
| ● Bridge        | ◇ Other      |
| ▲ Communication | 🏫 School     |
| ⛔ Protective    | ● Wastewater |
| ⚡ Hazmat        | ■ Water      |
| ✚ Medical       |              |









0 0.25 0.5  
Miles



# CITY OF PULLMAN

## 100 YEAR PROBABILISTIC EARTHQUAKE PEAK GROUND ACCELERATION

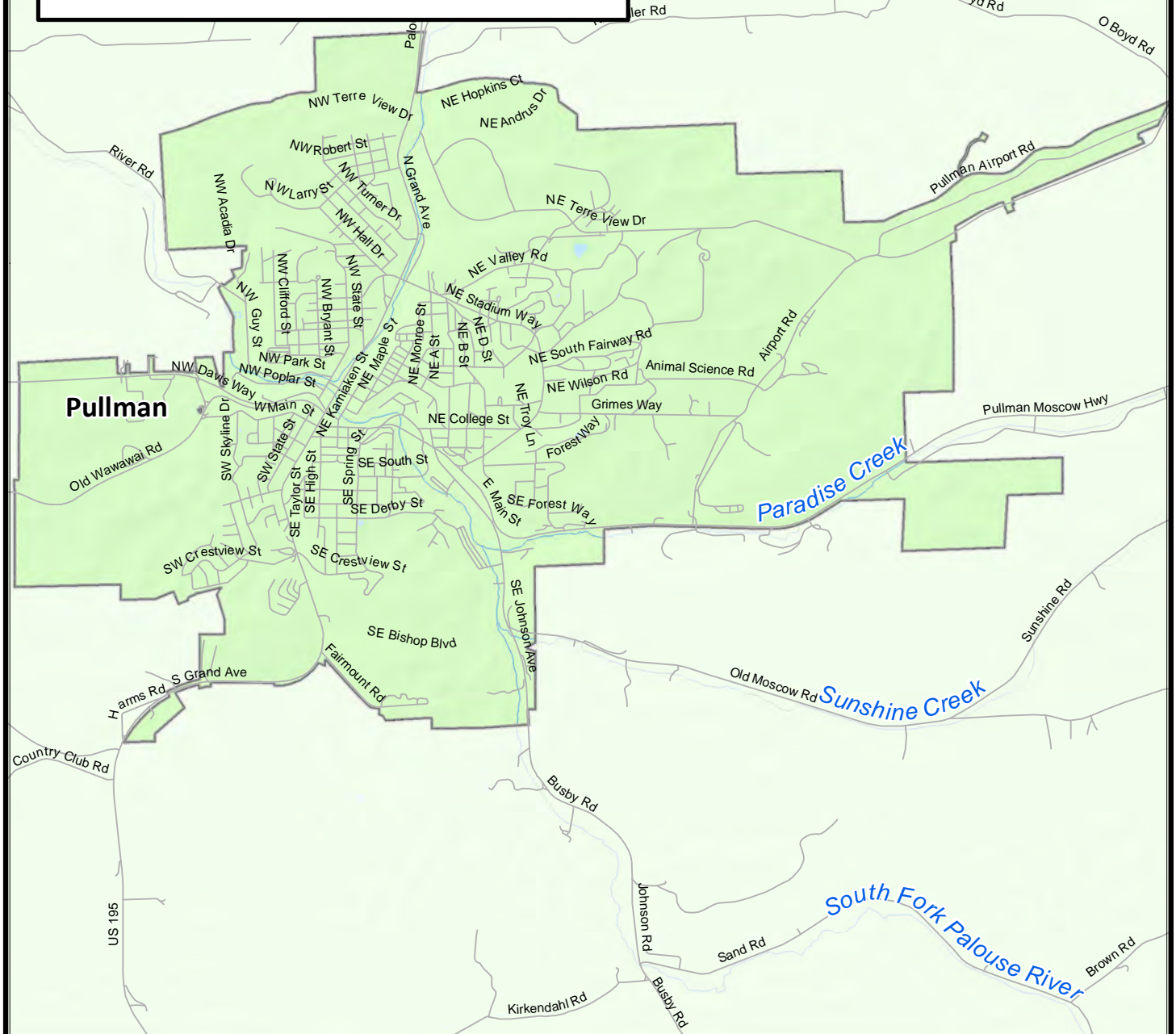
### Mercalli Scale, Potential Damage

- |  |  |
|--|--|
|  IV, Little to None |  VII, Moderate        |
|  V, Very Light      |  VIII, Moderate-Heavy |
|  VI, Light          |  IX, Heavy            |

Data Sources  
FEMA Hazus MH Version 2.1  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)









0 0.25 0.5  
Miles



# TOWN OF PULLMAN

## 500 YEAR PROBABILISTIC EARTHQUAKE PEAK GROUND ACCELERATION

### Mercalli Scale, Potential Damage

 IV, Little to None	 VII, Moderate
 V, Very Light	 VIII, Moderate-Heavy
 VI, Light	 IX, Heavy

Data Sources  
FEMA Hazus MH Version 2.1  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)



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Miles

Missouri Flat Creek

South Fork Palouse River

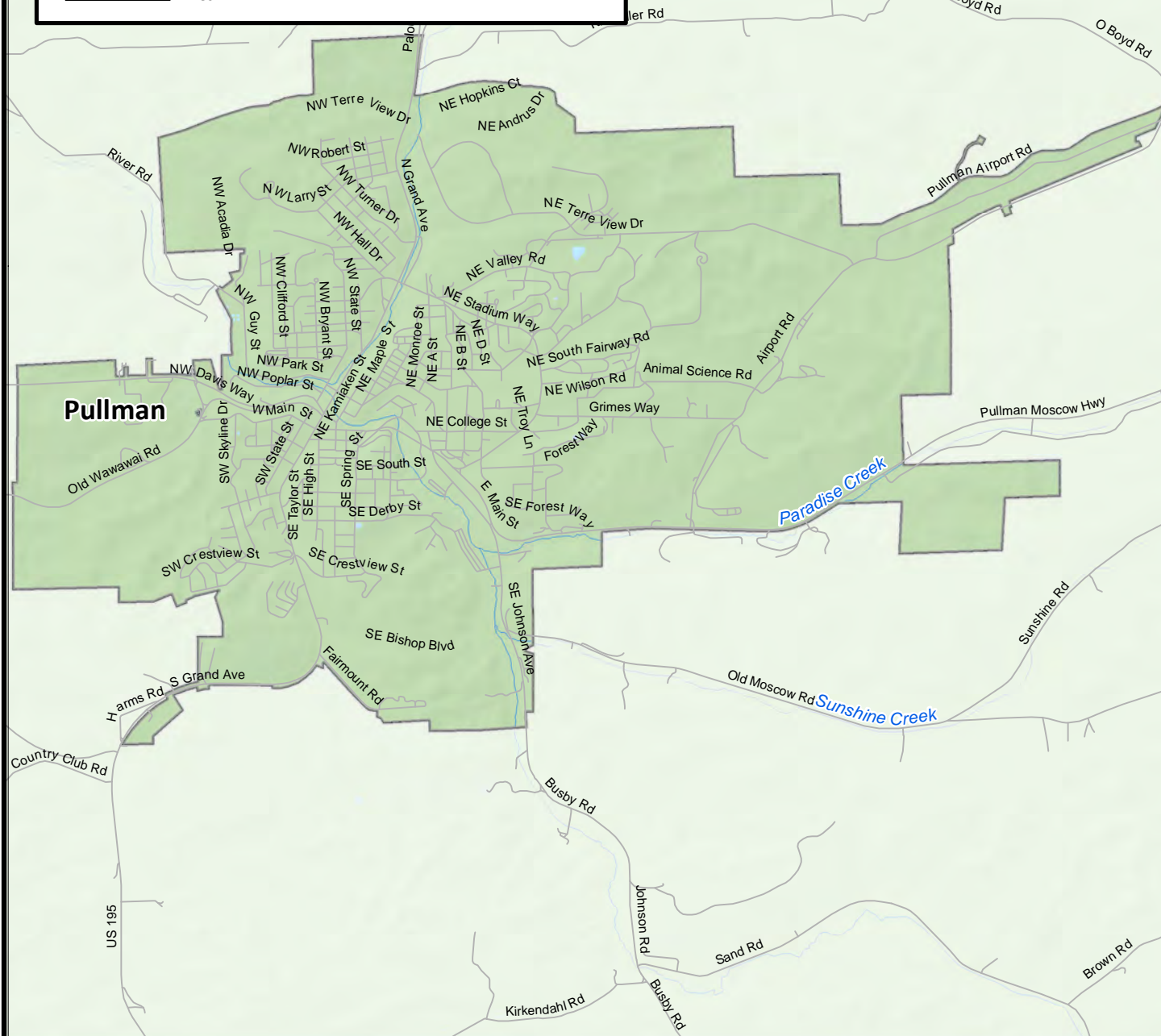
Pullman

Old Wawawai Rd

Paradise Creek








Sunshine Creek





# CITY OF PULLMAN

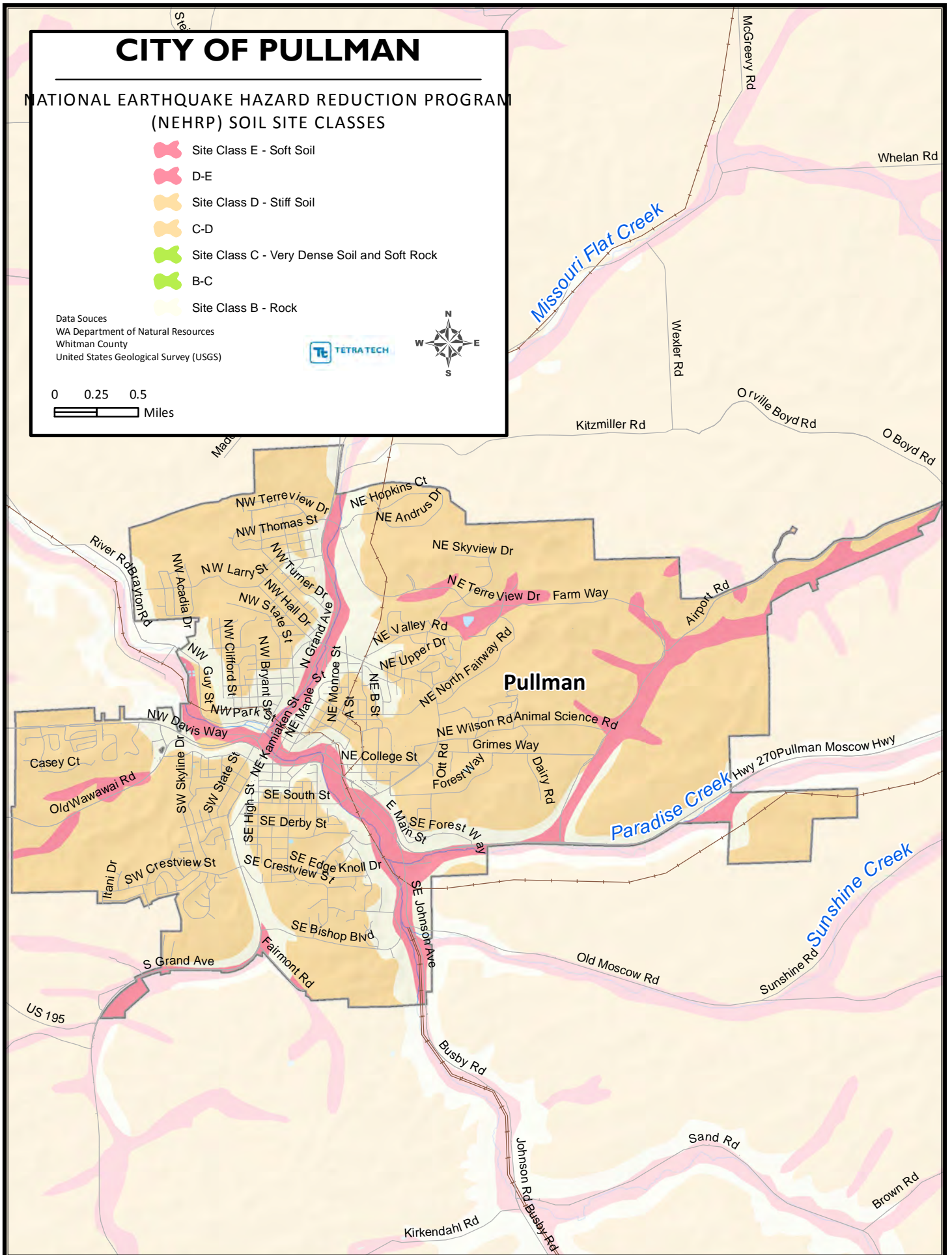
## NATIONAL EARTHQUAKE HAZARD REDUCTION PROGRAM (NEHRP) SOIL SITE CLASSES

-  Site Class E - Soft Soil
-  D-E
-  Site Class D - Stiff Soil
-  C-D
-  Site Class C - Very Dense Soil and Soft Rock
-  B-C
-  Site Class B - Rock

Data Sources  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)



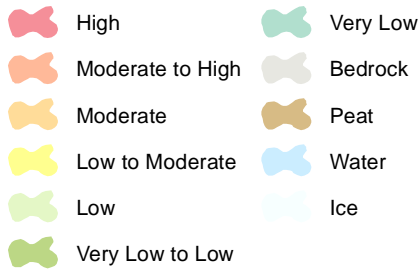
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Miles





# CITY OF PULLMAN

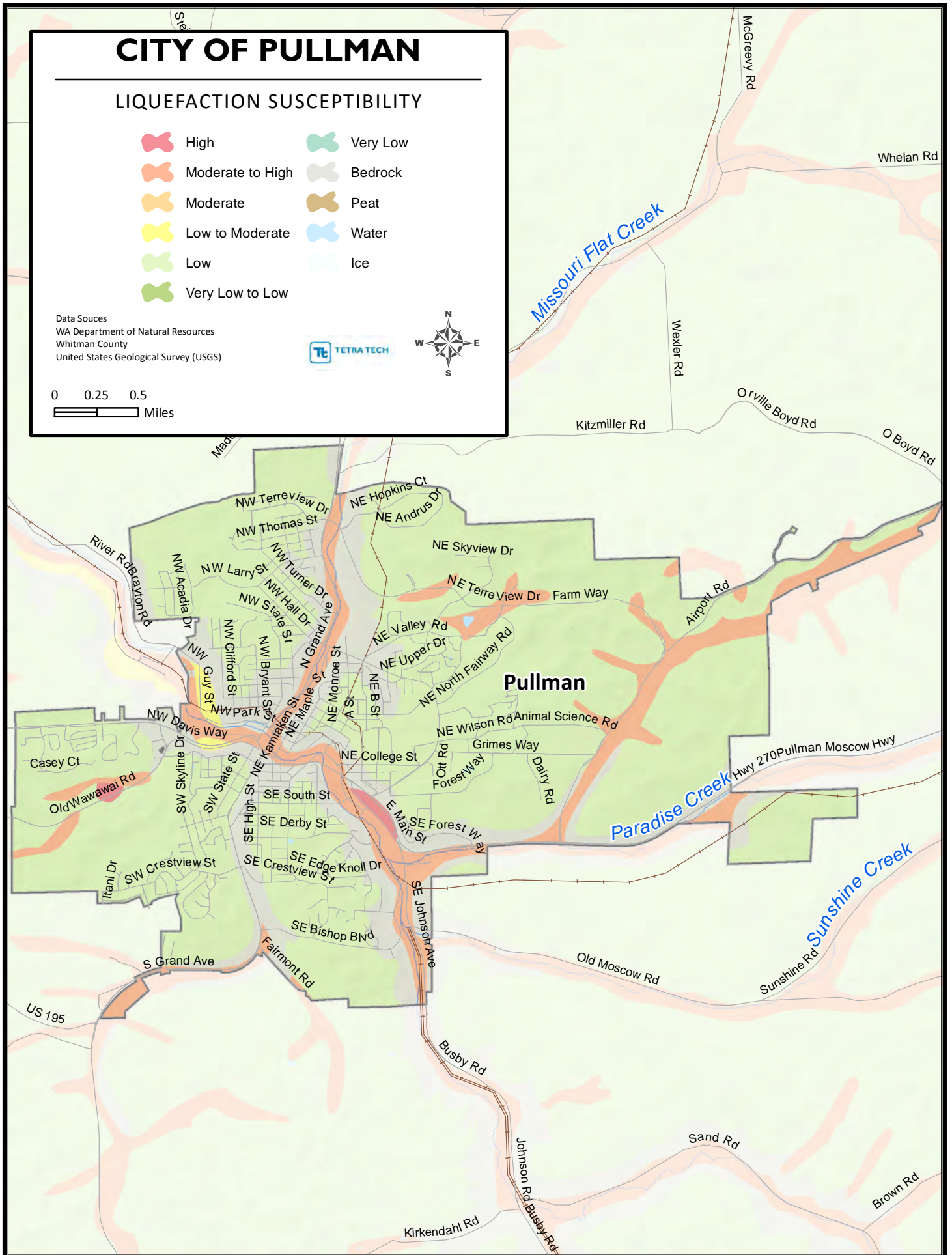
## LIQUEFACTION SUSCEPTIBILITY



Data Sources  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)





0 0.25 0.5  
Miles





# CITY OF PULLMAN


## FEMA FLOOD HAZARD AREAS

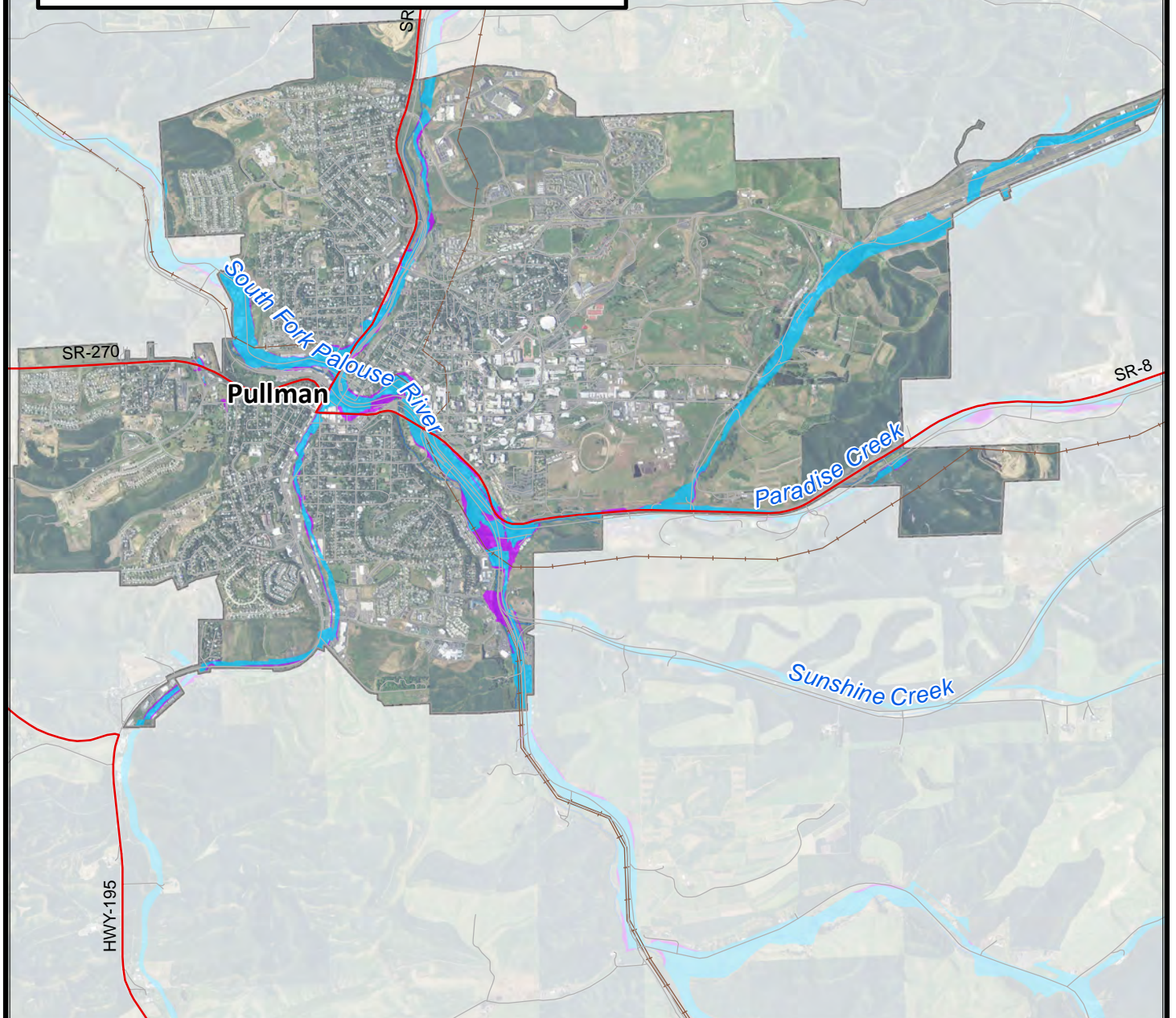
-  1 Percent Annual Chance Special Flood Hazard (100 Year)
-  0.2 Percent Annual Chance Special Flood Hazard (500 Year)

Data Sources  
FEMA Flood Insurance Rate Maps (Q3)

Whitman County  
WA Department of Natural Resources  
United States Geological Survey (USGS)




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# CITY OF PULLMAN


## HAZUS GENERATED FLOOD HAZARD AREA

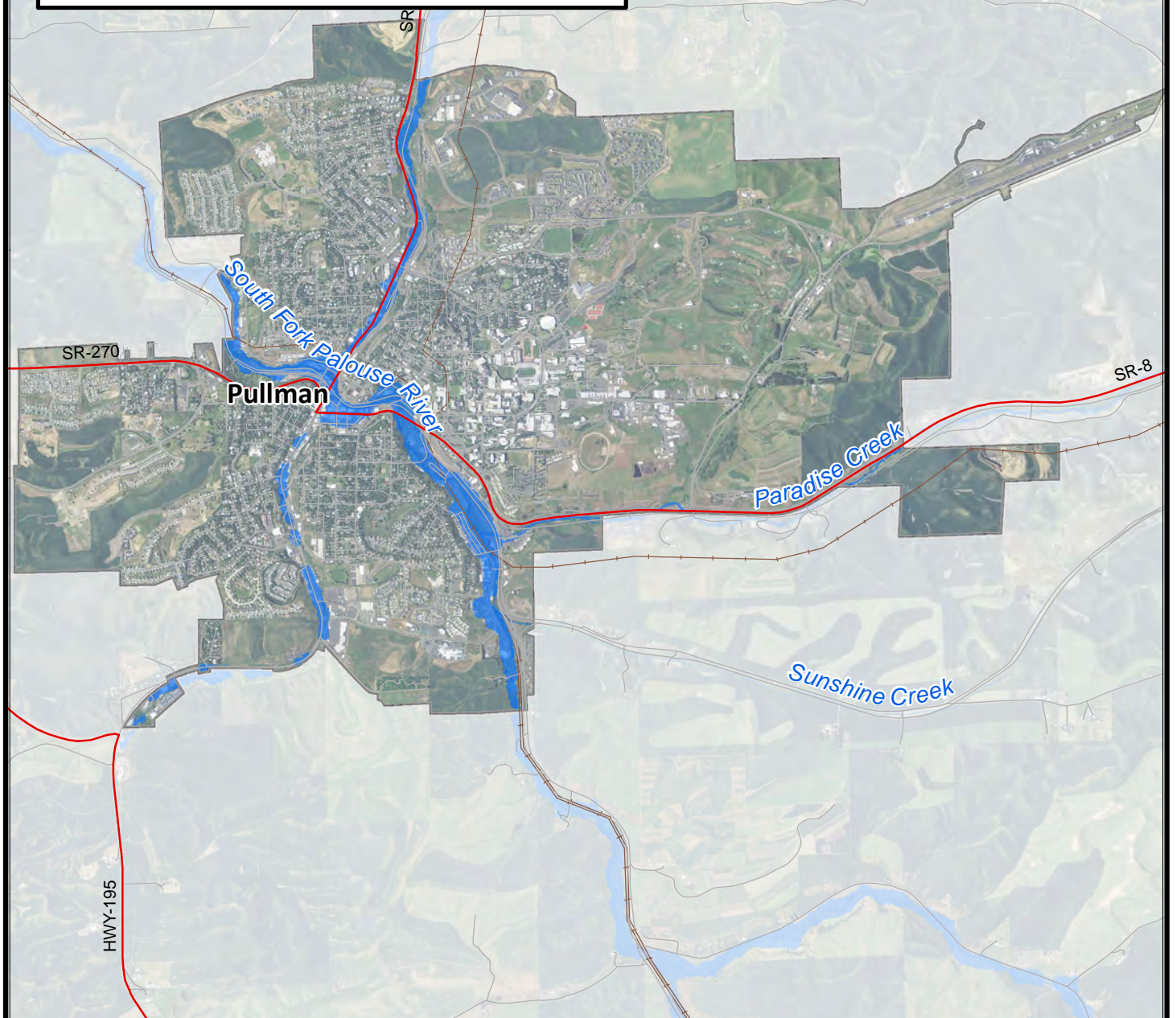
 Hazus 1 Percent Annual Chance  
Flood Hazard Area (100 Year)

Data Sources  
Hazus Generated Flood Area Using 10 Meter DEM

Whitman County  
WA Department of Natural Resources  
United States Geological Survey (USGS)  
2009 NAIP Imagery



0 0.25 0.5  
 Miles





# CITY OF PULLMAN

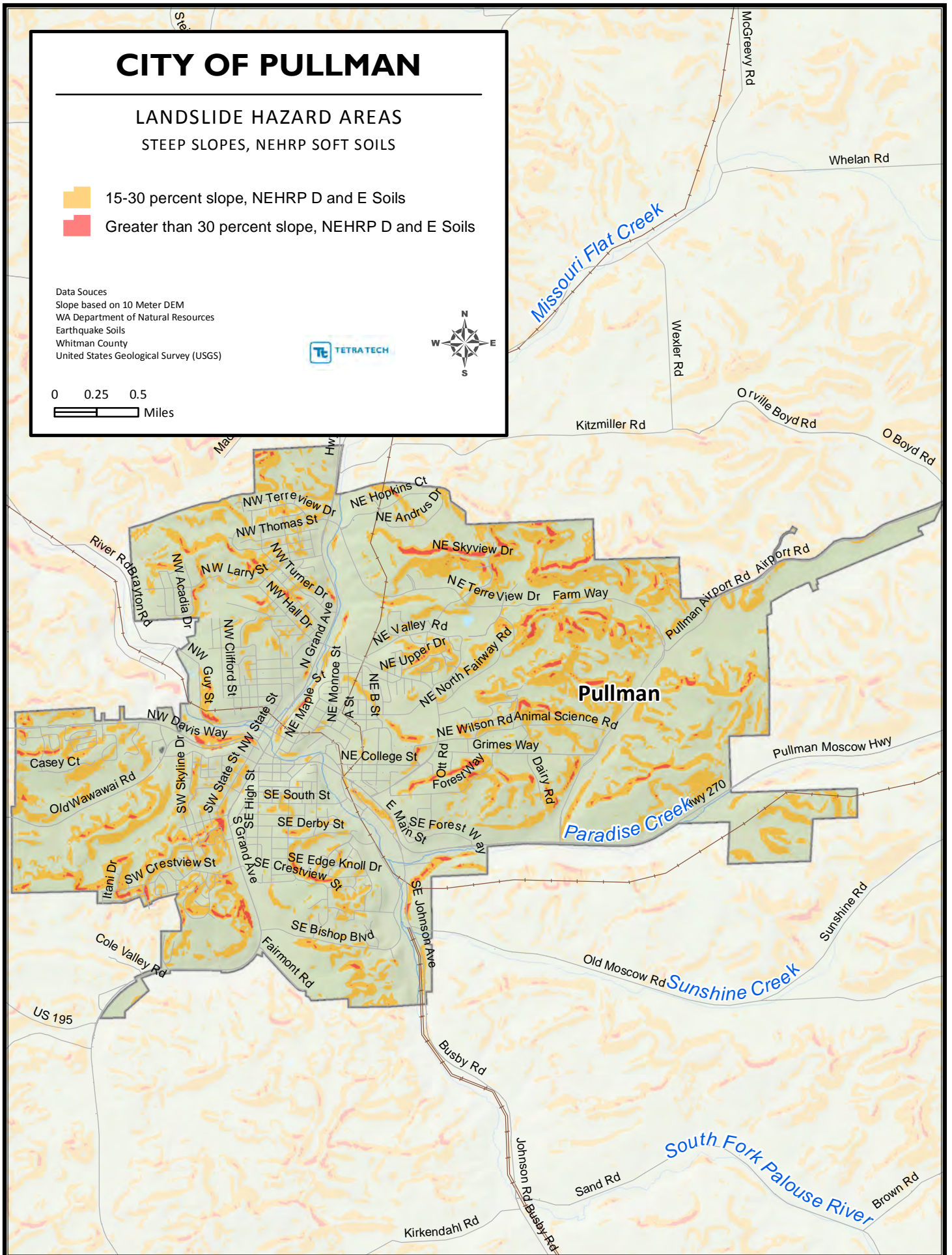
## LANDSLIDE HAZARD AREAS STEEP SLOPES, NEHRP SOFT SOILS

- 15-30 percent slope, NEHRP D and E Soils
- Greater than 30 percent slope, NEHRP D and E Soils

Data Sources  
Slope based on 10 Meter DEM  
WA Department of Natural Resources  
Earthquake Soils  
Whitman County  
United States Geological Survey (USGS)



0 0.25 0.5  
Miles





## CHAPTER 5. TOWN OF ENDICOTT ANNEX

### 5.1 HAZARD MITIGATION PLAN POINT OF CONTACT

#### Primary Point of Contact

Georgeann (Sue) Bafus, Clerk-Treasurer  
201 C Street  
Endicott, WA 99125  
Telephone: (509)0657-3411  
e-mail Address: [townofendicott@stjohncable.com](mailto:townofendicott@stjohncable.com)

#### Alternate Point of Contact

Verne Strader, Mayor  
201 C Street  
Endicott, WA 99125  
Telephone: (509)657-3411  
e-mail Address: [endicottmayor@gmail.com](mailto:endicottmayor@gmail.com)

### 5.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—February 11, 1905
- **Current Population**—295 as of April 1, 2012
- **Population Growth**—Based on data from the Washington State Office of Financial Management, the Town of Endicott has experienced a declining rate of growth. The overall population decreased by 16.9 percent between 2000 and 2010, an average annual decrease of 1.8 percent for this time frame.
- **Location and Description**—Endicott is a town on Rebel Flat Creek nineteen miles west of Colfax in central Whitman County. The town encompasses approximately 0.3 square miles at an elevation of 1706 feet above sea level. Rebel flat Creek flows through the town and has cause past flooding due to debris blockage and ice jams.
- **Brief History**—The town was founded by the Oregon Improvement Company which filed a town site plat on May 18, 1882. The name chosen was that of William Endicott, Jr., a Boston banker who was a shareholder in Oregon Improvement Company. Prior to this naming, the place had been called Rebel Flat by southerners who settled there after the Civil War. Endicott is an agricultural community with over 25 percent of its population being of German descent.
- **Climate**—Endicott enjoys a temperate climate with an average low temperature of 30.0°F and an average high temperature of 70°F. The average annual rain fall for Endicott is 22.6 inches.
- **Governing Body Format**—Endicott is governed by a mayor-council form of government consisting of 5 elected Council Members and an elected Mayor. This governing body will assume responsibility for adoption and implementation of this plan The Town provides public safety, general administrative services, park and recreation, water/wastewater services, and street improvements to its residents.
- **Development Trends**—Based on its projected growth, the anticipated development trends for the Town of Endicott are considered to be relatively neutral. While growth and development would be welcome by the town, none is anticipated during the next performance period for this plan. Whitman County is not mandated under the State Growth Management

Act to fully plan according to requirements of the law. The County and its cities have adopted critical areas and resources lands regulations pursuant to the Growth Management Act. Endicott does have mechanisms available to managed future development via regulations identified in a zoning ordinance and policies identified in a comprehensive plan should a growth spurt occur within the Town.

### **5.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY**

Table 5-1 lists all past occurrences of natural hazards in the county. Repetitive loss records are as follows:

- Number of FEMA Identified Repetitive Flood Loss Properties: None
- Number of Repetitive Flood Loss Properties that have been mitigated: None

### **5.4 HAZARD RISK RANKING**

Table 5-2 presents the ranking of the hazards of concern.

### **5.5 CAPABILITY ASSESSMENT**

The assessment of the jurisdiction's legal and regulatory capabilities is presented in Table 5-3. The assessment of the jurisdiction's administrative and technical capabilities is presented in Table 5-4. The assessment of the jurisdiction's fiscal capabilities is presented in Table 5-5. Classifications under various community mitigation programs are presented in Table 5-6.

### **5.6 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED INITIATIVES**

Table 5-7 lists the initiatives that make up the jurisdiction's hazard mitigation plan. Table 5-8 identifies the priority for each initiative. Table 5-9 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

### **5.7 STATUS OF PREVIOUS PLAN INITIATIVES**

Table 5-10 summarizes the current status of initiatives that were adopted by the County for the previous hazard plan. Those that are directly carried over as actions in this hazard plan are also indicated as such in Table 5-7.

### **5.8 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY**

The following data/science is needed to support future assessment of risk in Endicott:

- LIDAR data
- Assessor's data needs to be enhanced to include data such as area, occupancy and date of construction on all properties within the planning area. This data should be in a digital format and support GIS applications.
- Earthquake scenario maps (Shake maps) are needed for the region.
- Flood study data needs to be updated

## 5.9 HAZARD AREA EXTENT AND LOCATION

Hazard area extent and location maps for the Town of Endicott are included at the end of this chapter. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes.

<b>TABLE 5-1. NATURAL HAZARD EVENTS</b>		
Type of Event	Date	Preliminary Damage Assessment
Wind	11/16/2010	Information not available
Wind	5/22/2010	Information not available
Wind	2007	Information not available
Earthquake	2005	Information not available
Flood (FEMA Disaster #1159)	12/26/1996	Information not available
Flood (FEMA Disaster #1100)	1/26/96	\$1.6 Million for entire County
Volcanic Ash (FEMA Disaster #623)	5/21/1980	Information not available

<b>TABLE 5-2. HAZARD RISK RANKING</b>		
Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Severe Weather	$3 \times (9+6+3) = 54$
2	Flood	$3 \times (3+4+2) = 27$
3	Earthquake	$2 \times (9+2+1) = 24$
4	Landslide	$2 \times (3+2+1) = 12$
5	Drought	$3 \times (0+0+3) = 9$
6	Wildfire	$3 \times (0+0+2) = 6$
7	Volcano	$1 \times (3+2+1) = 6$
8	Dam Failure	$1 \times (0+0+3) = 3$



**TABLE 5-3.  
LEGAL AND REGULATORY CAPABILITY**

	Local Authority	State or Federal Prohibitions	Other Jurisdictional Authority	State Mandated	Comments
<b>Codes, Ordinances &amp; Requirements</b>					
Building Code	Y	N	N	Y	Adopted 1993
Zoning Code	Y	N	N	N	Adopted 1975
Subdivisions	Y	N	N	N	Adopted 1994
Stormwater Management	N	N	N	N	
Post Disaster Recovery	N	N	N	N	
Real Estate Disclosure	Y	N	N	N	Revised Code of Washington 64.06
Growth Management	Y	N	N	Y	Adopted 2007
Site Plan Review	Y	N	N	Y	Part of Building Code
Special Purpose (flood management, critical areas)	Y	N	N	N	Adopted 2007
<b>Planning Documents</b>					
General Plan	N	N	N	N	
Floodplain or Basin Plan	N	N	N	N	
Stormwater Plan	N	N	N	N	
Capital Improvement Plan	Y	N	N	N	Roads/Transportation, Water, and Sewer. 6-year CIP updated annually
Habitat Conservation Plan	N	N	N	N	
Economic Development Plan	N	N	N	N	
Emergency Response Plan	Y	N	N	N	Whitman County FD #6
Shoreline Management Plan	N	N	N	N	
Post Disaster Recovery Plan	N	N	N	N	



**TABLE 5-4.  
ADMINISTRATIVE AND TECHNICAL CAPABILITY**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Andersen Perry & Associates, Inc. 214 E Birch, Walla Walla, WA (509) 529-9260
Engineers or professionals trained in building or infrastructure construction practices	Yes	Building Inspector
Planners or engineers with an understanding of natural hazards	No	None on staff. Can contract for services
Staff with training in benefit/cost analysis	No	None on Staff. Can contract for services
Floodplain manager	Y	Clerk/Treasurer
Surveyors	Yes	Andersen Perry & Associates
Personnel skilled or trained in GIS applications	Yes	Andersen Perry & Associates
Scientist familiar with natural hazards in local area	No	None on Staff. WSU is a resource
Emergency manager	Yes	Whitman County Emergency Management
Grant writers	No	

**TABLE 5-5.  
FISCAL CAPABILITY**

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes, Road and Water
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes, Water and Sewer
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes

**TABLE 5-6.  
COMMUNITY CLASSIFICATIONS**

	Participating?	Classification	Date Classified
Community Rating System	No	—	—
Building Code Effectiveness Grading Schedule	Yes	5/5	2001
Public Protection	Yes	8/9*	9/1/2005
Storm Ready	No	—	—
Firewise	No	—	—
* Higher classification applies to when subject property is located beyond 1,000 feet of a creditable fire hydrant and is within 5 road miles of a recognized fire station.			

**TABLE 5-7.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative #E-1</b> —Promote water conservation by private property-owners through public outreach programs implemented by the Town of Endicott.							
New and existing	Drought	2, 6, 7	City Council	Low	General Fund	Ongoing	Yes
<b>Initiative #E-2</b> —Enhance stream channel capacity on Rebel Flat Creek to mitigate the impacts of flooding that have benefits that exceeds costs, enhances the natural and beneficial functions of the floodplain, while providing flood protection to the people and property within Endicott.							
New and existing	Flood	1, 3, 5	Public Works	High	General fund, Transportation Improvement Board funding, Grant funding	Long Term, depends on funding	Yes
<b>Initiative #E-3</b> —Consider regulatory standards appropriate for the risk to mitigate future impacts to new development within Endicott for which the Town has susceptibility.							
New	All Hazards	1, 3, 5, 10	City Council	Low	General Fund	Short-term	Yes
<b>Initiative #E-4</b> —Support County Wide Initiatives that promote the education of the public on the impacts of natural hazards within Whitman County, and the preparedness for and the mitigation of those impacts. This support will be in the form dissemination of appropriate information to the residents of Endicott and continuing support/participation in the Whitman County Natural Hazards Mitigation Planning Partnership.							
New and Existing	All Hazards	2, 6, 7	City Council	Low	General Fund	Ongoing	Yes

**TABLE 5-7.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative #E-5</b> —Consider voluntary participation in programs such as the Community Rating System, Firewise, and Storm Ready programs that will provide benefits/incentives to the Citizens of Endicott for hazard mitigation.							
New and Existing	Severe Weather, Flood, Wildfire	2, 6, 7, 8	City Council	Low	General Fund	Long-term	Yes
<b>Initiative #E-6</b> —Utilize information provided in the Whitman County Hazard Identification and Vulnerability Assessment to consider regulatory provisions that will reduce the vulnerability, and promote wise land use with regards to hazards that impact the Town of Endicott.							
New and Existing	All Hazards	1, 3, 9, 10	City Council	Low	General Fund	Ongoing	Yes
<b>Initiative #E-7</b> —Continue to coordinate and work with Whitman County Emergency Management in disaster response and preparedness. This level of coordination should include: updates to the Emergency response plan, development of a post disaster action plan, training and support							
New and existing	All Hazards	2, 4, 6	City Council	Low	General Fund, DHS funding	Ongoing	Yes
<b>Initiative #E-8</b> —Update the zoning ordinance for the town of Endicott.							
New and existing	All Hazards	1, 3, 5, 10	City Council	Low	General Fund	Short-term	No
<b>Initiative #E-9</b> —Continue to maintain compliance and good standing under the National Flood Insurance Program.							
New and existing	Flood	2, 6, 7, 8	City Council	Low	General Fund	Ongoing	No

**TABLE 5-8.**  
**MITIGATION STRATEGY PRIORITY SCHEDULE**

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority <sup>a</sup>
E-1	3	Low	Low	Yes	No	Yes	High
E-2	3	High	High	Yes	Yes	No	Medium
E-3	4	High	Low	Yes	No	Yes	High
E-4	3	Medium	Low	Yes	No	Yes	High
E-5	4	Medium	Low	Yes	No	No	Medium
E-6	4	Medium	Low	Yes	No	Yes	High
E-7	3	High	Low	Yes	Yes	Yes	High
E-8	4	Medium	Low	Yes	No	Yes	High
E-9	4	Medium	Low	Yes	No	Yes	High

a. See Section 1.3 for definitions of high, medium and low priorities.

**TABLE 5-9.  
ANALYSIS OF MITIGATION INITIATIVES**

Hazard Type	Initiative Addressing Hazard, by Mitigation Type					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	3, 4, 8		4		4, 6, 7	
Drought	3, 4, 8	1	4		4, 6, 7	
Earthquake	3, 4, 8		4		4, 6, 7	
Flood	3, 4, 5, 8, 9	5, 9	4, 5, 9	2, 5, 9	4, 5, 6, 7, 9	2
Landslide	3, 4, 8		4		4, 6, 7	
Severe Weather	3, 4, 5, 8	5	4, 5	5	4, 5, 6, 7	
Volcano	3, 4, 8		4		4, 6, 7	
Wildfire	3, 4, 5, 8	5	4, 5	5	4, 5, 6, 7	

1. Prevention: Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.

2. Property Protection: Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.

3. Public Education and Awareness: Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.

4. Natural Resource Protection: Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.

5. Emergency Services: Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.

6. Structural Projects: Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.

**TABLE 5-10.  
PREVIOUS ACTION PLAN IMPLEMENTATION STATUS**

Action #	Action Status			Comments
	Completed	Carry Over to Plan Update	Removed; No Longer Feasible	
E-1		✓		Now Initiative E-1.
E-2			✓	No longer feasible due to lack of funding resources.
E-3		✓		Now Initiative E-2
E-4		✓		Now Initiative E-3
E-5		✓		Now Initiative E-4
E-6		✓		Now Initiative E-5
E-7		✓		Now Initiative E-6
E-8		✓		Now Initiative E-7

# CITY OF ENDICOTT

## CRITICAL FACILITIES

- |                 |              |
|-----------------|--------------|
| ● Bridge        | ◇ Other      |
| ▲ Communication | 🏫 School     |
| ⚠ Protective    | ● Wastewater |
| ☢ Hazmat        | ■ Water      |
| ✚ Medical       |              |









0 0.25 0.5 Miles



# TOWN OF ENDICOTT

## 100 YEAR PROBABILISTIC EARTHQUAKE PEAK GROUND ACCELERATION

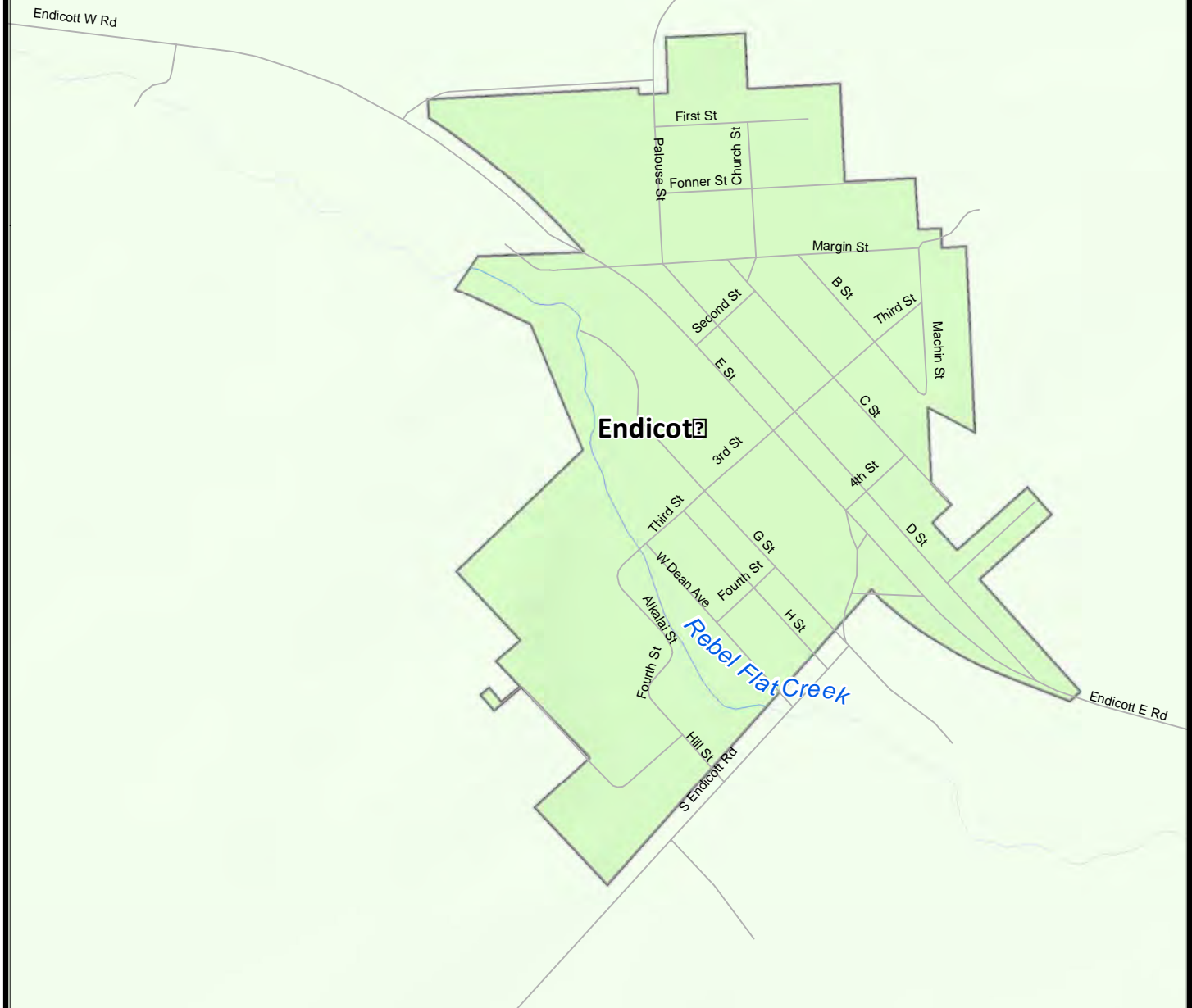
### Mercalli Scale, Potential Damage

 IV, Little to None	 VII, Moderate
 V, Very Light	 VIII, Moderate-Heavy
 VI, Light	 IX, Heavy

Data Sources  
FEMA Hazus MH Version 2.1  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)









0 0.25 0.5  
Miles



# TOWN OF ENDICOTT

## 500 YEAR PROBABILISTIC EARTHQUAKE PEAK GROUND ACCELERATION

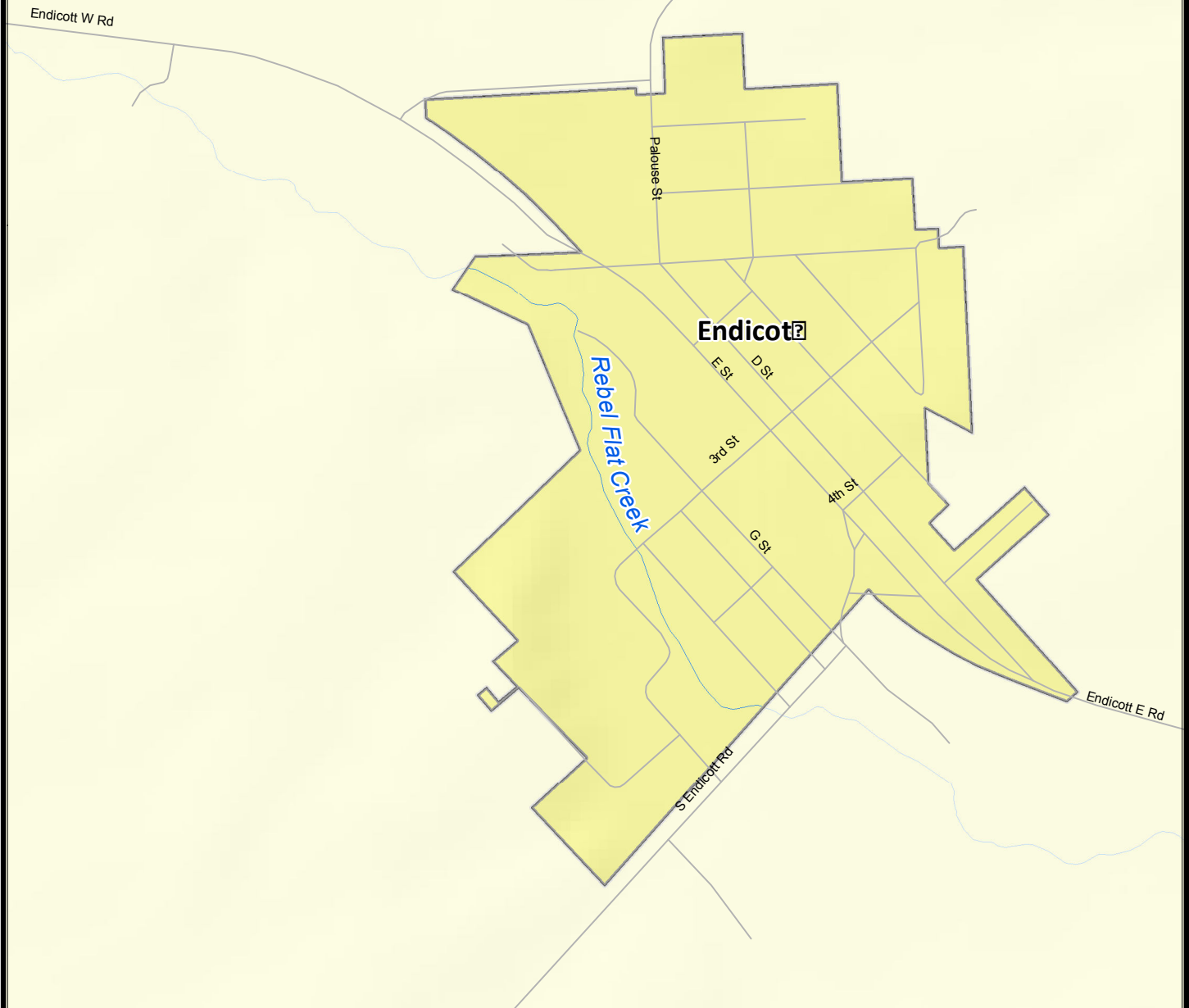
### Mercalli Scale, Potential Damage

 IV, Little to None	 VII, Moderate
 V, Very Light	 VIII, Moderate-Heavy
 VI, Light	 IX, Heavy

Data Sources  
FEMA Hazus MH Version 2.1  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)



0 0.25 0.5  
Miles





# TOWN OF ENDICOTT

## LATAH CREEK FAULT PLANNING SCENARIO PEAK GROUND ACCELERATION 6.0 MAGNITUDE

### Mercalli Scale, Potential Damage

	III, None		VII, Moderate
	IV, Little to None		VIII, Moderate-Heavy
	V, Very Light		IX, Heavy
	VI, Light		

Data Sources  
WA Department of Natural Resources  
Whitman County  
FEMA's Hazus MH 2.1

Hypothetical event located  
10 miles north of Steptoe Butte



0 0.25 0.5  
Miles

Endicott W Rd

Rebel Flat Creek

Endicott-St John Rd

Endicott

First St

Palouse St

Fonner St

Church St

Margin St

Second St

F St

B St

Third St

Machine St

3rd St

Third St

W Dean Ave

Alkali St

Fourth St

Hill St

S Endicott Rd

G St

Fourth St

H St

4th St








C St

D St

Endicott E Rd

# TOWN OF ENDICOTT

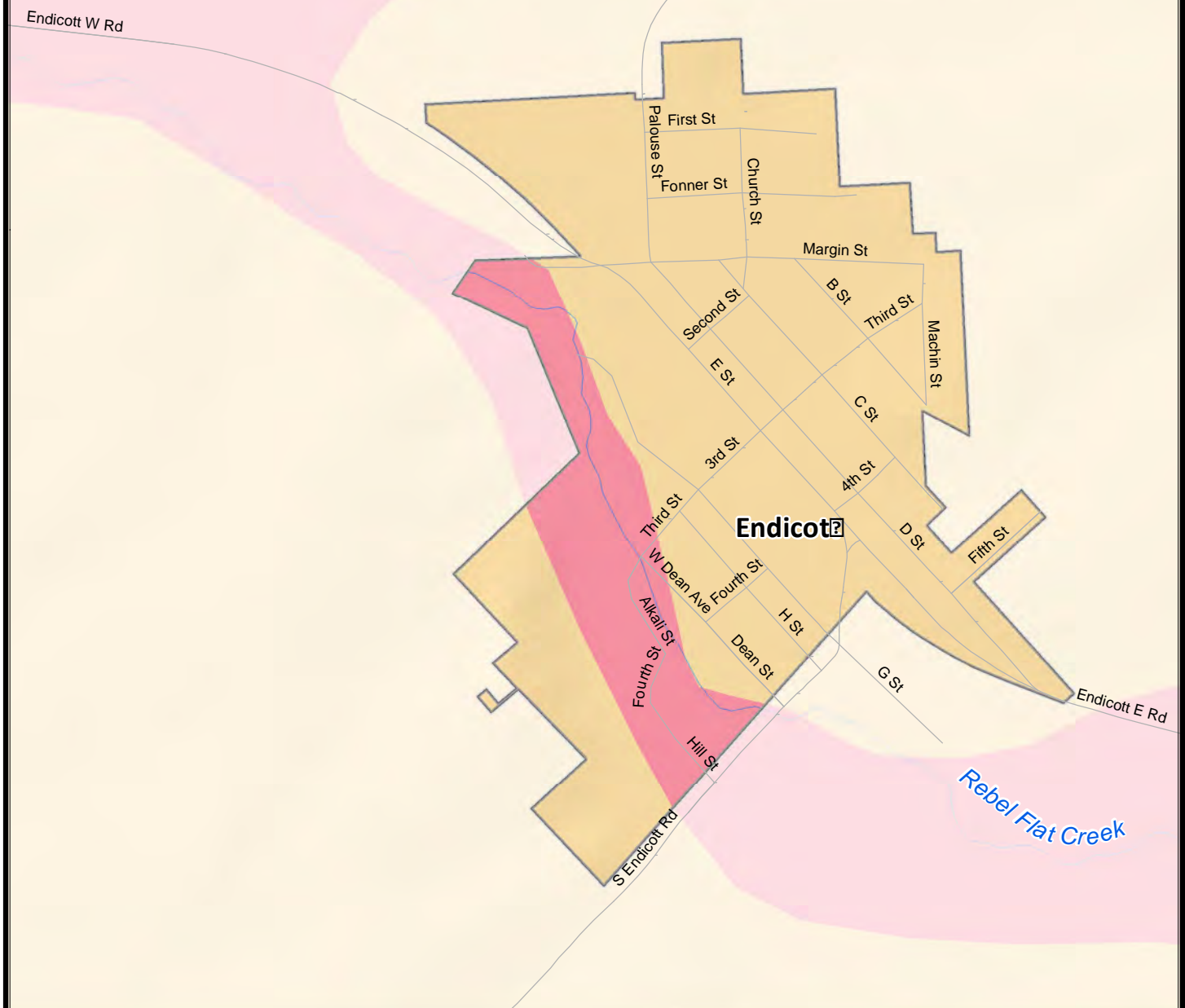
## NATIONAL EARTHQUAKE HAZARD REDUCTION PROGRAM (NEHRP) SOIL SITE CLASSES

-  Site Class E - Soft Soil
-  D-E
-  Site Class D - Stiff Soil
-  C-D
-  Site Class C - Very Dense Soil and Soft Rock
-  B-C
-  Site Class B - Rock

Data Sources  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)

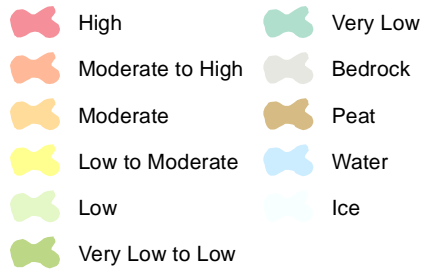


0 0.25 0.5  
Miles

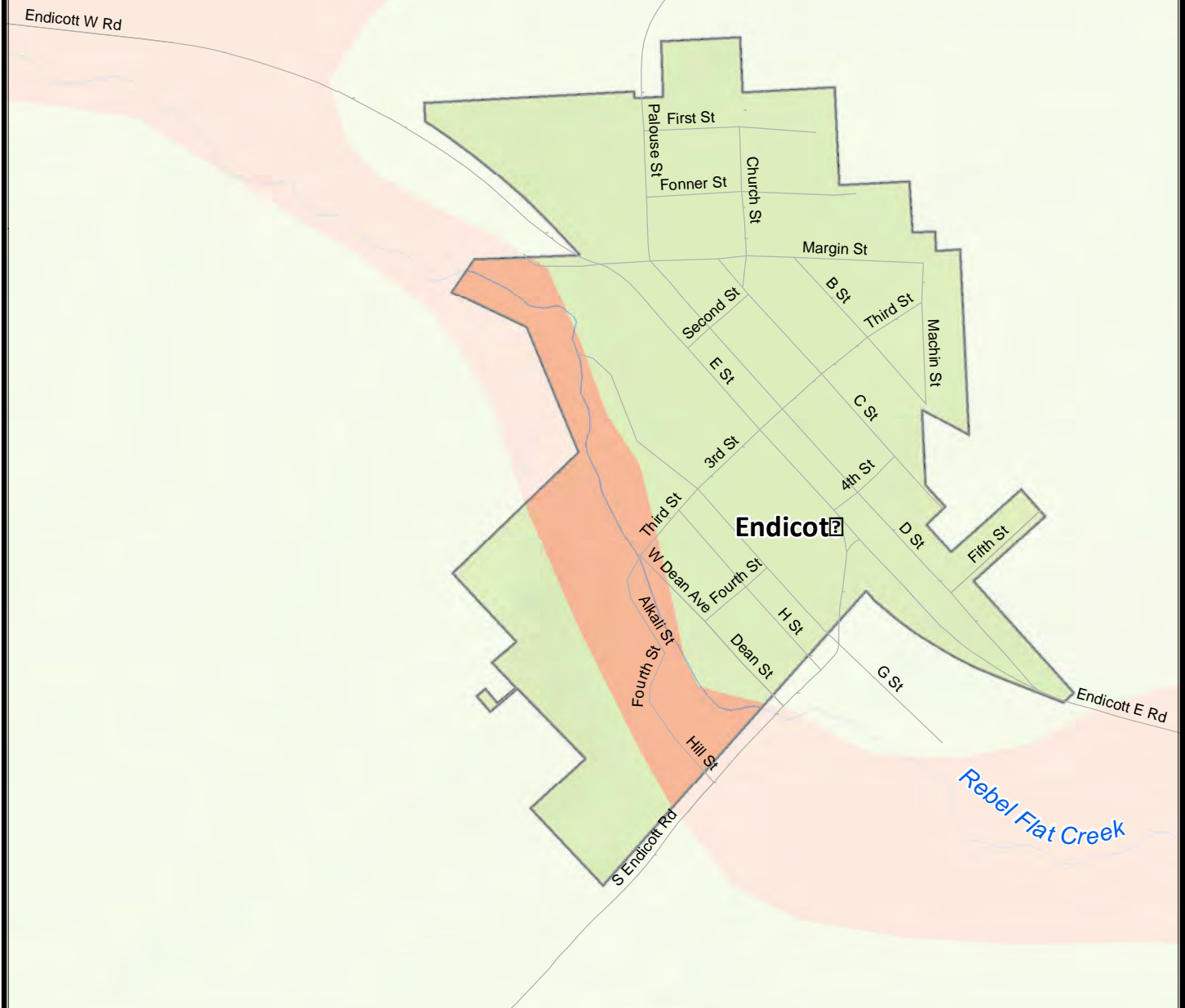
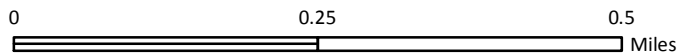


# TOWN OF ENDICOTT

## LIQUEFACTION SUSCEPTIBILITY





Data Sources  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)



# TOWN OF ENDICOTT

## FEMA FLOOD HAZARD AREAS


-  1 Percent Annual Chance Special Flood Hazard (100 Year)
-  0.2 Percent Annual Chance Special Flood Hazard (500 Year)

Data Sources  
FEMA Flood Insurance Rate Maps (Q3)

Whitman County  
WA Department of Natural Resources  
United States Geological Survey (USGS)

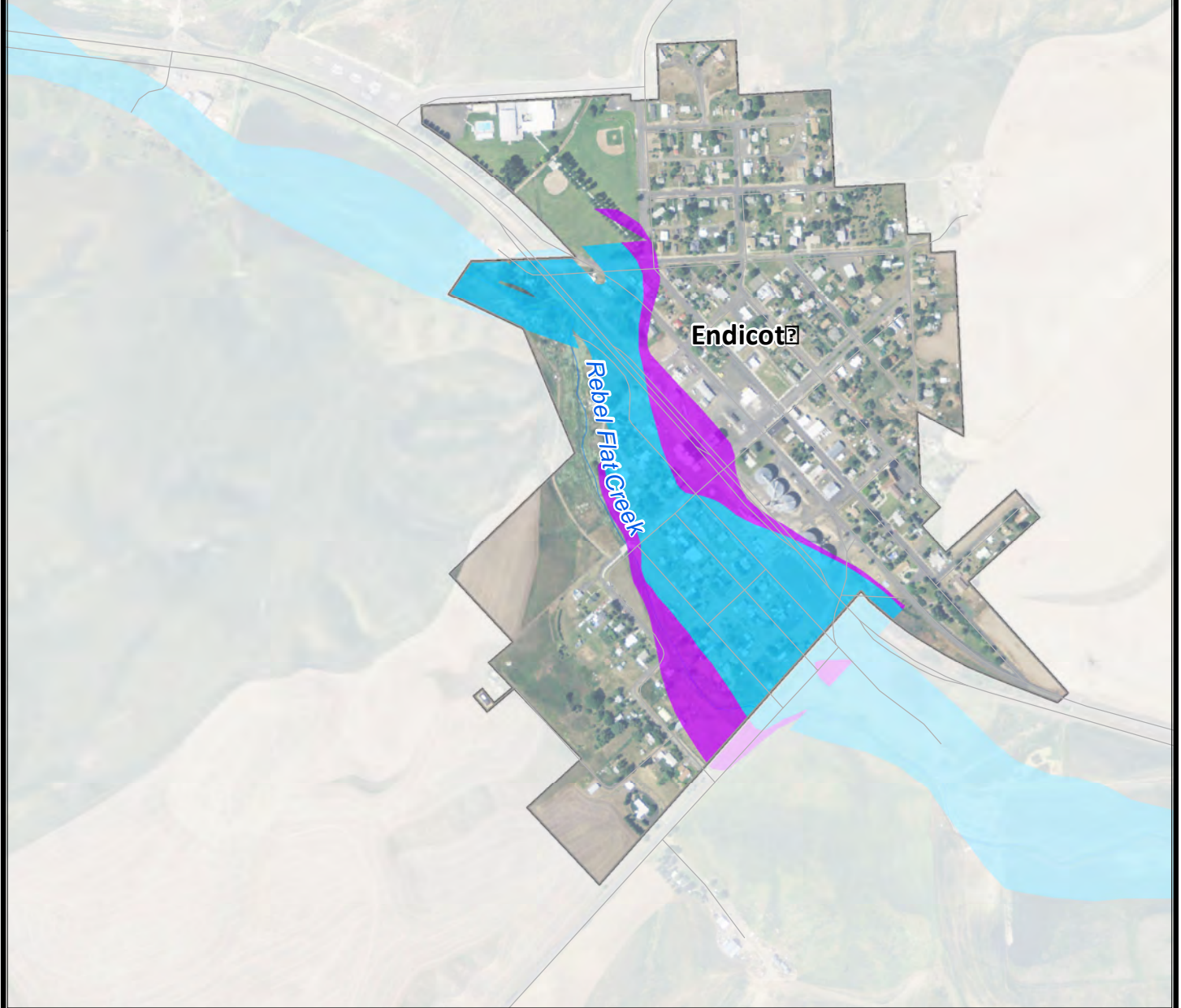


0 0.25 0.5 Miles



Endicott


Rebel Flat Creek





# TOWN OF ENDICOTT

## HAZUS GENERATED FLOOD HAZARD AREA

 Hazus 1 Percent Annual Chance  
Flood Hazard Area (100 Year)


### Data Sources

Hazus Generated Flood Area Using 10 Meter DEM

Whitman County  
WA Department of Natural Resources  
United States Geological Survey (USGS)  
2009 NAIP Imagery

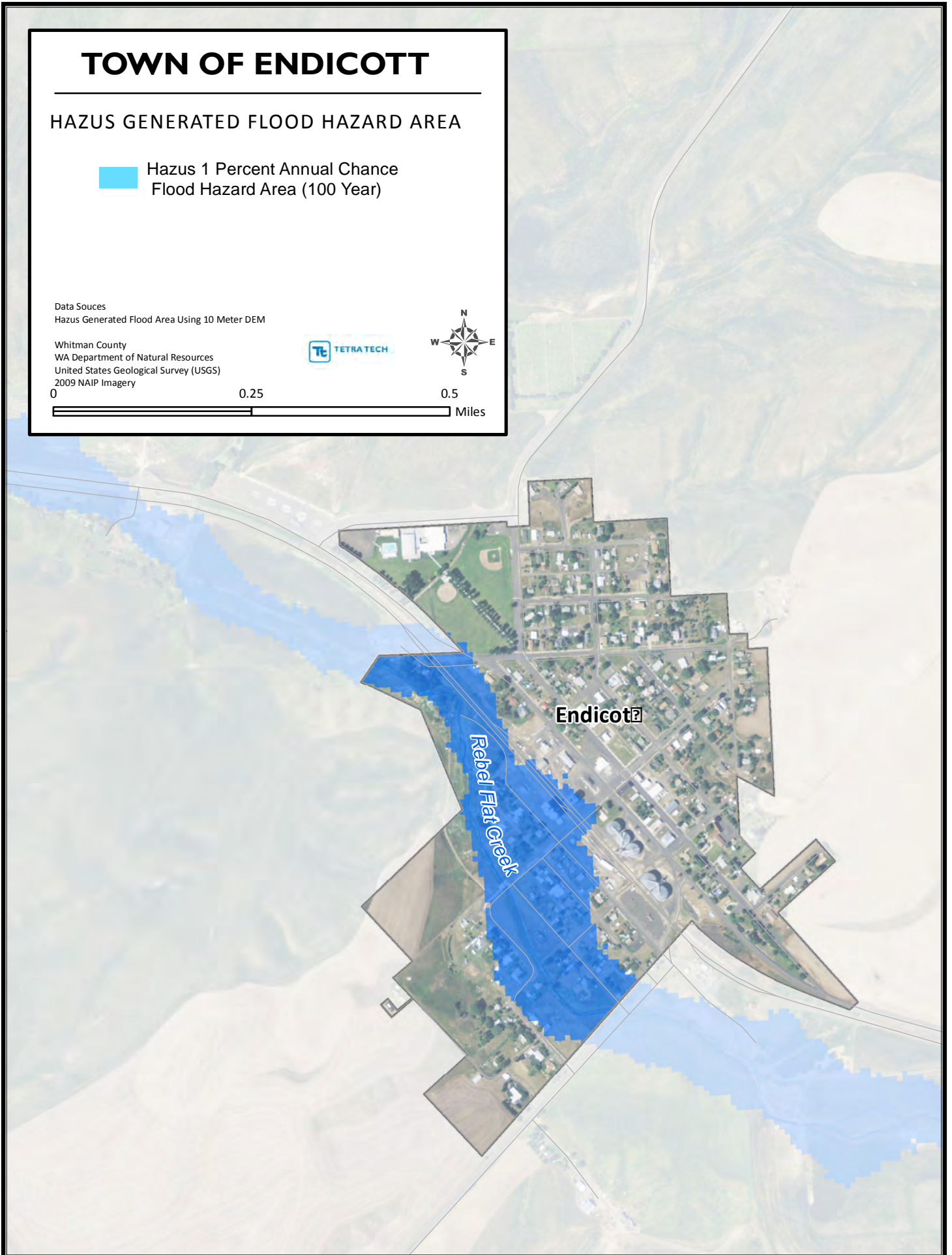


0 0.25 0.5 Miles





Endicott

Rebel Flat Creek



# TOWN OF ENDICOTT

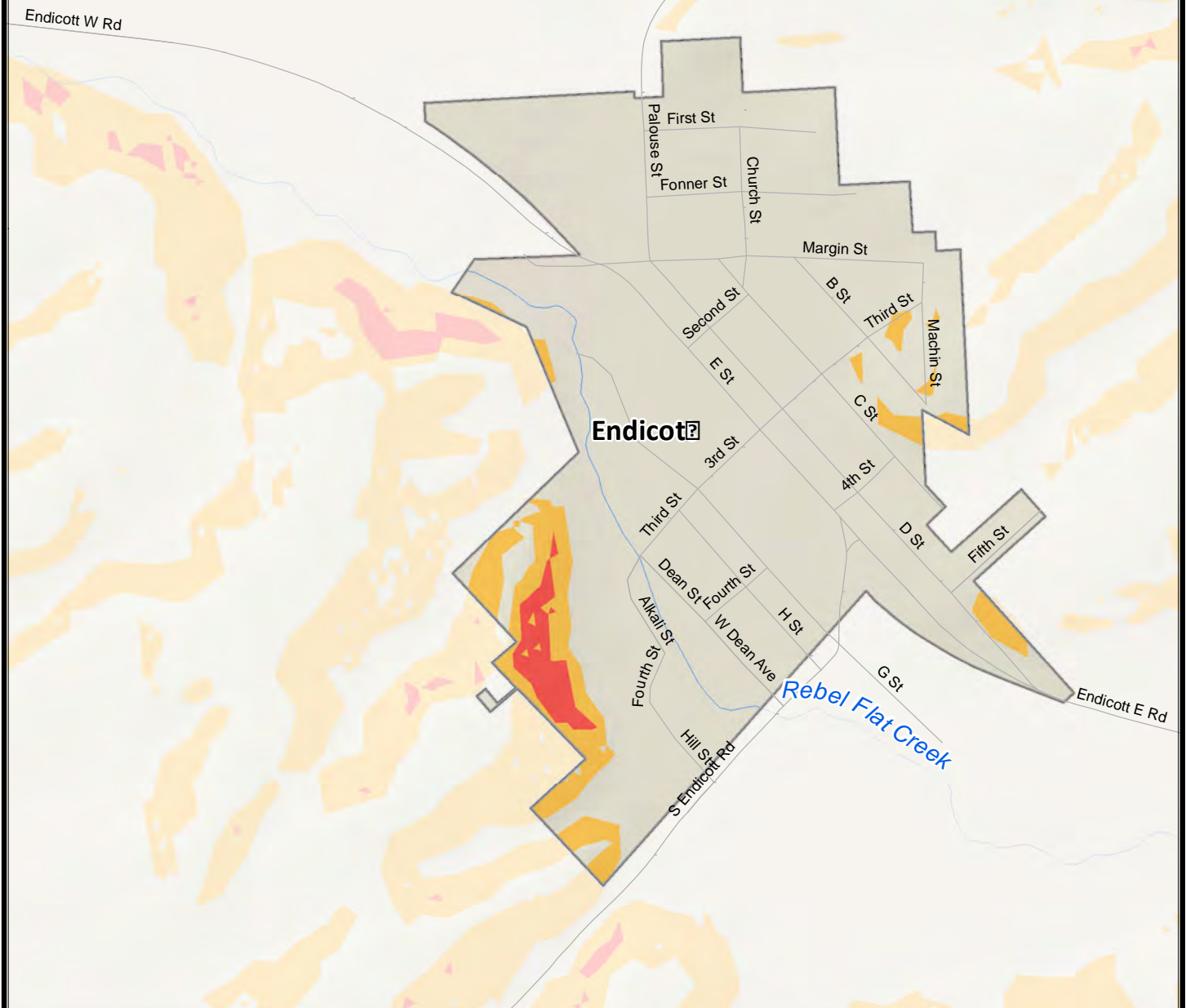
## LANDSLIDE HAZARD AREAS STEEP SLOPES, NEHRP SOFT SOILS

-  15-30 percent slope, NEHRP D and E Soils
-  Greater than 30 percent slope, NEHRP D and E Soils

Data Sources  
Slope based on 10 Meter DEM  
WA Department of Natural Resources  
Earthquake Soils  
Whitman County  
United States Geological Survey (USGS)



0 0.25 0.5  
Miles



## CHAPTER 6. TOWN OF FARMINGTON ANNEX

### 6.1 HAZARD MITIGATION PLAN POINT OF CONTACT

#### Primary Point of Contact

Barbara Dial-Flomer: Clerk-Treasurer  
PO Box 65  
Farmington, WA 99128]  
Telephone: 509-287-2500  
e-mail: townoffarmington.wa@gmail.com

#### Alternate Point of Contact

Todd Lobdell: Mayor Pro-Tem  
405 E Main Street  
Farmington, WA 99128  
Telephone: 509-287-2950  
e-mail Address: lobdell@live.com

### 6.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—May 12, 1890
- **Current Population**—145 as of April 1, 2012
- **Population Growth**—Based on data from the Washington State Office of Financial Management, the Town of Farmington has experienced a negative rate of growth. The overall population decreased by 5 percent between 2000 and 2010, an average annual decrease of 0.54 percent for this time frame.
- **Location and Description**—As Whitman County's 2nd smallest Town, Farmington is nestled at the base of Skyline Drive and among patchwork fields of grains and legumes in northeastern Whitman County. Skyline Drive offers spectacular views of the Palouse Empire landscape, which reflects the ever-changing agricultural patchwork of the valleys, bordered by surrounding forested foothills. Located at the confluence of the north and south forks of Pine creek, the town encompasses approximately 0.91 square kilometers at an elevation of 1949 feet above sea level.
- **Brief History**—Farmington was first settled in 1871, and was founded and named by G.W. Truax in 1878. Farmington was officially incorporated in 1888. At Farmington's peak (1900–1930) the town had a population of just under 500. As demand for farm labor decreased, the population and business of the town decreased.
- **Climate**—Farmington enjoys a temperate four-season climate with an average low temperature of 33.08 (F) and an average high temperature of 57.83 (F). The average annual rainfall for Farmington is 26.61 inches.
- **Governing Body Format**—The Town was incorporated in 1888 and operates under the laws of the state of Washington applicable to a mayor/council form of government, with five council members and an elected Mayor. The City Council will assume the responsibility for the adoption and implementation of this plan. The Town of Farmington is a general purpose government and provides water services and solid waste services via contract. The only businesses in the town are: the Farmington State Bank, the Seventh Day Adventist School, Seventh Day Adventist Church, Audiophile Distributors, Medical Equipment Repair, Mountain View Cemetery, and Farmington Branch of the Whitman County Library There are no other businesses coming to town.

- **Development Trends**—Based on its projected growth, the anticipated development trends for the Town of Farmington are considered to be relatively neutral. While growth and development would be welcome by the town, none is anticipated during the next performance period for this plan. Whitman County is not mandated under the State Growth Management Act to fully plan according to requirements of the law. The County and its cities have adopted critical areas and resources lands regulations pursuant to the Growth Management Act. Endicott does have mechanisms available to managed future development via regulations identified in a zoning ordinance and policies identified in a comprehensive plan should a growth spurt occur within the Town.

### **6.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY**

Table 6-1 lists all past occurrences of natural hazards in the county. Repetitive loss records are as follows:

- Number of FEMA Identified Repetitive Flood Loss Properties: None
- Number of Repetitive Flood Loss Properties that have been mitigated: None

### **6.4 HAZARD RISK RANKING**

Table 6-2 presents the ranking of the hazards of concern.

### **6.5 CAPABILITY ASSESSMENT**

The assessment of the jurisdiction's legal and regulatory capabilities is presented in Table 6-3. The assessment of the jurisdiction's administrative and technical capabilities is presented in Table 6-4. The assessment of the jurisdiction's fiscal capabilities is presented in Table 6-5. Classifications under various community mitigation programs are presented in Table 6-6.

### **6.6 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED INITIATIVES**

Table 6-7 lists the initiatives that make up the jurisdiction's hazard mitigation plan. Table 6-8 identifies the priority for each initiative. Table 6-9 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

### **6.7 STATUS OF PREVIOUS PLAN INITIATIVES**

Table 6-10 summarizes the current status of initiatives that were adopted by the County for the previous hazard plan. Those that are directly carried over as actions in this hazard plan are also indicated as such in Table 6-7.

### **6.8 HAZARD AREA EXTENT AND LOCATION**

Hazard area extent and location maps for the Town of Farmington are included at the end of this chapter. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes.



**TABLE 6-1.  
NATURAL HAZARD EVENTS**

Type of Event	Date	Preliminary Damage Assessment
Flash Flooding	Periodic	
Wildland Fire	2003	Mostly smoke damage to some structures
Severe Weather	2000	Roof off bank, tree damage, grain elevator
Flood (FEMA Disaster #1100)	01/26/1996	1.6 Million for entire County
Volcanic Ash (FEMA Disaster #623)	05/21/1980	Information not available

**TABLE 6-2.  
HAZARD RISK RANKING**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Dam Failure	6
2	Drought	54
3	Earthquake	6
4	Flood	54
5	Landslide	6
6	Severe Weather	54
7	Volcano	6
8	Wildfire	24

**TABLE 6-3.  
LEGAL AND REGULATORY CAPABILITY**

	Local Authority	State or Federal Prohibitions	Other Jurisdictional Authority	State Mandated	Comments
<b>Codes, Ordinances &amp; Requirements</b>					
Building Code	Y	N	N	Y	International Building Code (IBC) Ordinance #182-04A 06/14/2004
Zonings	Y	N	N	N	Ordinance #91 01/01/1981
Subdivisions	N	N	N	N	
Stormwater Management	Y	N	N	N	Flood Drainage Prevention Ordinance #180-3 11/10/2003
Post Disaster Recovery	N	N	N	N	
Real Estate Disclosure	Y	N	N	Y	Revised Code of Washington 64.06
Growth Management	N	N	N	N	Critical areas and resource lands only.
Site Plan Review	Y	N	N	N	IBC
Special Purpose (flood management, critical areas)	Y	N	N	N	Flood Drainage Prevention Ordinance #180-3 11/10/2003
<b>Planning Documents</b>					
General or Comprehensive Plan	Y	N	N	Y	
Floodplain or Basin Plan	N	N	N	N	
Stormwater Plan	N	N	N	N	
Capital Improvement Plan	Y	N	N	N	6 year CIP updated annually for Roads, Water, & Sewer Water/Sewer 2012
Habitat Conservation Plan	N	N	N	N	
Economic Development Plan	N	N	N	N	
Emergency Response Plan	Y	N	N	N	Collaborative with Whitman County OEM
Shoreline Management Plan	N	N	N	N	
Post Disaster Recovery Plan	N	N	N	N	

**TABLE 6-4.  
ADMINISTRATIVE AND TECHNICAL CAPABILITY**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Y	J.U.B. Engineering
Engineers or professionals trained in building or infrastructure construction practices	Y	J.U.B. Engineering Bob Hill- Building Inspector
Planners or engineers with an understanding of natural hazards	N	Will contract as necessary.
Staff with training in benefit/cost analysis	Y	Public Works, Town of Farmington, Manager
Floodplain manager	Y	Mayor, City Council
Surveyors	Y	Whitman County Surveyor on contract if needed.
Personnel skilled or trained in GIS applications	N	
Scientist familiar with natural hazards in local area	N	
Emergency manager	Y	Mayor, Mayor Pro-Tem
Grant writers	Y	Mayor

**TABLE 6-5.  
FISCAL CAPABILITY**

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes, if needed and approved.
Incur Debt through Special Tax Bonds	Yes, if needed and approved.
Incur Debt through Private Activity Bonds	N
Withhold Public Expenditures in Hazard-Prone Areas	No hazard prone areas.
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes, Utility connection fee'

**TABLE 6-6.  
COMMUNITY CLASSIFICATIONS**

	Participating?	Classification	Date Classified
Community Rating System	No	—	—
Building Code Effectiveness Grading Schedule	Yes	3/3	1998
Public Protection	Yes	9	11/1/2005
Storm Ready	No	—	—
Firewise	No	—	—

**TABLE 6-7.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>F-1</b> Water Conservation- Install Irrigation system for all town properties							
New & existing	Drought, Wild Fire	3, 5	Farmington	\$10,000	General fund, Grant funding	Long- term, depends on funding	Y
<b>F-2</b> Meter for town used water (Public system is not metered; Private water system is metered)							
New & Existing	Drought, Wildfire	3, 5	Farmington	\$3,000	General Fund	2012- 2017	Y
<b>F-3</b> Modify source well electrical system to connect existing 20-KW generator for Emergency water supply and fire flow							
New & Existing	Earthquake Severe Weather Wildfire	3, 4, 5	Farmington	\$5,000	General fund, Grant funding	2012- 2017	Y
<b>F-4</b> Seismic retrofit/upgrade of that portion of the Town's domestic water supply that is vulnerable to severe ground shaking due to age and it's construction							
New & Existing	Earthquake	3, 4, 5	Farmington	\$1,000,000	General fund, Grant funding	2012- 2025	Y
<b>F-5</b> Coordinate with Whitman county to update the Flood Insurance Study for Farmington							
New & Existing	Flood Landslide	1, 2, 6, 7	Farmington	High	General fund, Grant funding	2012- 2017	Y
<b>F-6</b> Support Countywide initiatives that promote the education of the public on the impacts of natural hazards within Whitman County, and preparedness for and the mitigation of those impacts.							
New & Existing	All Hazards	2, 6, 7	Whitman County	Low	General Fund	2012- 2017	Y

**TABLE 6-7.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>F-7</b> Consider Voluntary participation in programs such as the Community Rating System, Firewise, and Storm Ready programs that will provide benefits/incentives to citizens for Hazard Mitigation.							
New & Existing	Flood	2, 6, 7, 8	Farmington, Whitman County, State	Low	General Fund	Long- term	Y
<b>F-8</b> Utilize information provided in the Whitman County Hazard Identification and Vulnerability Assessment to consider regulatory provisions that will reduce the vulnerability, and promote wise land use with regards to Hazards that impact the Town of Farmington							
New & Existing	All Hazards	1, 2, 6, 7	Farmington Council	Low	General fund	2012- 2017	Y
<b>F-9</b> Continue to coordinate and work with the Whitman County Office of Emergency Management in disaster response and preparedness. The level of coordination should include: updates to the Emergency Response Plan, development of a Post Disaster Action Plan, training and support.							
New & Existing	All Hazards	3, 4, 6	Farmington Council, Whitman County Office of Emergency Management	Low	General Fund	2012- 2017	N

**TABLE 6-8.  
MITIGATION STRATEGY PRIORITY SCHEDULE**

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant- Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority <sup>a</sup>
F-1	0	Low	Low	No	No	Possibly	Low
F-2	0	Low	Low	No	No	Possibly	Low
F-3	3	High	Low	Yes	No	Possibly	Low
F-4	1	High	High	No	Yes	No	Medium
F-5	2	Low	Low	Yes	?	Yes	Medium
F-6	6	Low	Low	Yes	Yes	Yes	Medium
F-7	6	Low	Low	Yes	No	Yes	Low
F-8	5	Low	Low	Yes	No	Yes	Low
F-9	7	Low	Low	Yes	No	Yes	Low

a. See Section 1.3 for definitions of high, medium and low priorities.

**TABLE 6-9.**  
**ANALYSIS OF MITIGATION INITIATIVES**

Hazard Type	Initiative Addressing Hazard, by Mitigation Type					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	F-3	F-3	F-3		F-3	
Drought	F-7	F-7	F-7	F-7	F-7	
Earthquake	F-3, F-4	F-3, F-4	F-3, F-4, F-6, F-7, F-9	F-4, F-5,	F-3, F-4, F-6, F-7	F-3, F-4
Flood	F-2, F-3, F-4, F-5, F-6	F-3, F-4	F-6, F-7, F-8, F-9	F-5, F-6, F-7, F-8, F-9	F-6, F-7, F-9	
Landslide	F-4	F-4	F-6, F-7, F-8	F-6	F-6, F-7, F-8	
Severe Weather	F-5, F-6, F-7, F-8	F-6, F-7, F-8	F-6, F-7, F-8	F-6, F-7, F-8	F-6, F-7, F-8	
Wildfire	F-6, F-7, F-8	F-6, F-7, F-8	F-6, F-7, F-8	F-6, F-7, F-8	F-6, F-7, F-8	
<p>1. Prevention: Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.</p> <p>2. Property Protection: Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.</p> <p>3. Public Education and Awareness: Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.</p> <p>4. Natural Resource Protection: Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.</p> <p>5. Emergency Services: Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.</p> <p>6. Structural Projects: Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.</p>						



**TABLE 6-10.  
PREVIOUS ACTION PLAN IMPLEMENTATION STATUS**

Action #	Action Status			Comments
	Completed	Carry Over to Plan Update	Removed; No Longer Feasible	
F-1		✓	✓	No longer a priority, not a hazard mitigation factor.
F-2		✓	✓	Required update by Washington Department of Health, Jurisdictional funding.
F-3		✓		In process of completion with Grant already obtained.
F-4		✓		Will require revenue stream from outside sources.
F-5		✓		Will require action from current council with Flood Insurance Program.
F-6		✓		Requires Council action to adopt and implement.
F-7		✓		Requires Council action to adopt and implement.
F-8		✓		Requires Council action to adopt and implement.
F-9		✓		Requires Council action to adopt and implement.

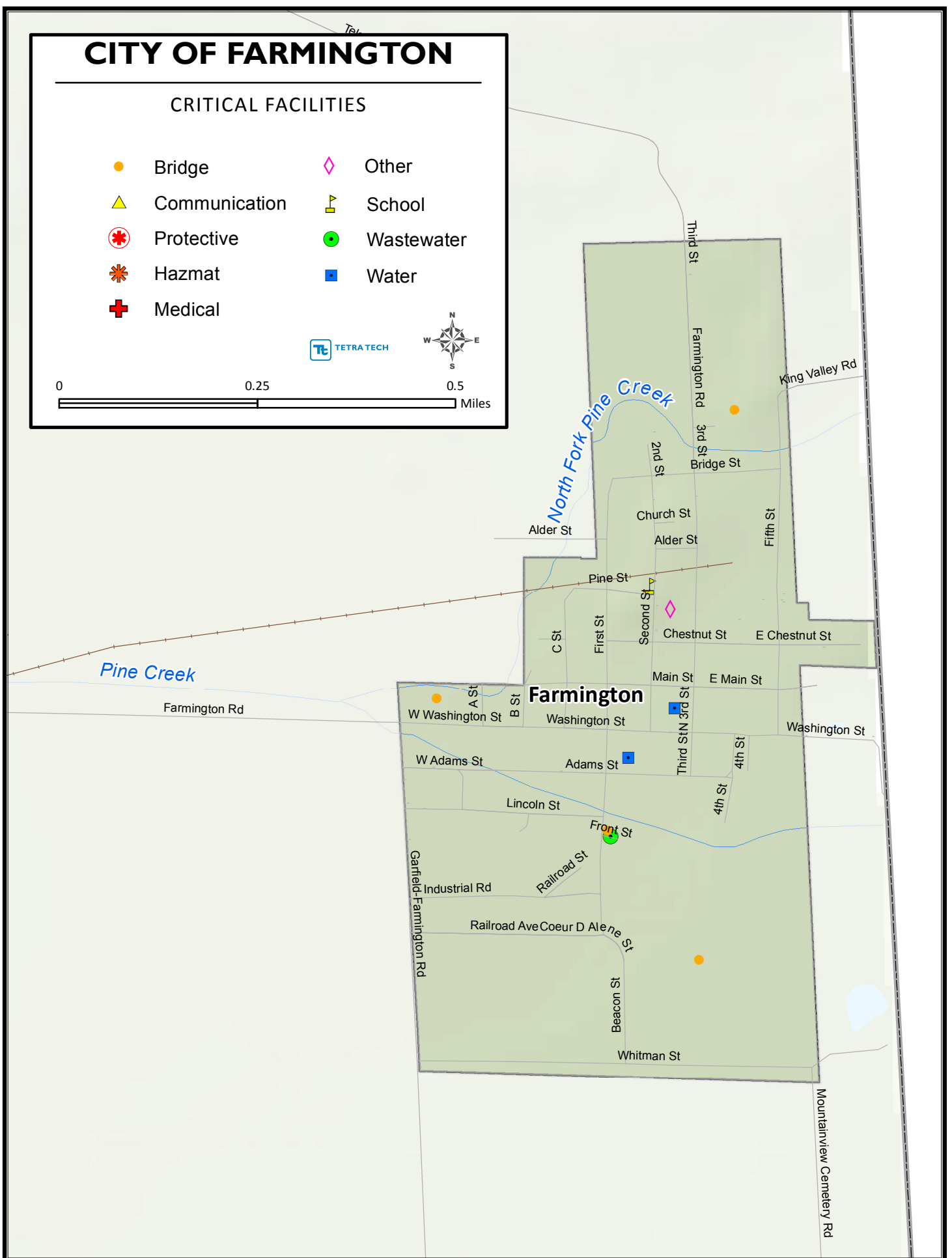
# CITY OF FARMINGTON

## CRITICAL FACILITIES

- |                 |              |
|-----------------|--------------|
| ● Bridge        | ◇ Other      |
| ▲ Communication | 🏫 School     |
| ⛔ Protective    | ● Wastewater |
| ⚡ Hazmat        | ■ Water      |
| ✚ Medical       |              |









0 0.25 0.5 Miles



# TOWN OF FARMINGTON

## 100 YEAR PROBABILISTIC EARTHQUAKE PEAK GROUND ACCELERATION

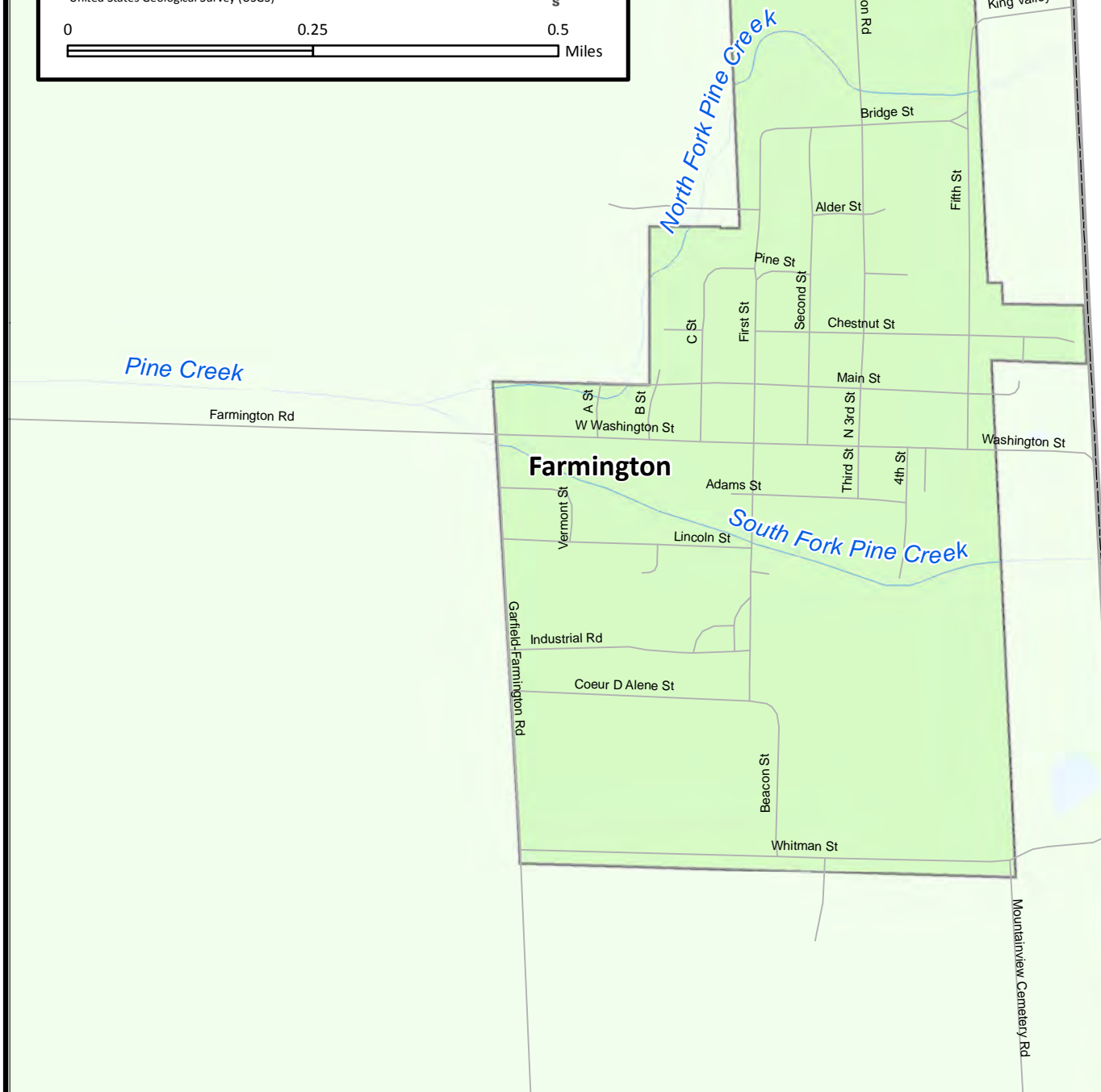
### Mercalli Scale, Potential Damage

 IV, Little to None	 VII, Moderate
 V, Very Light	 VIII, Moderate-Heavy
 VI, Light	 IX, Heavy

Data Sources  
FEMA Hazus MH Version 2.1  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)








0 0.25 0.5  
Miles



# TOWN OF FARMINGTON

## 500 YEAR PROBABILISTIC EARTHQUAKE PEAK GROUND ACCELERATION

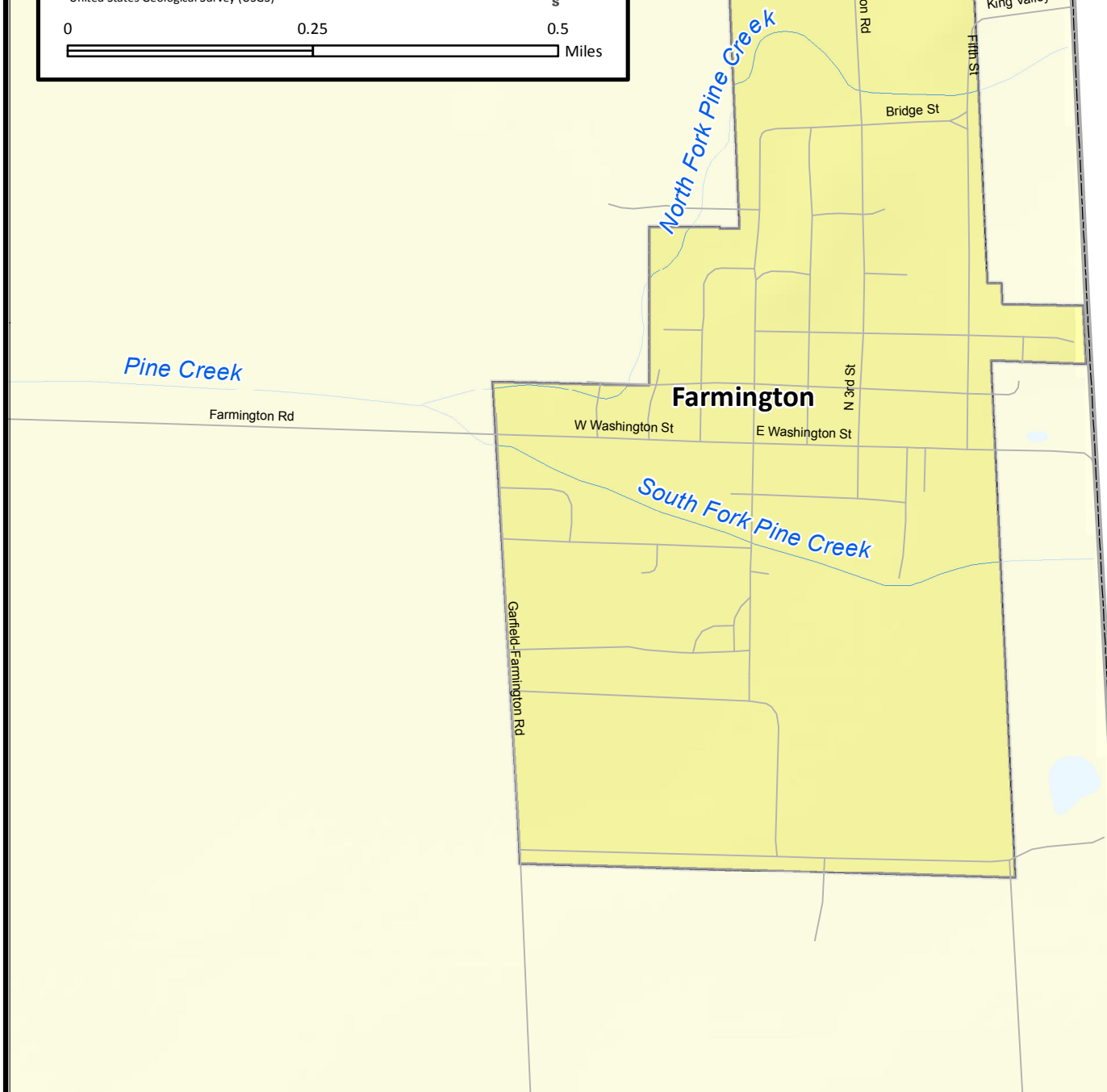
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Data Sources  
FEMA Hazus MH Version 2.1  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)



0 0.25 0.5  
Miles



# TOWN OF FARMINGTON

## LATAH CREEK FAULT PLANNING SCENARIO PEAK GROUND ACCELERATION 6.0 MAGNITUDE

### Mercalli Scale, Potential Damage

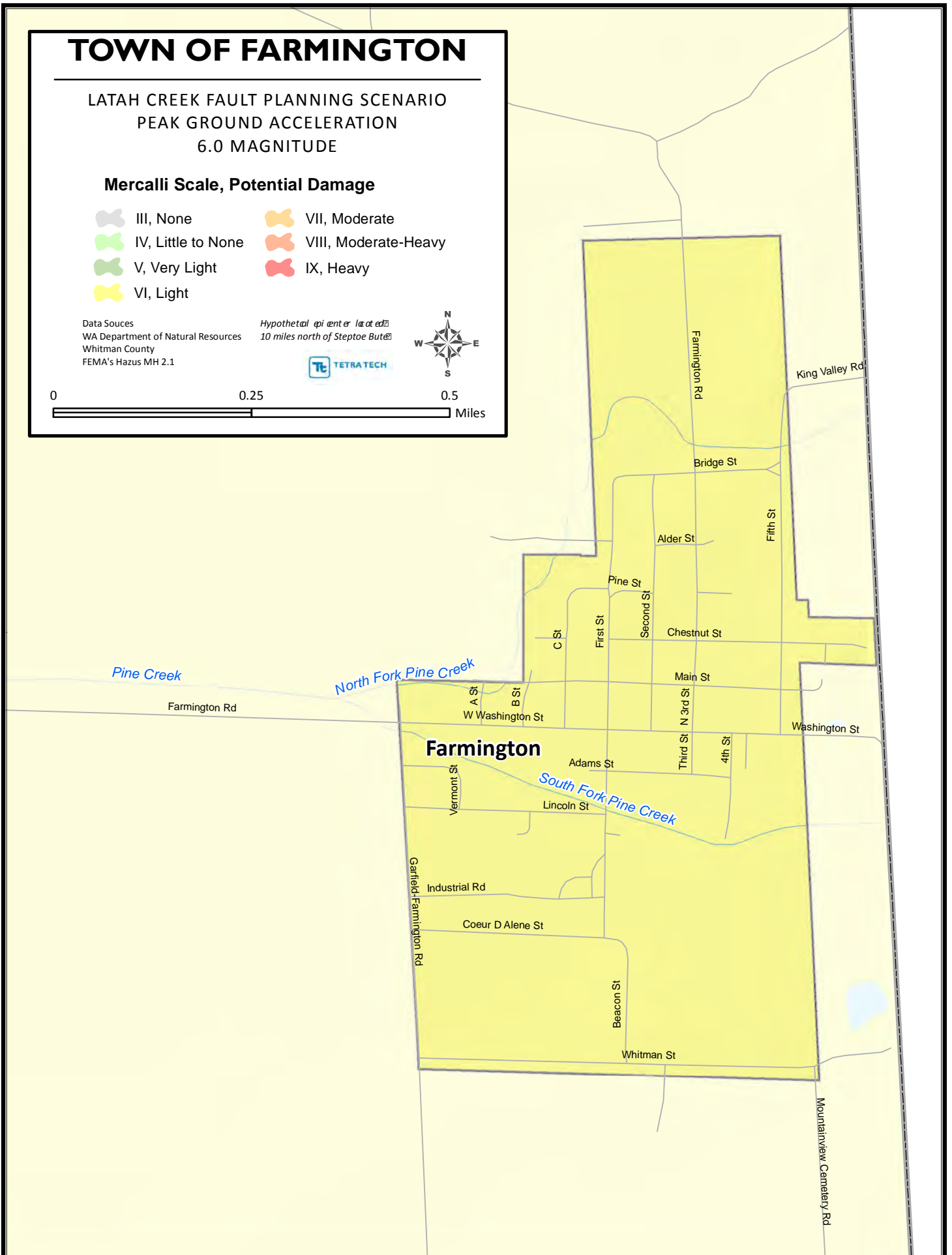
- |  |  |
|--|--|
|  III, None          |  VII, Moderate        |
|  IV, Little to None |  VIII, Moderate-Heavy |
|  V, Very Light      |  IX, Heavy            |
|  VI, Light          |  |

Data Sources  
WA Department of Natural Resources  
Whitman County  
FEMA's Hazus MH 2.1

Hypothetical event located  
10 miles north of Steptoe Butte










0 0.25 0.5 Miles



# TOWN OF FARMINGTON

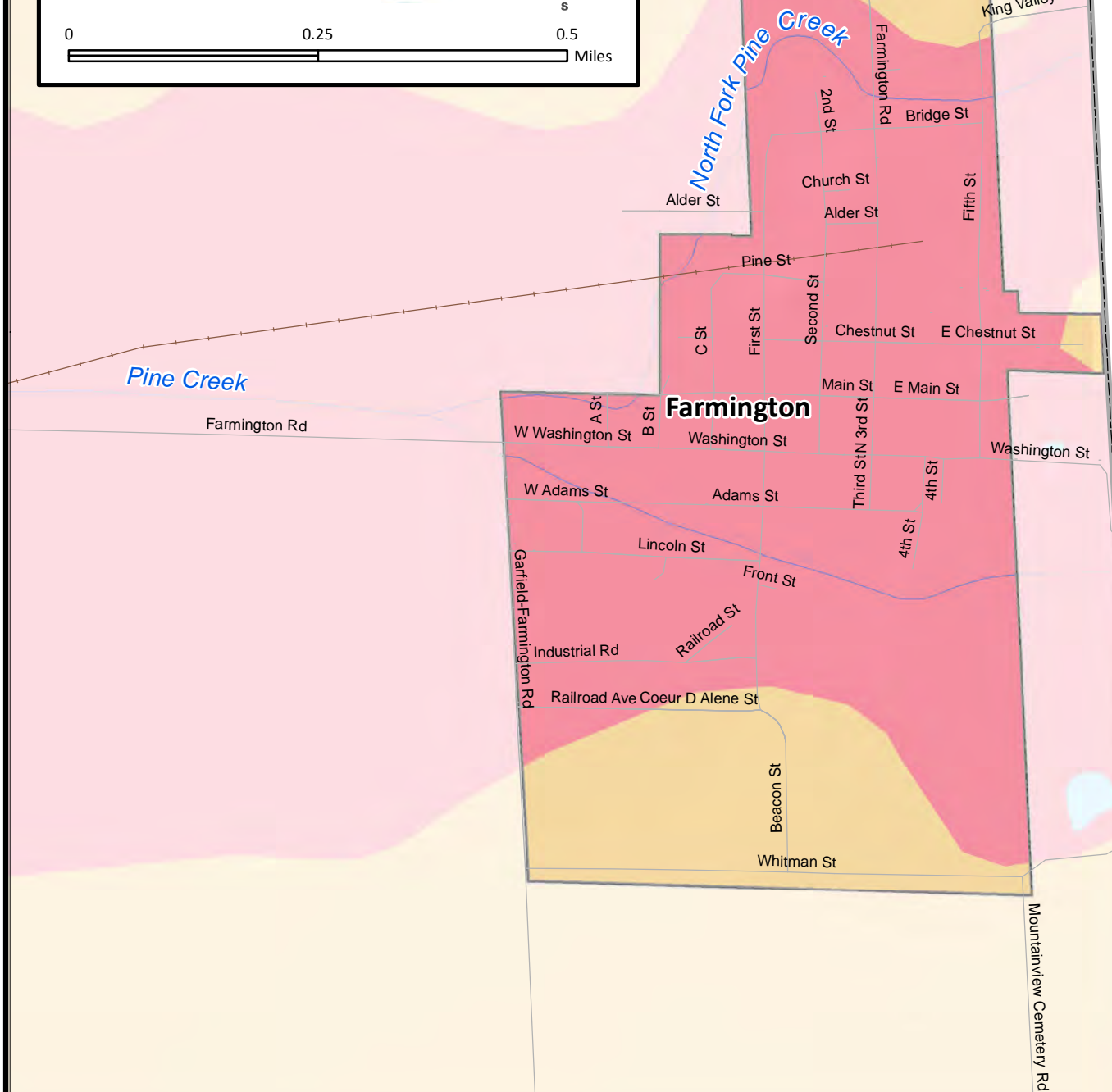
## NATIONAL EARTHQUAKE HAZARD REDUCTION PROGRAM (NEHRP) SOIL SITE CLASSES

-  Site Class E - Soft Soil
-  D-E
-  Site Class D - Stiff Soil
-  C-D
-  Site Class C - Very Dense Soil and Soft Rock
-  B-C
-  Site Class B - Rock

Data Sources  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)



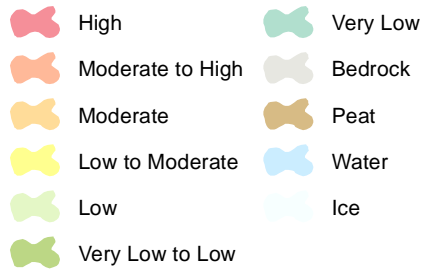
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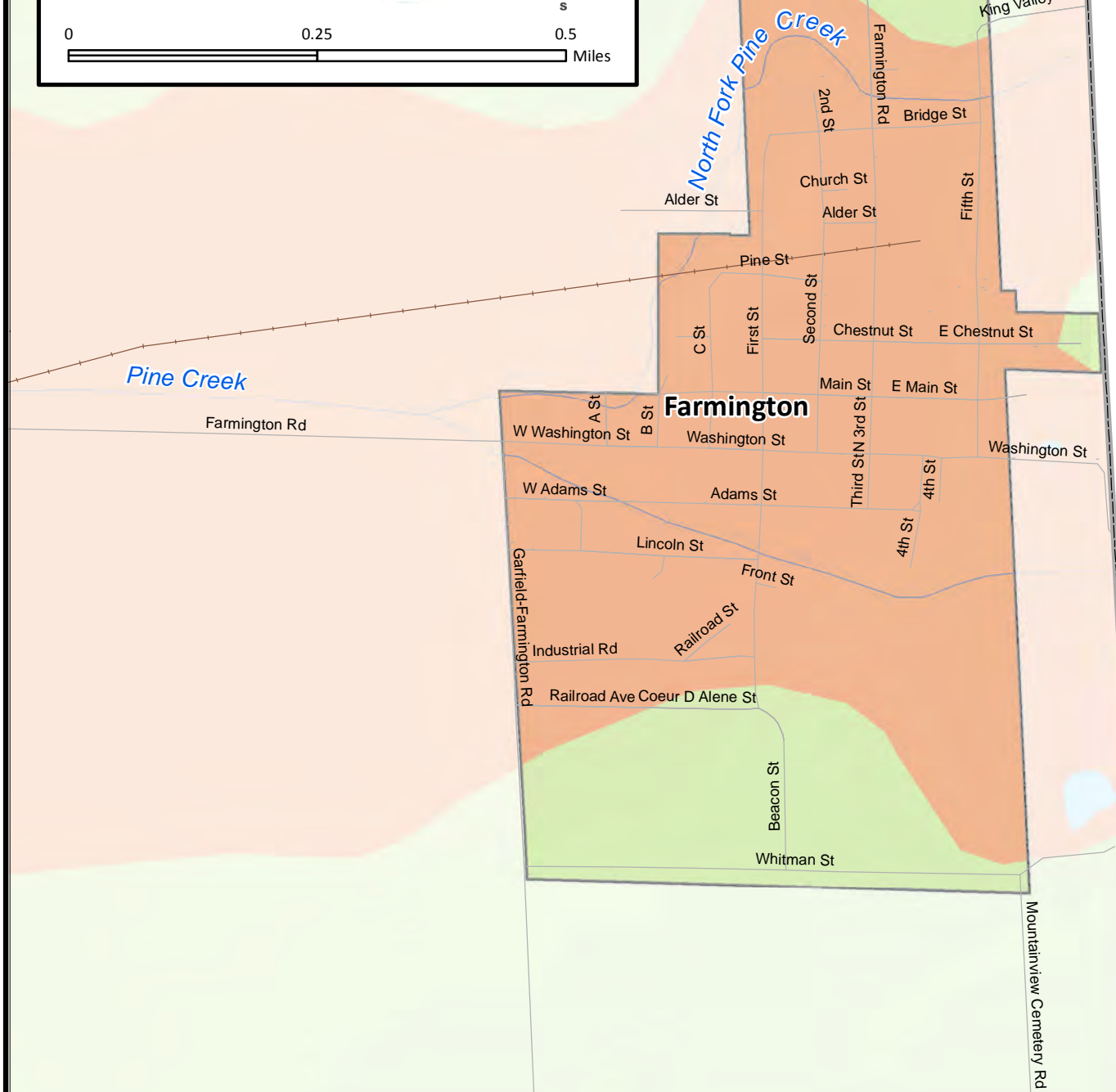
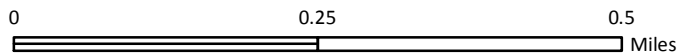


# TOWN OF FARMINGTON

## LIQUEFACTION SUSCEPTIBILITY





Data Sources  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)



# TOWN OF FARMINGTON

## FEMA FLOOD HAZARD AREAS

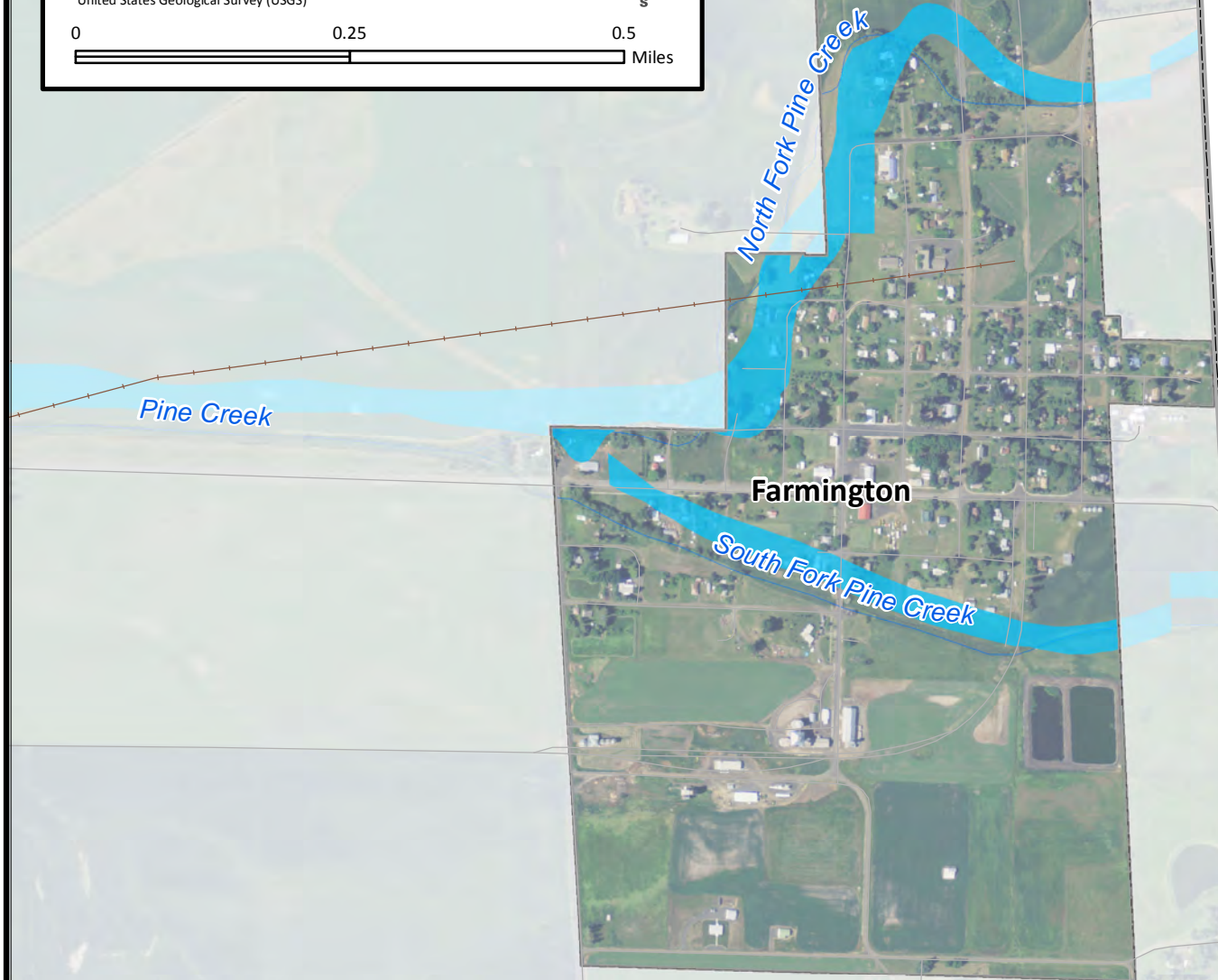

-  1 Percent Annual Chance Special Flood Hazard (100 Year)
-  0.2 Percent Annual Chance Special Flood Hazard (500 Year)

Data Sources  
FEMA Flood Insurance Rate Maps (Q3)

Whitman County  
WA Department of Natural Resources  
United States Geological Survey (USGS)




0 0.25 0.5 Miles



# TOWN OF FARMINGTON

## HAZUS GENERATED FLOOD HAZARD AREA

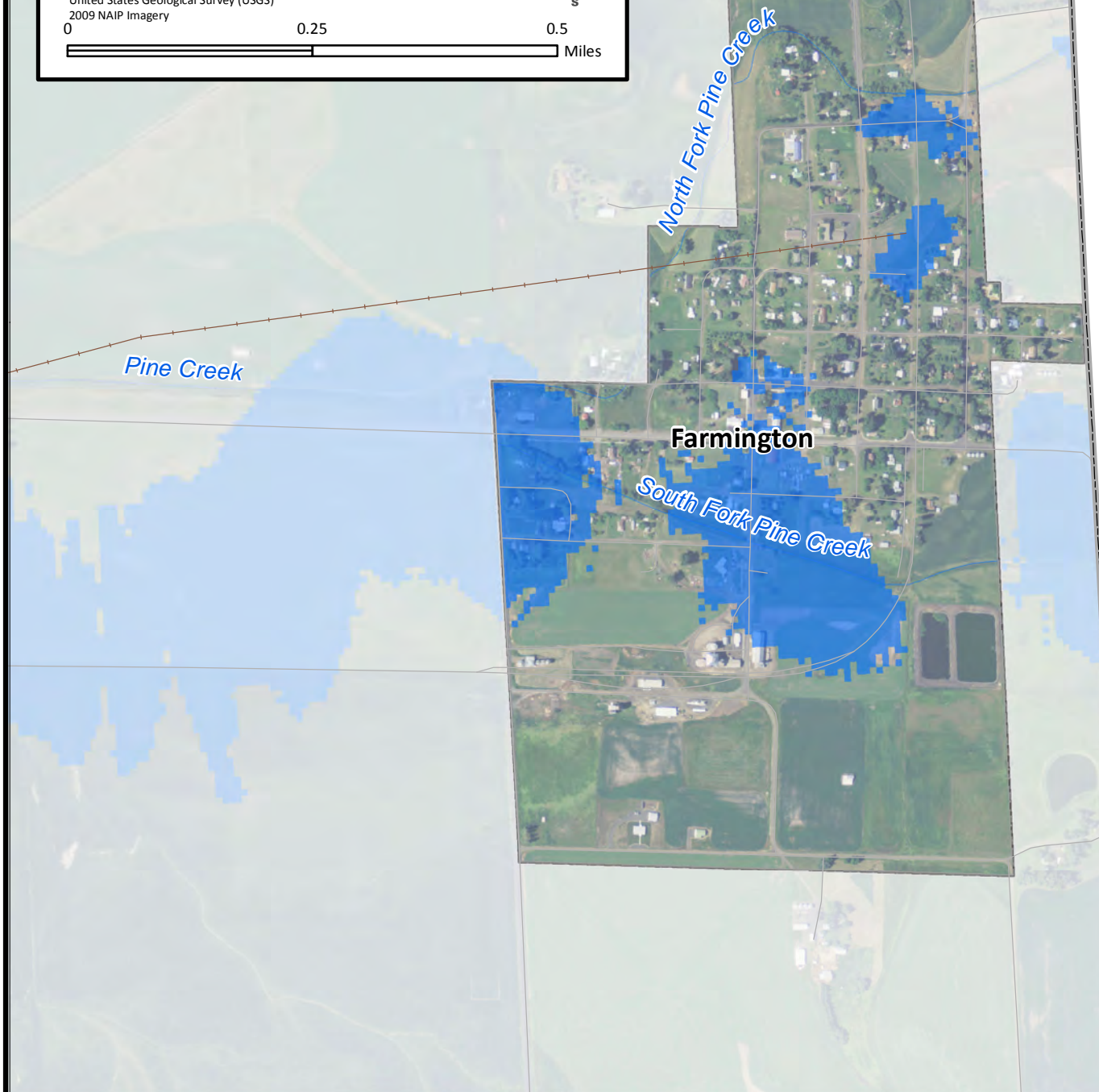

 Hazus 1 Percent Annual Chance  
Flood Hazard Area (100 Year)

Data Sources  
Hazus Generated Flood Area Using 10 Meter DEM

Whitman County  
WA Department of Natural Resources  
United States Geological Survey (USGS)  
2009 NAIP Imagery



0 0.25 0.5 Miles





# TOWN OF FARMINGTON

## LANDSLIDE HAZARD AREAS

STEEP SLOPES, NEHRP SOFT SOILS



15-30 percent slope, NEHRP D and E Soils



Greater than 30 percent slope, NEHRP D and E Soils

### Data Sources

Slope based on 10 Meter DEM  
WA Department of Natural Resources  
Earthquake Soils  
Whitman County  
United States Geological Survey (USGS)

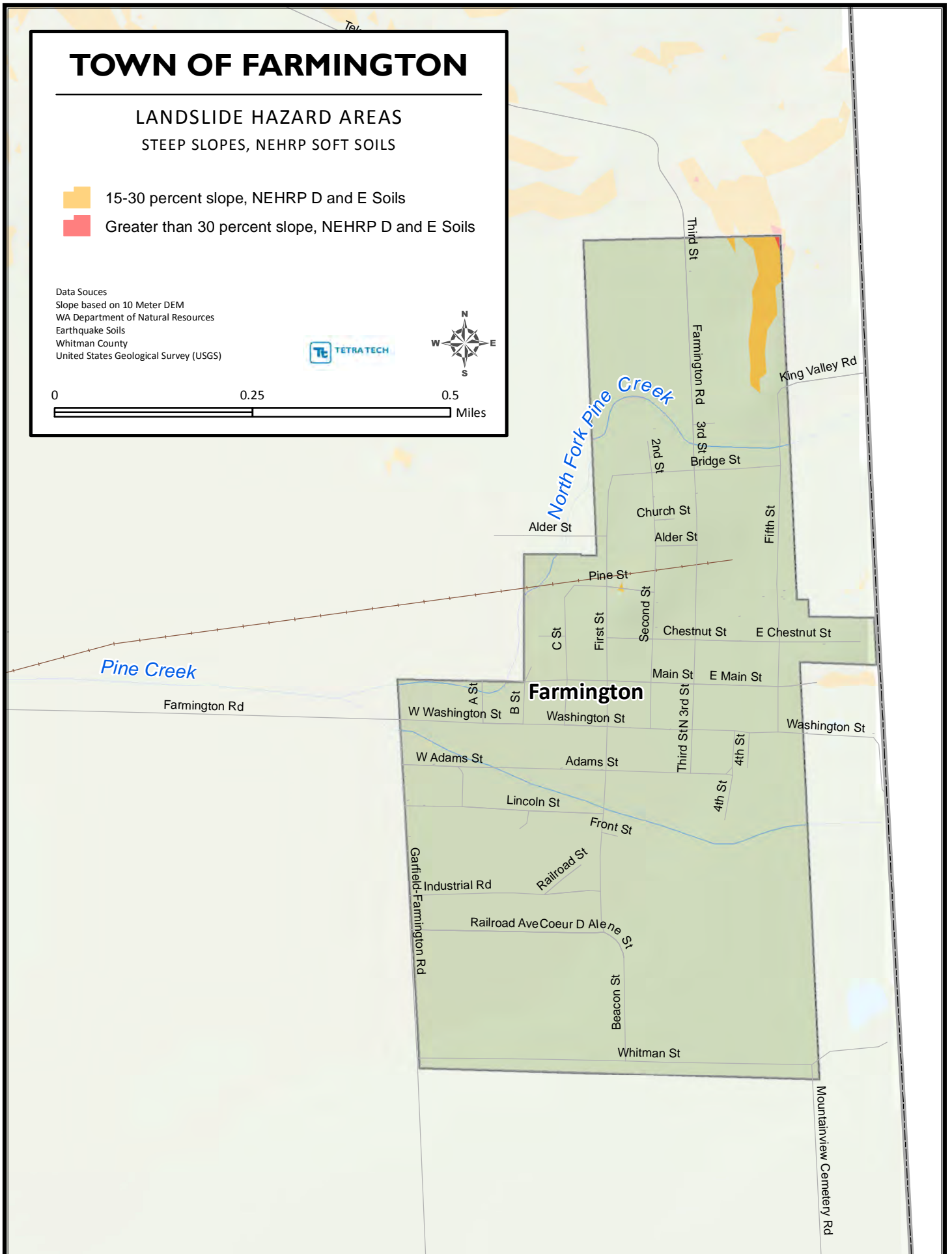


0

0.25

0.5

Miles



## CHAPTER 7. TOWN OF GARFIELD ANNEX

### 7.1 HAZARD MITIGATION PLAN POINT OF CONTACT

#### Primary Point of Contact

Perry Brown, Public Works Superintendent  
405 W California – PO Box 218  
Garfield, WA 99130-0218  
Telephone: 509-635-1604/509-338-2704  
e-mail Address: garfield-town@completebbs.com

#### Alternate Point of Contact

Annie Pillers, Clerk-Treasurer  
405 W California – PO Box 218  
Garfield, WA 99130-0218  
Telephone: 509-635-1604  
e-mail Address: garfield-town@completebbs.com

### 7.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—January 17, 1893
- **Current Population**—595 as of April 1, 2012
- **Population Growth**—Based on data from the Washington State Office of Financial Management, the Town of Garfield has experienced a relatively flat rate of growth. The overall population decreased by 7 percent between 2000 and 2010, an average annual decrease of 0.75 percent for this time frame.
- **Location and Description**—Situated in the Palouse Hills region of central Whitman County, Garfield is located adjacent to Silver Creek, 49.5 miles southeast of Spokane, and 8.2 miles northwest of Palouse. Garfield is located at 47°0'33"N 117°8'31"W (47.00917°N 117.14194°W) (47.009053, -117.141814). According to the U.S. Census Bureau, the town has a total area of 0.7 square miles (1.8 square kilometers), and is at an elevation of 2,467 feet above sea level.
- **Brief History**—Garfield was founded in the early 1880s by Samuel J. Tant, who named the town after James A. Garfield, the 20th President of the United States. Garfield was in office less than four months when he was assassinated in early July 1881.
- **Climate**—Garfield enjoys a temperate, 4-season climate with an average low temperature of 36.83°F and an average high temperature of 57.92°F, with an average annual rainfall of 21.01 inches.
- **Governing Body Format**—Garfield is governed by a Mayor-Council form of government that consists of an elected mayor and 5 Town Council members. This Town Council will assume the responsibility for the adoption and implementation of the recommendations of this plan. Town provided services include: park, streets, water and sewer supply, solid waste collection, curbside and drop off recycling through the Public Works Department, code enforcement, and police services contracted through City of Palouse
- **Development Trends**—Based on its projected growth, the anticipated development trends for the Town of Garfield are considered low to moderate, consisting of primarily residential development. Whitman County is not mandated under the State Growth Management Act to fully plan according to requirements of the law. The County and its cities have adopted

critical areas and resources lands regulations pursuant to the Growth Management Act. Garfield does have mechanisms available to managed future development via regulations identified in a zoning ordinance and policies identified in a comprehensive plan.

### **7.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY**

Table 7-1 lists all past occurrences of natural hazards in the county. Repetitive loss records are as follows:

- Number of FEMA Identified Repetitive Flood Loss Properties: None
- Number of Repetitive Flood Loss Properties that have been mitigated: None

### **7.4 HAZARD RISK RANKING**

Table 7-2 presents the ranking of the hazards of concern.

### **7.5 CAPABILITY ASSESSMENT**

The assessment of the jurisdiction's legal and regulatory capabilities is presented in Table 7-3. The assessment of the jurisdiction's administrative and technical capabilities is presented in Table 7-4. The assessment of the jurisdiction's fiscal capabilities is presented in Table 7-5. Classifications under various community mitigation programs are presented in Table 7-6.

### **7.6 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED INITIATIVES**

Table 7-7 lists the initiatives that make up the jurisdiction's hazard mitigation plan. Table 7-8 identifies the priority for each initiative. Table 7-9 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

### **7.7 STATUS OF PREVIOUS PLAN INITIATIVES**

Table 7-10 summarizes the status of initiatives that were adopted for the previous hazard plan. Those that are directly carried over as actions in this hazard plan are also indicated as such in Table 7-7.

### **7.8 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY**

Further technical assistance needed with floodplain management and critical areas protection. Further assistance need with seeking out grant funding.

### **7.9 HAZARD AREA EXTENT AND LOCATION**

Hazard area extent and location maps for the Town of Garfield are included at the end of this chapter. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes.



**TABLE 7-1.  
NATURAL HAZARD EVENTS**

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Wind	N/A	11/16/2010	Information not available
Wind	N/A	5/22/2010	Information not available
Wind	N/A	2007	Information not available
Earthquake	N/A	2005	Information not available
Flood	1159	12/26/1996	Information not available
Flood	1100	1/26/1996	Information not available
High Wind Storm	N/A	7/9/1995	Information not available
Flood	N/A	2/1994	Information not available
Hail Storm	N/A	1992	Information not available
Volcano	623	5/1980	Information not available
Flood	N/A	1974	Information not available
Flood	N/A	1972	Information not available
Flood	N/a	1948	Information not available

**TABLE 7-2.  
HAZARD RISK RANKING**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Severe Storm	$3 \times (9 + 6 + 3) = 54$
2	Flood	$3 \times (3 + 6 + 1) = 30$
3	Wildland Fire	$3 \times (3 + 4 + 2) = 27$
4	Landslide	$3 \times (3 + 2 + 3) = 24$
5	Earthquake	$2 \times (3 + 2 + 1) = 12$
6	Drought	$3 \times (0 + 0 + 3) = 9$
7	Volcano (Ash Fall)	$1 \times (3 + 2 + 1) = 6$
8	Dam Failure	$1 \times (0 + 0 + 1) = 1$

**TABLE 7-3.  
LEGAL AND REGULATORY CAPABILITY**

	Local Authority	State or Federal Prohibitions	Other Jurisdictional Authority	State Mandated	Comments
<b>Codes, Ordinances &amp; Requirements</b>					
Building Code	Y	N	N	Y	Floodplain/Zoning
Zoning Code	Y	N	N	N	
Subdivisions	Y	N	N	N	
Post Disaster Recovery	N	N	N	N	
Real Estate Disclosure	N	N	N	N	
Growth Management	N	N	N	Y	
Site Plan Review	Y	N	N	N	Not a fully acting Growth Management Act County
Special Purpose (flood management, critical areas)	Y	N	N	N	
General Plan	Y	N	N	N	
Floodplain or Basin Plan	N	N	N	N	
Stormwater Plan	N	N	N	N	
Capital Improvement Plan	Y	N	N	N	
Habitat Conservation Plan	N	N	N	N	
Economic Development Plan	N	N	N	N	
Emergency Response Plan	Y	N	N	N	
Shoreline Management Plan	N	N	N	N	
Post Disaster Recovery Plan	N	N	N	N	

**TABLE 7-4.  
ADMINISTRATIVE AND TECHNICAL CAPABILITY**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Paid staff; consultants
Engineers or professionals trained in building or infrastructure construction practices	Yes	Contracted with building inspector; consultants
Planners or engineers with an understanding of natural hazards	Yes	Contracted with building inspector
Staff with training in benefit/cost analysis	No	Consultants
Floodplain manager	Yes	Contracted with building inspector
Surveyors	No	Consultants
Personnel skilled or trained in GIS applications	No	Consultants
Scientist familiar with natural hazards in local area	No	Consultants
Emergency manager	Yes	Whitman County, Palouse Police Department
Grant writers	Yes / No	Clerk-Treasurer when feasible; Consultants

**TABLE 7-5.  
FISCAL CAPABILITY**

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Unknown
Withhold Public Expenditures in Hazard-Prone Areas	Unknown
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes

**TABLE 7-6.  
COMMUNITY CLASSIFICATIONS**

	Participating?	Classification	Date Classified
Community Rating System	No	—	—
Building Code Effectiveness Grading Schedule	Yes	6/6	2001
Public Protection	Yes	7/9*	6/1/2005
Storm Ready	No	—	—
Firewise	No	—	—
* Higher classification applies to when subject property is located beyond 1,000 feet of a creditable fire hydrant and is within 5 road miles of a recognized fire station.			

**TABLE 7-7.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative #G-1</b> —Create redundancy to electrical power supply to critical infrastructure such as the water supply system with purchase of backup generator.							
Existing	All Hazards	3, 4, 5	Garfield Council	Medium	Utility Reserve Funds, Bonds, PDM/HMGP	Short Term	Yes
<b>Initiative #G-2</b> —Retrofit vulnerable water distribution mains from the impacts of severe ground shaking caused from earthquakes							
Existing	Earthquake	3, 5	Garfield Council	High	Utility Reserve Funds, Bonds, PDM/HMGP	Ongoing, Long Term	Yes
<b>Initiative #G-3</b> —Implement structural measures that will mitigate the causes of flooding on Silver Creek, which include: decrease channel capacity due to sediment deposition, stream channel maintenance and ice jams at the railroad trestle crossing. Phase 1 of this project will include feasibility analysis to identify most appropriate action within the city's capabilities.							
Existing	Flood	3, 5	Garfield Council	High	Bonds, PDM/HMGP, FEMA, FCAAP, FPMSP	Long Term	Yes
<b>Initiative #G-4</b> —Support countywide initiatives that promote the education of the public on the impacts of natural hazards within Whitman County, and the preparedness for and the mitigation of those impacts. This support will be in the form of dissemination of appropriate information to the residents of Garfield and continuing support/participation in the Whitman County Natural Hazards Mitigation Planning Partnership.							
Both	All Hazards	2	Garfield Council	Low (staff time)	Current Expenses	Ongoing, Short Term	Yes

**TABLE 7-7.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative #G-5</b> —Consider voluntary participation in programs such as the Community Rating System, Firewise and Storm Ready programs that will provide benefits/incentives to the Citizens of Garfield for hazard mitigation.							
Both	Flood, Wildfire	8	Garfield Council	Low (staff time)	Current Expenses	Ongoing, Short Term	Yes
<b>Initiative #G-6</b> —Continue to coordinate and work with Whitman County Emergency Management in disaster response and preparedness. This level of coordination should include: updates to the Emergency response plan, development of a post disaster action plan, training and support							
Both	All Hazards	2, 4, 6	Garfield Council	Low (staff time)	Current Expenses	Ongoing, Short Term	Yes
<b>Initiative #G-7</b> —Relocate and construct a new fire station outside of the floodplain.							
New	Flood	3, 4	Garfield Council	High	Capital Facilities Fund; CDBG, FEMA, HMGP, FMA	Short Term	No
<b>Initiative #G-8</b> —Undertake a floodplain study to review and assess the existing floodplain boundaries and remap the floodplain accordingly.							
Both	Flood	1, 7, 9	Garfield Council	Medium	National Flood Insurance Program, CRS, U.S. Corps of Engineers, FPMSP, NDOP, PDM, FMA	Short Term	No
<b>Initiative #G-9</b> —Lower California Street from 2 <sup>nd</sup> Street to 4 <sup>th</sup> Street to reduce risk and impact of water damage to central business district from flooding.							
Existing	Flood	3, 5	Garfield Council	High	Capital Facilities Fund; CDBG, FEMA, HMGP, PDM, FMA	Long Term	No
<b>Initiative #G-10</b> —Retrofit sewer distribution mains and manholes from the impacts of severe weather rainfall.							
Existing	Flood	3, 5	Garfield Council	High	Capital Facilities Fund; CDBG, FEMA, HMGP, PDM, FMA	Long Term	No

**TABLE 7-8.  
MITIGATION STRATEGY PRIORITY SCHEDULE**

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority <sup>a</sup>
G-1	3, 4, 5	Medium	Medium	Yes	Yes	No	Medium
G-2	3, 5	High	High	Yes	Yes	No	Medium
G-3	3, 5	High	High	Yes	Yes	No	Medium
G-4	2	Low	Low	Yes	No	Yes	High
G-5	8	Low	Low	Yes	No	Yes	High
G-6	2, 4, 6	Low	Low	Yes	No	Yes	High
G-7	3, 4	High	High	Yes	Yes	No	High
G-8	1, 7, 9	High	Medium	Yes	Yes	No	High
G-9	3, 5	High	High	Yes	Yes	No	Medium
G-10	3, 5	High	High	Yes	Yes	No	Medium

a. See Section 1.3 for definitions of high, medium and low priorities.



**TABLE 7-9.  
ANALYSIS OF MITIGATION INITIATIVES**

Hazard Type	Initiative Addressing Hazard, by Mitigation Type					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	—	1,	4	—	6	—
Drought	—	1,	4	—	6	—
Earthquake	—	1, 2,	4	—	6	—
Flood	5, 8	1, 5, 7, 10	4, 5, 8	5	5, 6, 7	3, 9, 10
Landslide	—	1,	4	—	6	—
Severe Weather	5	1, 5, 10	4, 5	—	5, 6	9, 10
Volcano	—	1,	4	—	6	—
Wildfire	5	1, 5	4, 5	5	5, 6	—

1. Prevention: Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.

2. Property Protection: Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.

3. Public Education and Awareness: Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.

4. Natural Resource Protection: Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.

5. Emergency Services: Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.

6. Structural Projects: Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.

**TABLE 7-10.  
PREVIOUS ACTION PLAN IMPLEMENTATION STATUS**

Action #	Action Status			Comments
	Completed	Carry Over to Plan Update	Removed; No Longer Feasible	
G-1		✓		
G-2		✓		
G-3		✓		Work with new engineer for Phase I options
G-4		✓		
G-5		✓		
G-6	✓			Critical Areas protection ordinance Adopted May 2007
G-7		✓		

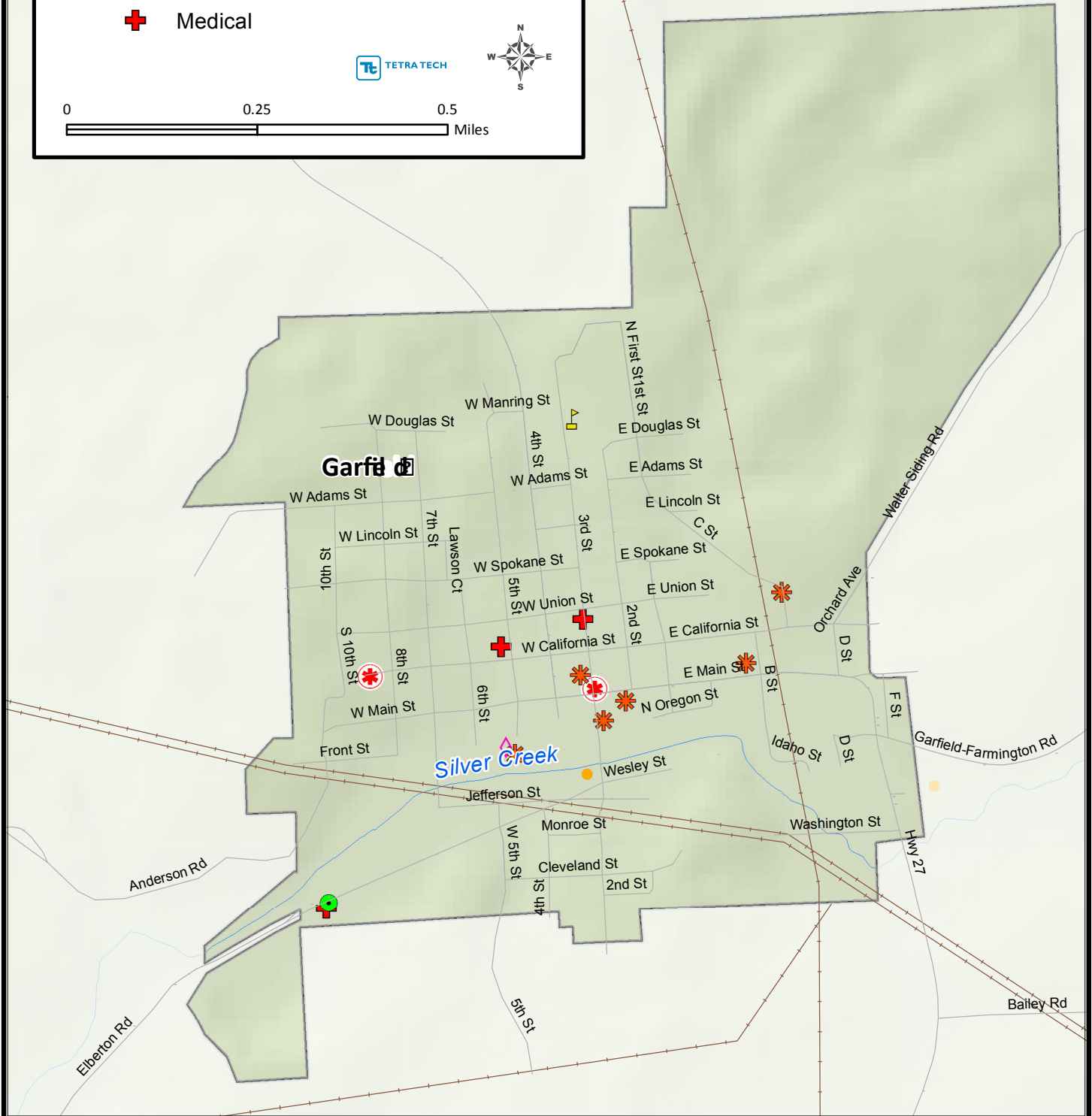
# CITY OF GARFIELD

## CRITICAL FACILITIES

- |                 |              |
|-----------------|--------------|
| ● Bridge        | ◇ Other      |
| ▲ Communication | 🏫 School     |
| ⛔ Protective    | ● Wastewater |
| ⚡ Hazmat        | ■ Water      |
| ✚ Medical       |              |









0 0.25 0.5 Miles



# TOWN OF GARFIELD

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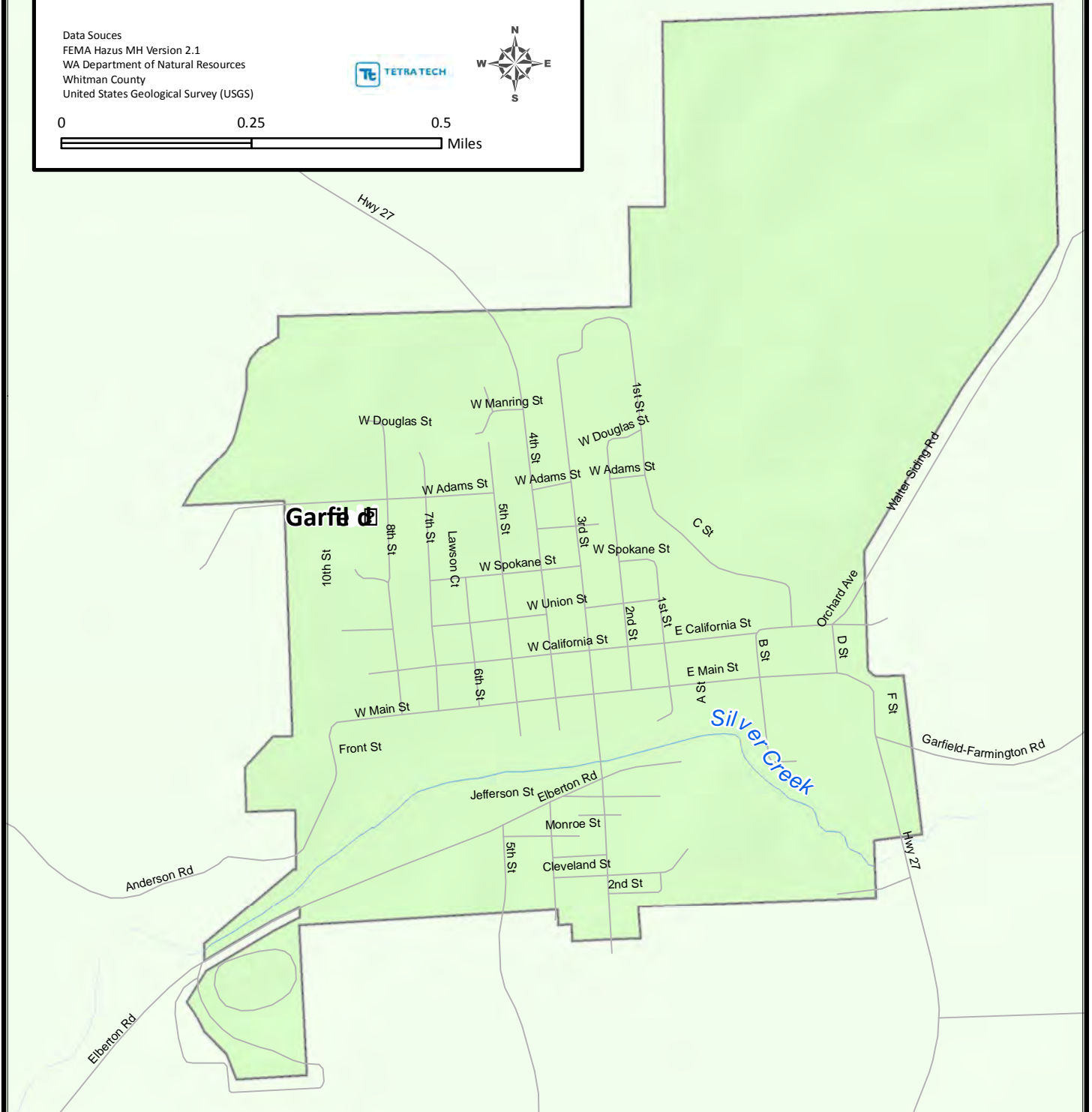
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Whitman County  
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0 0.25 0.5  
Miles

Garfield

Silver Creek

Garfield-Farmington Rd

# TOWN OF GARFIELD

## LATAH CREEK FAULT PLANNING SCENARIO PEAK GROUND ACCELERATION 6.0 MAGNITUDE

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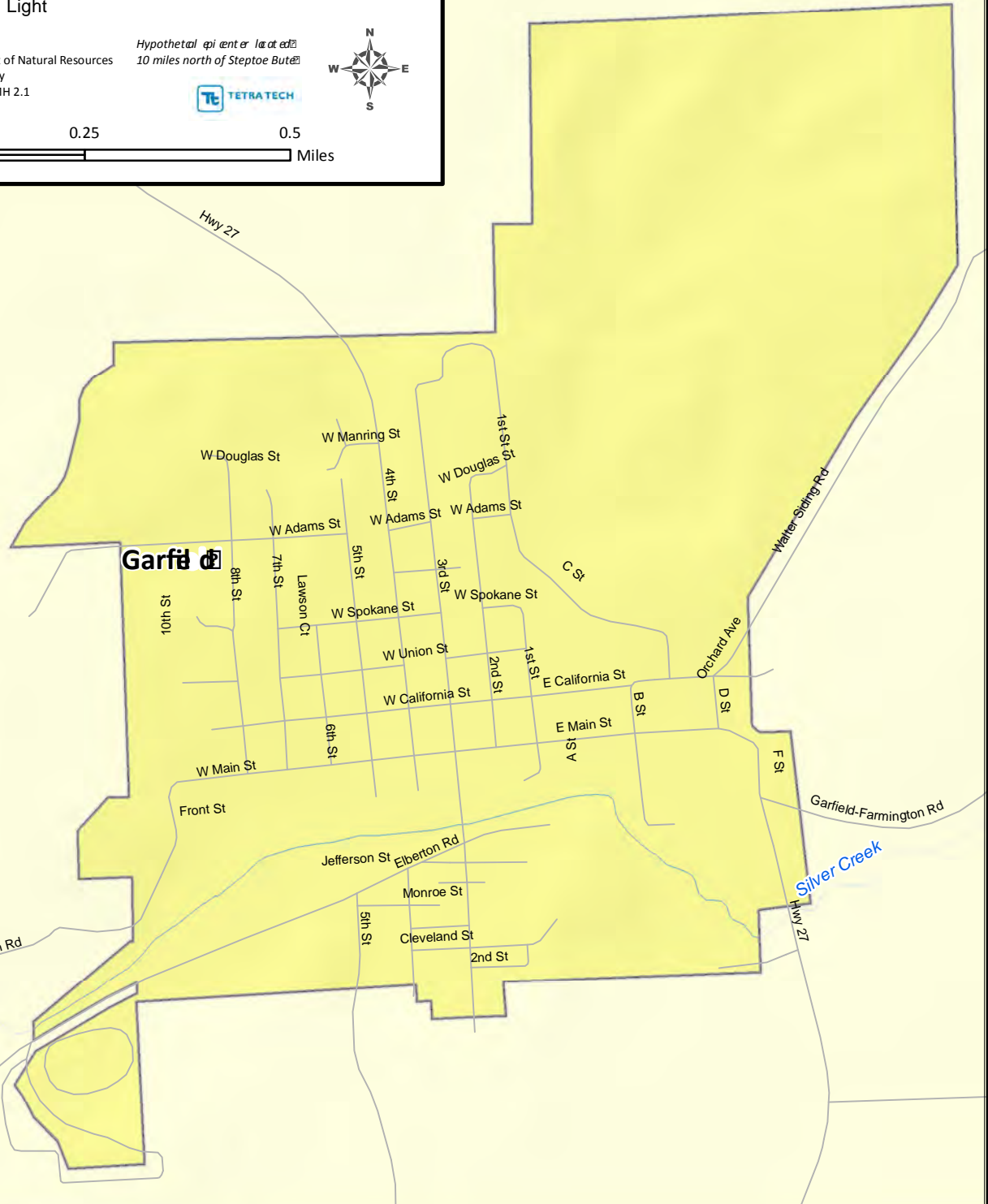
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|  V, Very Light      |  IX, Heavy            |
|  VI, Light          |  |

Data Sources  
WA Department of Natural Resources  
Whitman County  
FEMA's Hazus MH 2.1

Hypothetical epicenter located  
10 miles north of Steptoe Butte








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Miles



# TOWN OF GARFIELD

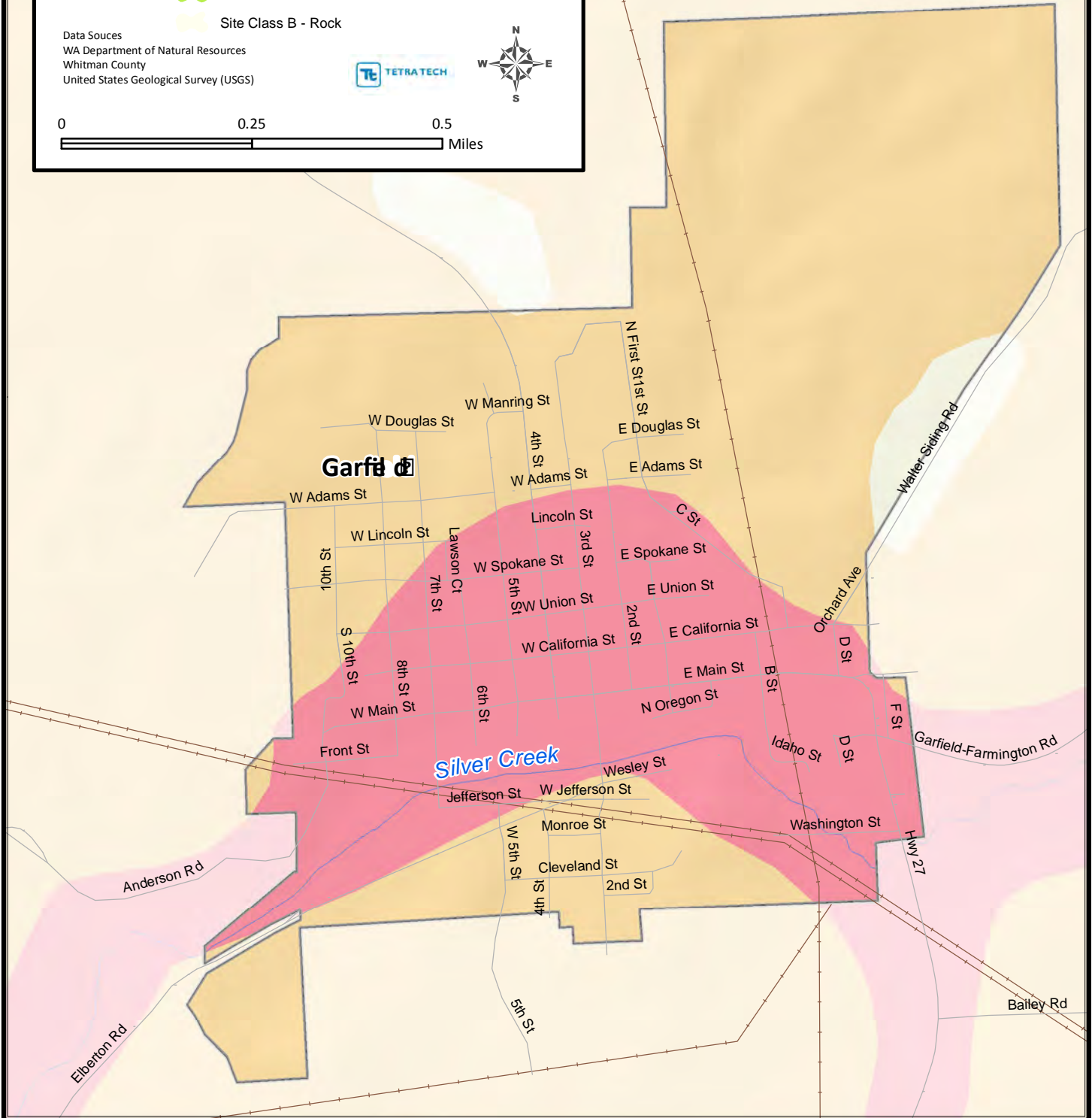
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Data Sources  
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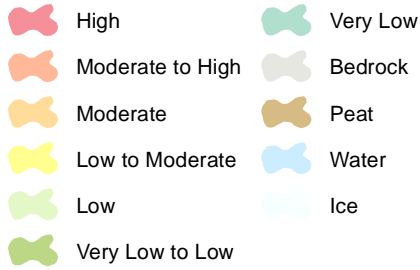
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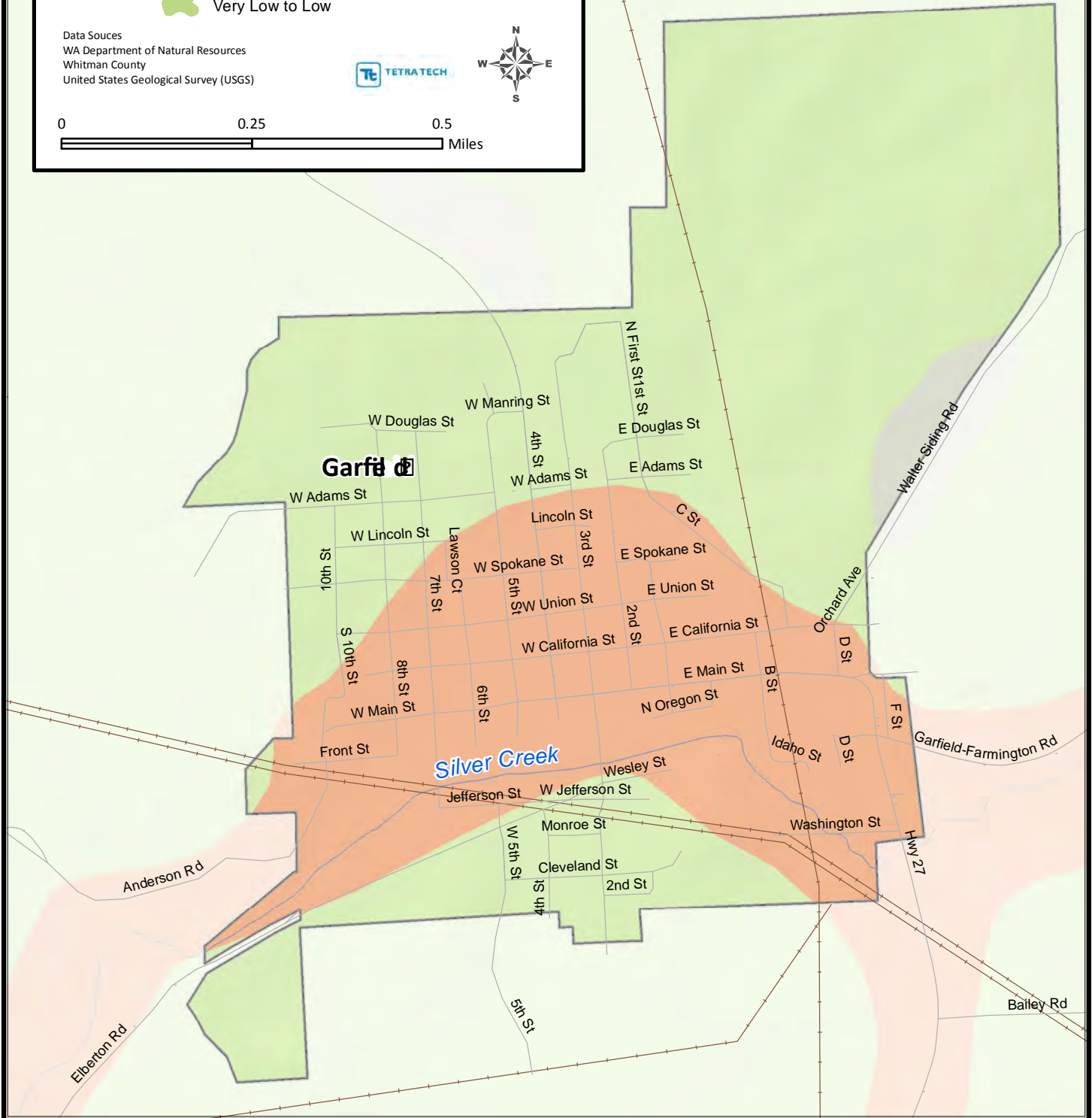
## LIQUEFACTION SUSCEPTIBILITY



Data Sources  
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Whitman County  
United States Geological Survey (USGS)





0 0.25 0.5  
Miles



# TOWN OF GARFIELD

## FEMA FLOOD HAZARD AREAS

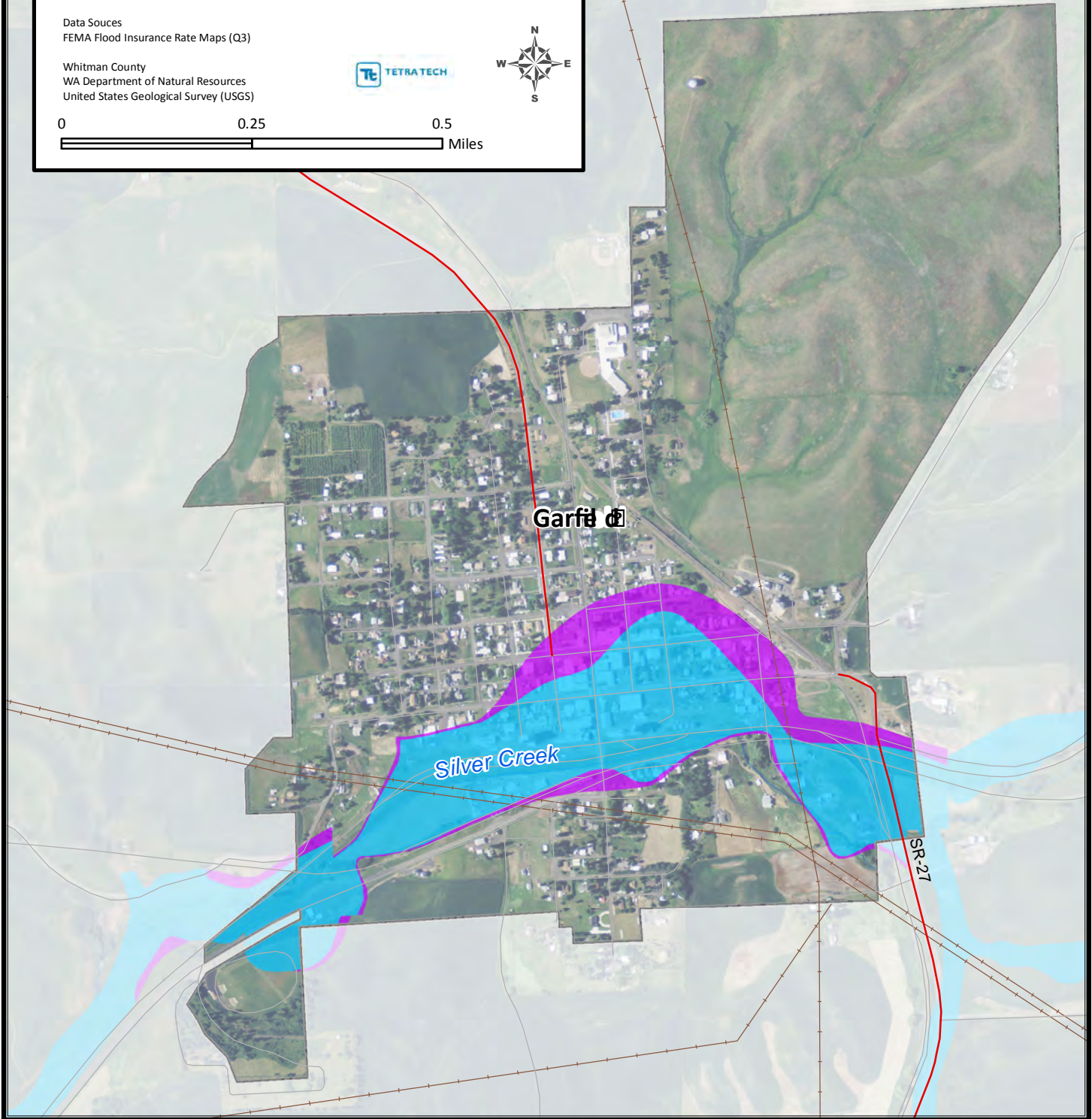
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-  0.2 Percent Annual Chance Special Flood Hazard (500 Year)

Data Sources  
FEMA Flood Insurance Rate Maps (Q3)

Whitman County  
WA Department of Natural Resources  
United States Geological Survey (USGS)




0 0.25 0.5  
Miles





# TOWN OF GARFIELD

## HAZUS GENERATED FLOOD HAZARD AREA

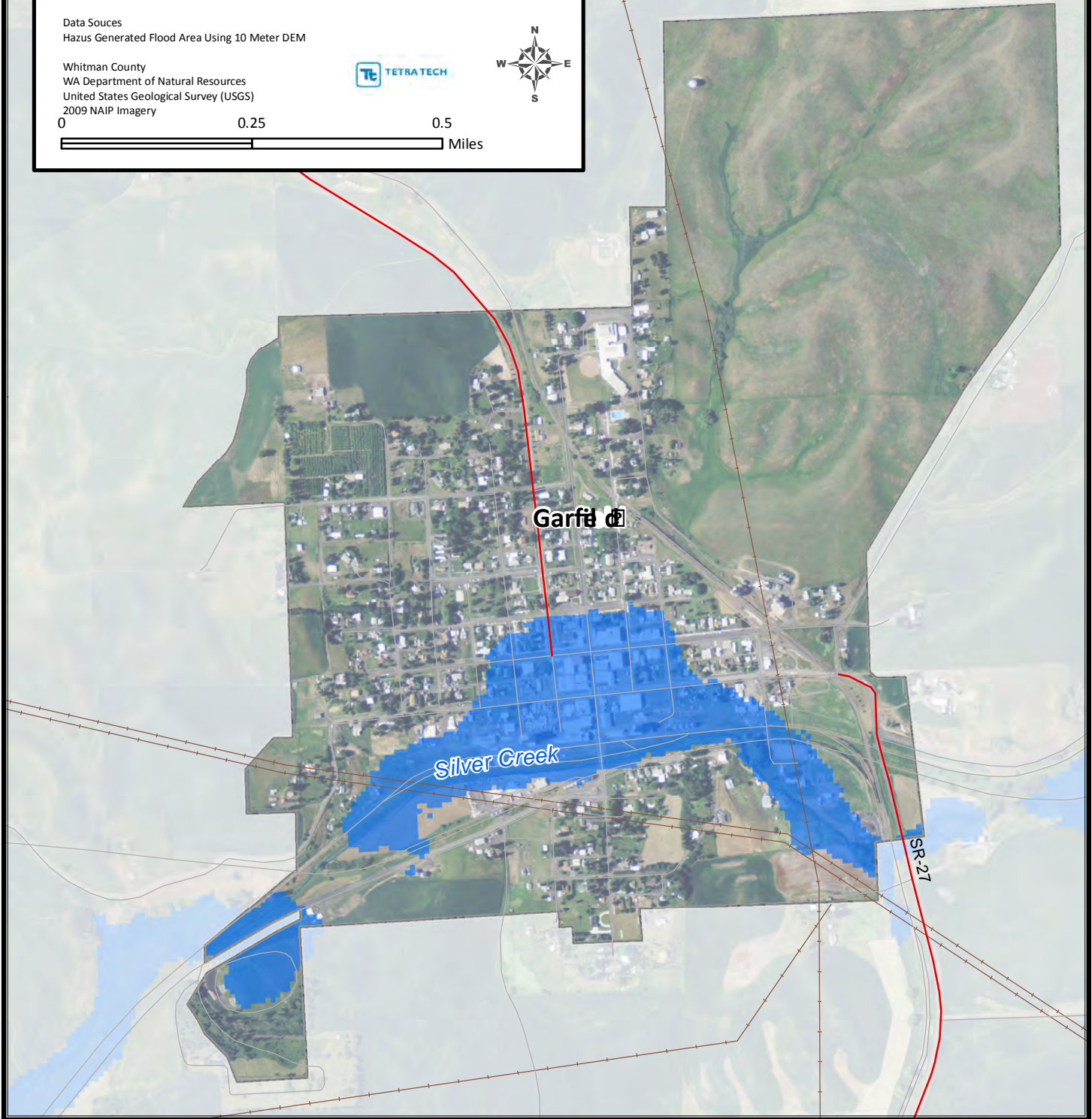
 Hazus 1 Percent Annual Chance  
Flood Hazard Area (100 Year)

Data Sources  
Hazus Generated Flood Area Using 10 Meter DEM

Whitman County  
WA Department of Natural Resources  
United States Geological Survey (USGS)  
2009 NAIP Imagery



0 0.25 0.5  
Miles



# TOWN OF GARFIELD

## LANDSLIDE HAZARD AREAS

STEEP SLOPES, NEHRP SOFT SOILS



15-30 percent slope, NEHRP D and E Soils



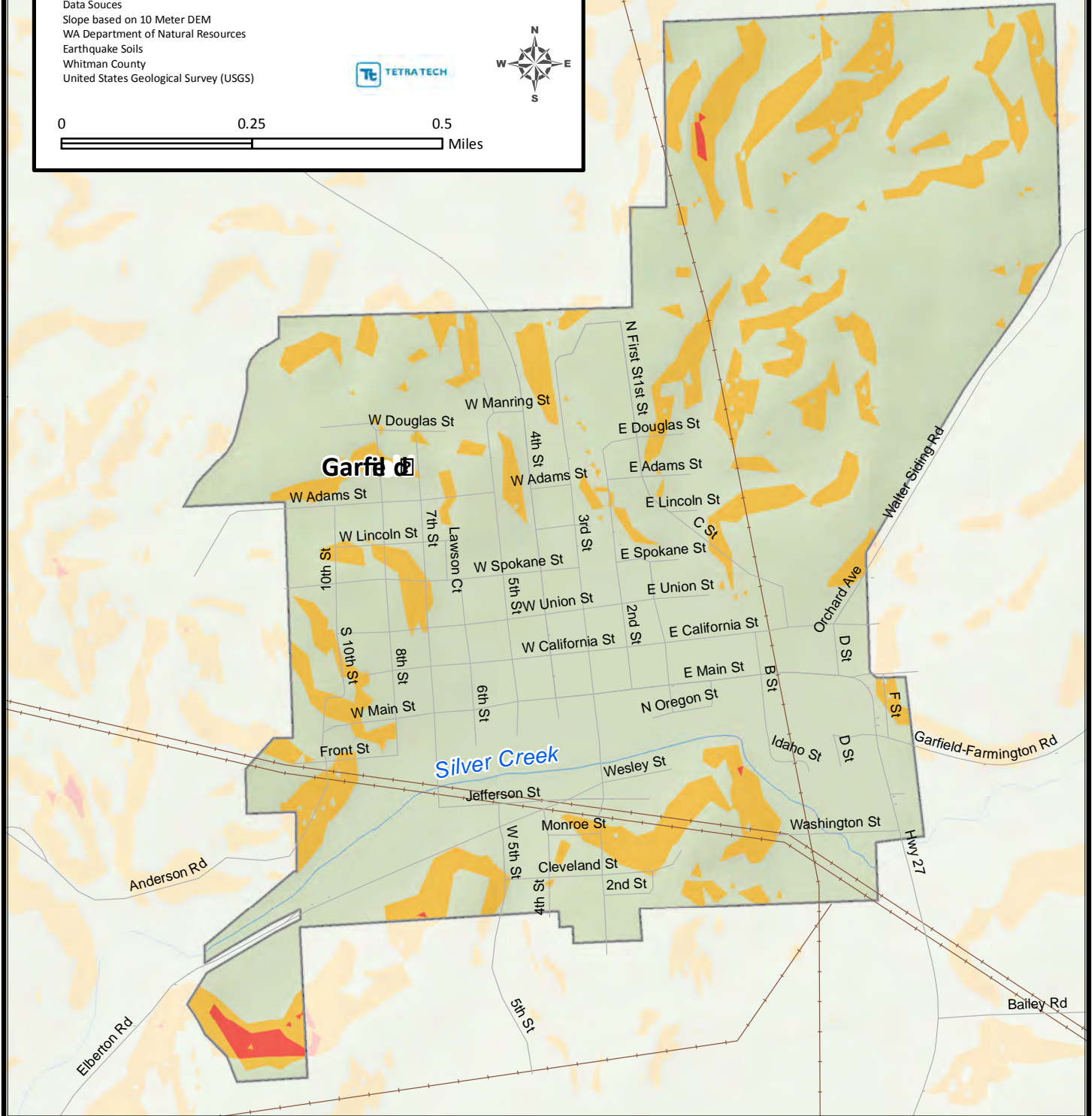
Greater than 30 percent slope, NEHRP D and E Soils

### Data Sources

Slope based on 10 Meter DEM  
WA Department of Natural Resources  
Earthquake Soils  
Whitman County  
United States Geological Survey (USGS)



0 0.25 0.5  
Miles





## CHAPTER 8. TOWN OF LACROSSE ANNEX

### 8.1 HAZARD MITIGATION PLAN POINT OF CONTACT

#### Primary Point of Contact

Larry Burgess, Mayor  
201 S Hill  
LaCrosse WA 99143  
Telephone: 509-549-3489  
e-mail Address: butchb@pionnet.com

#### Alternate Point of Contact

Thomas Cauley  
202 N Leslie  
LaCrosse WA 99143  
Telephone: 509-549-3499  
e-mail Address: jaspertrucking@yahoo.com

### 8.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—February 19, 1917
- **Current Population**—315 as of April 1, 2012
- **Population Growth**—Based on data from the Washington State Office of Financial Management, the Town of LaCrosse has experienced a declining rate of growth. The overall population decreased by 17 percent between 2000 and 2010, an average annual decrease of 1.54 percent for this time frame.
- **Location and Description**—Located in southwestern Whitman County, LaCrosse is located on Highway 26, 45 miles west of Pullman at an elevation of 1481 feet above sea level. La Crosse is located at 46°48'51"N 117°52'48"W / 46.81417°N 117.88°W / 46.81417; -117.88 (46.814289, -117.880097).
- **Brief History**—As with many of the towns in the Palouse region, LaCrosse was developed according to a similar pattern. First came the railroad, next came a few settlers, followed by a post office. The most commonly held theory as to how LaCrosse received its name was that two surveying engineers from Wisconsin that settled in the region christen their new towns after their home towns of LaCrosse and Winona Wisconsin. There are several ways to spell our town's name—La Crosse, LaCrosse, LaCrosse and these and all possible variations are seen daily at the post office.
- **Climate**—LaCrosse enjoys a temperate climate with an average annual low temperature of 30 (F) and an average annual high temperature of 70 (F). The average annual rain fall for LaCrosse is 16.25".
- **Governing Body Format**—LaCrosse is governed by a mayor-council form of government consisting of 5 elected Council Members and an elected Mayor. This governing body will assume the responsibility for the adoption and implementation of this plan. LaCrosse visitors and residents enjoy a variety of services. Two airports serve the town—the LaCrosse airport, just outside of town, accommodates small planes, Commercial flights to Seattle, Spokane and other cities are available at the Pullman airport. LaCrosse residents enjoy a local post office, UPS and Federal Express pickup and delivery, a city hall, a Whitman County branch library, a local telephone company, internet service, and a fire department with emergency medical

services. Medical care and full-service hospital are only 30 miles to the east, in Colfax. LaCrosse is also served by city utilities, wireless communications and cable TV.

- **Development Trends**—Based on its projected growth, the anticipated development trends for the Town of LaCrosse are considered to be relatively neutral. While growth and development would be welcome by the town, none is anticipated during the next performance period for this plan. Whitman County is not mandated under the State Growth Management Act to fully plan according to requirements of the law. The County and its cities have adopted critical areas and resources lands regulations pursuant to the Growth Management Act.

### **8.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY**

Table 8-1 lists all past occurrences of natural hazards in the county. Repetitive loss records are as follows:

- Number of FEMA Identified Repetitive Flood Loss Properties: None
- Number of Repetitive Flood Loss Properties that have been mitigated: Not Applicable

### **8.4 HAZARD RISK RANKING**

Table 8-2 presents the ranking of the hazards of concern.

### **8.5 CAPABILITY ASSESSMENT**

The assessment of the jurisdiction's legal and regulatory capabilities is presented in Table 8-3. The assessment of the jurisdiction's administrative and technical capabilities is presented in Table 8-4. The assessment of the jurisdiction's fiscal capabilities is presented in Table 8-5. Classifications under various community mitigation programs are presented in Table 8-6.

### **8.6 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED INITIATIVES**

Table 8-7 lists the initiatives that make up the jurisdiction's hazard mitigation plan. Table 8-8 identifies the priority for each initiative. Table 8-9 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

### **8.7 STATUS OF PREVIOUS PLAN INITIATIVES**

Table 8-10 summarizes the current status of initiatives that were adopted by the County for the previous hazard plan. Those that are directly carried over as actions in this hazard plan are also indicated as such in Table 8-7.

### **8.8 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY**

Once tools and technology such as GIS become available for the Whitman County planning area, the Hazard Identification and Vulnerability Assessment needs to be updated in a map format so this can be better used as a planning and public outreach tool.



## 8.9 ADDITIONAL COMMENTS

The financial resources available to the Town of LaCrosse are extremely limited. With the changed tax structure of Washington State severely affecting the budgets of small cities and towns, implementation of many recommendations of this plan will be contingent upon the following factors:

- Grant funding for eligible projects
- Cost sharing within the partnership
- Partnering with other Stakeholders within the planning area
- Leveraging all technical resources to maximize all funding options

The town of LaCrosse is committed to pursuing all of those factors to ensure successful implementation of the initiatives identified by this plan.

## 8.10 HAZARD AREA EXTENT AND LOCATION

Hazard area extent and location maps for the Town of LaCrosse are included at the end of this chapter. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes.

<b>TABLE 8-1. NATURAL HAZARD EVENTS</b>		
Type of Event	Date	Preliminary Damage Assessment
Flood	June 1977	None available -Minor basement flooding
Volcano (FEMA Disaster #623)	May 21 1980	Information not available
Dust storm	May 10 1980	None available
Snow storm	Dec 2008	None Available

<b>TABLE 8-2. HAZARD RISK RANKING</b>		
Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Wildfire	High
2	Severe Weather	High
3	Earthquake	Medium
4	Volcano	Low
5	Flood	High
6	Drought	High

**TABLE 8-3.  
LEGAL AND REGULATORY CAPABILITY**

	Local Authority	State or Federal Prohibitions	Other Jurisdictional Authority	State Mandated	Comments
<b>Codes, Ordinances &amp; Requirements</b>					
Building Code	YES	N	N	YES	Ordinance #282
Zonings	NO	N	N	N	
Subdivisions	NO	N	N	N	
Stormwater Management	NO	N	N	N	
Post Disaster Recovery	NO	N	N	N	
Real Estate Disclosure	YES	N	N	Y	Resolution 2007-04 #2
Growth Management	YES	N	N	N	Ordinance #357
Site Plan Review	YES	N	N	YES	Ordinance #334
Special Purpose (flood management, critical areas)	NO	N	N	N	
<b>Planning Documents</b>					
General or Comprehensive Plan	NO	N	N	N	
Floodplain or Basin Plan	NO	N	N	N	
Stormwater Plan	NO	N	N	N	
Capital Improvement Plan	YES	N	N	N	Updated each spring w/Southeast Washington Economic Development Association
Habitat Conservation Plan	NO	N	N	N	
Economic Development Plan	NO	N	N	N	
Emergency Response Plan	NO	N	N	N	
Shoreline Management Plan	NO	N	N	N	
Post Disaster Recovery Plan	NO	N	N	N	

**TABLE 8-4.  
ADMINISTRATIVE AND TECHNICAL CAPABILITY**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	YES	T D & H Engineering
Engineers or professionals trained in building or infrastructure construction practices	YES	T D & H Engineering
Planners or engineers with an understanding of natural hazards	N	
Staff with training in benefit/cost analysis	N	
Floodplain manager	N	
Surveyors	N	
Personnel skilled or trained in GIS applications	N	
Scientist familiar with natural hazards in local area	N	
Emergency manager	YES	Whitman County
Grant writers	N	

**TABLE 8-5.  
FISCAL CAPABILITY**

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Y
Capital Improvements Project Funding	Y
Authority to Levy Taxes for Specific Purposes	Y
User Fees for Water, Sewer, Gas or Electric Service	Y (water & sewer)
Incur Debt through General Obligation Bonds	Y
Incur Debt through Special Tax Bonds	N
Incur Debt through Private Activity Bonds	N
Withhold Public Expenditures in Hazard-Prone Areas	N
State Sponsored Grant Programs	N
Development Impact Fees for Homebuyers or Developers	N

**TABLE 8-6.  
COMMUNITY CLASSIFICATIONS**

	Participating?	Classification	Date Classified
Community Rating System	No	—	—
Building Code Effectiveness Grading Schedule	Yes	6/6	2001
Public Protection	Yes	8/9*	9/1/2005
Storm Ready	No	—	—
Firewise	No	—	—
* Higher classification applies to when subject property is located beyond 1,000 feet of a creditable fire hydrant and is within 5 road miles of a recognized fire station.			

**TABLE 8-7.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative # L1</b> Support countywide initiatives that promote the education of the public on the impacts of natural hazards within Whitman County, and the preparedness for and the mitigation of those impacts. This support will be in the form of dissemination of appropriate information to the residents of LaCrosse and continuing support/participation in the Whitman County Natural Hazards Mitigation Planning Partnership.							
New & existing	ALL	All	Town Council	Low	General Fund	Ongoing	YES
<b>Initiative # L2</b> Continue to coordinate and work with Whitman County Emergency Management in disaster response and preparedness. This level of coordination should include: updates to the Emergency response plan, development of a post disaster action plan, training and support.							
New & existing	ALL	4, 6, 7	Town Council	Low	General Fund	Ongoing	YES
<b>Initiative # L3</b> Adopt International Building Code pursuant to state mandate.							
New & existing	ALL	1, 3, 10	Town Council	Low	General Fund	Ongoing	YES
<b>Initiative # L4</b> Consider Voluntary participation in the National Flood Insurance program.							
New	Flood	1, 2, 6, 7	Town Council	Low	General Fund	Short-term	YES
<b>Initiative # L5</b> Work with local utility providers to initiate/promote underground utilities when opportunities arise via repair or replacement of utilities.							
New	Severe weather, Flood, Wildfire,	3, 4, 5	Town Council	High	General Fund	Ongoing	YES

**TABLE 8-8.  
MITIGATION STRATEGY PRIORITY SCHEDULE**

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority <sup>a</sup>
1	3	LOW	LOW	Y	N	Y	HIGH
2	3	MED	LOW	Y	N	Y	HIGH
3	4	MED	LOW	Y	N	Y	HIGH
4	5	LOW	LOW	Y	N	Y	HIGH
5	3	HIGH	HIGH	Y	N	N	MED

a. See Section 1.3 for definitions of high, medium and low priorities.

**TABLE 8-9.  
ANALYSIS OF MITIGATION INITIATIVES**

Hazard Type	Initiative Addressing Hazard, by Mitigation Type					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	3	5	1		2	
Drought	3	5	1		2	
Earthquake	3	5	1		2	
Flood	3, 4	4, 5	1, 4	4	2, 4	
Landslide	3	5	1		2	
Severe Weather	3	5	1		2	
Volcano	3	5	1		2	
Wildfire	3	5	1		2	

1. Prevention: Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
2. Property Protection: Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
3. Public Education and Awareness: Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
4. Natural Resource Protection: Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
5. Emergency Services: Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
6. Structural Projects: Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.

**TABLE 8-10.**  
**PREVIOUS ACTION PLAN IMPLEMENTATION STATUS**

Action #	Action Status			Comments
	Completed	Carry Over to Plan Update	Removed; No Longer Feasible	
L-1		Y		Continuing
L-2		Y		Continuing
L-3	Y	N		Ordinance # 282
L-4		Y		Continuing
L-5		Y		Continuing



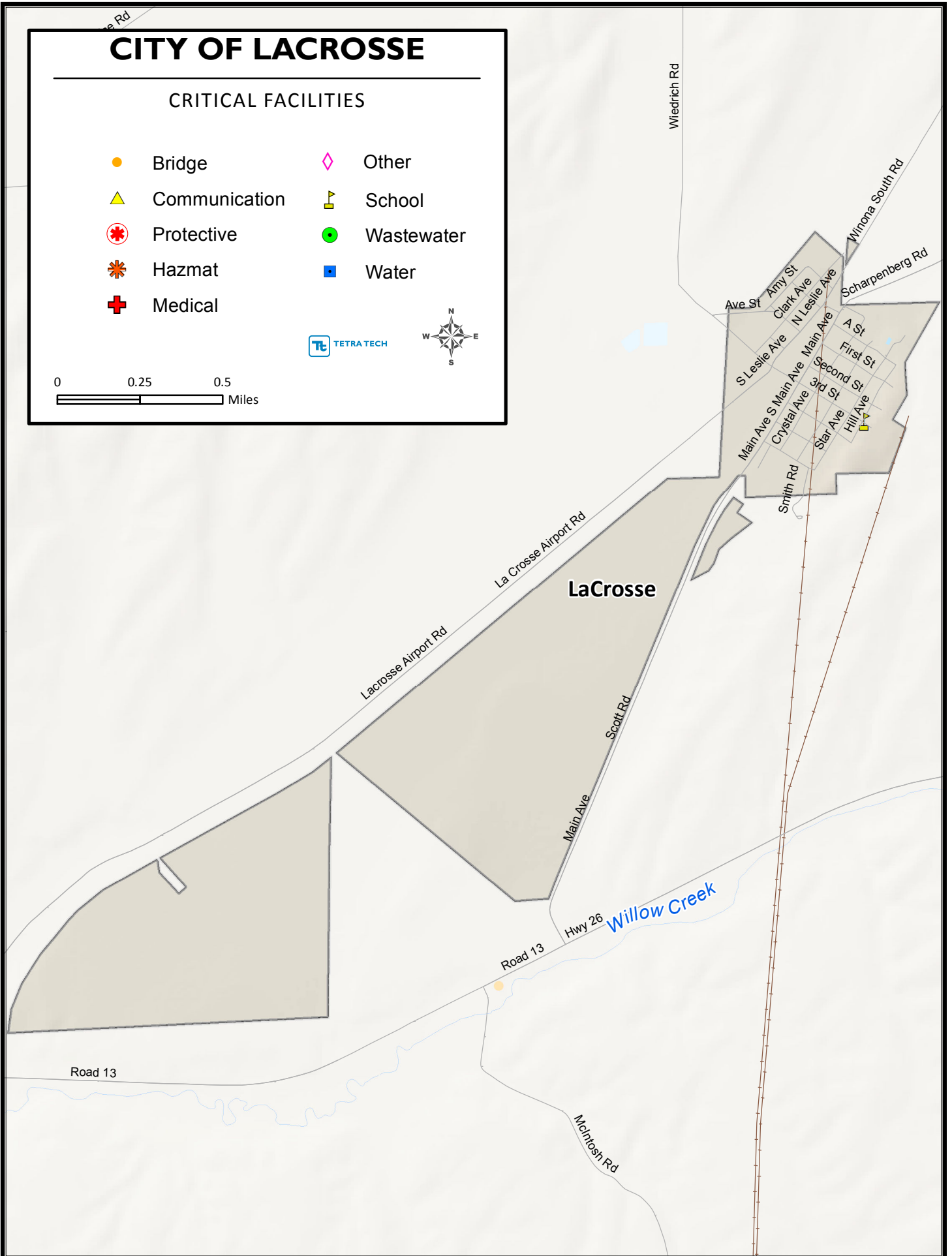
# CITY OF LACROSSE

## CRITICAL FACILITIES

- |                 |              |
|-----------------|--------------|
| ● Bridge        | ◇ Other      |
| ▲ Communication | 🚦 School     |
| ⚠ Protective    | ● Wastewater |
| ☄ Hazmat        | ■ Water      |
| ✚ Medical       |              |









0 0.25 0.5  
Miles



# TOWN OF LA CROSSE

## 100 YEAR PROBABILISTIC EARTHQUAKE PEAK GROUND ACCELERATION

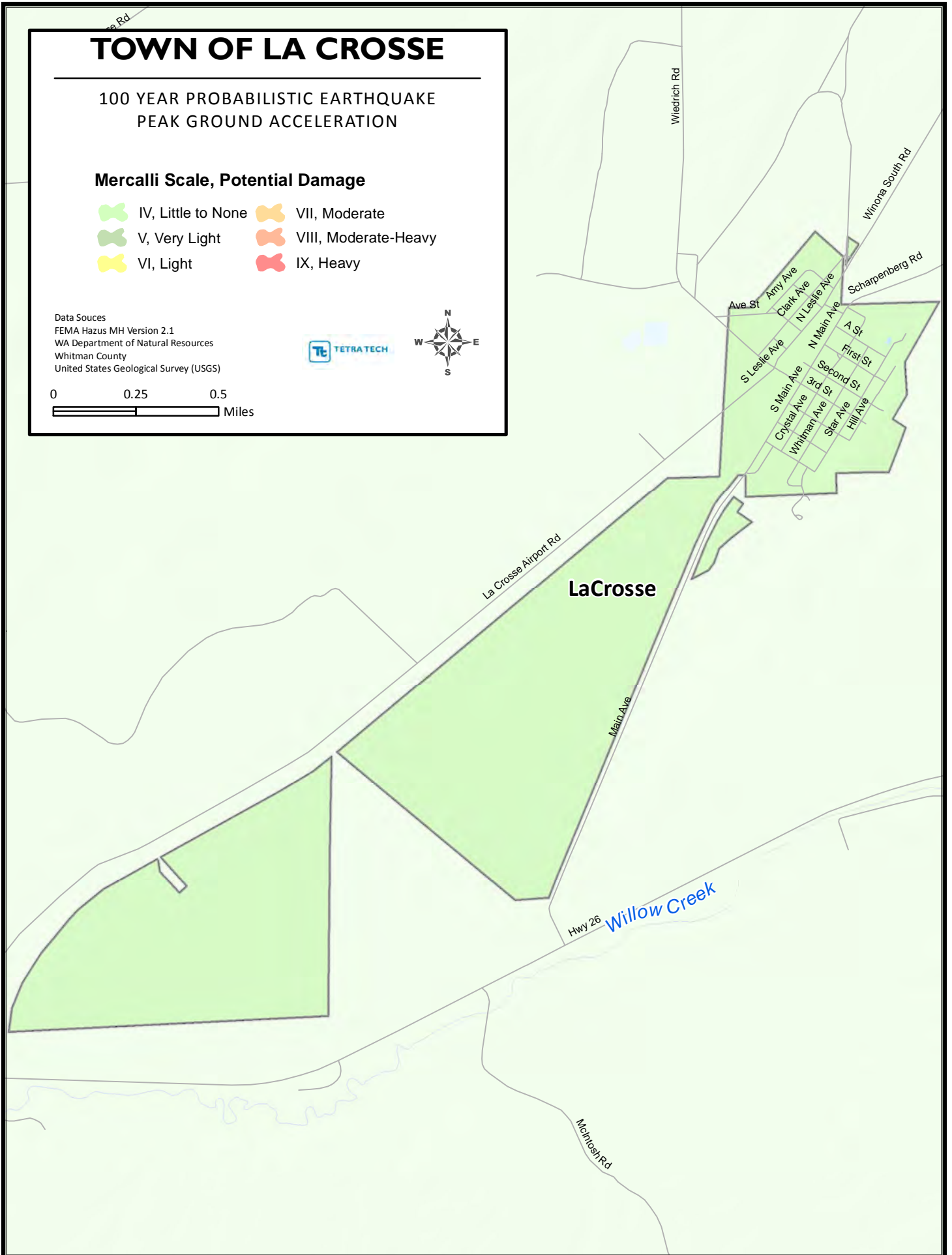
### Mercalli Scale, Potential Damage

 IV, Little to None	 VII, Moderate
 V, Very Light	 VIII, Moderate-Heavy
 VI, Light	 IX, Heavy

Data Sources  
FEMA Hazus MH Version 2.1  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)









0 0.25 0.5  
Miles



# TOWN OF LACROSSE

## 500 YEAR PROBABILISTIC EARTHQUAKE PEAK GROUND ACCELERATION

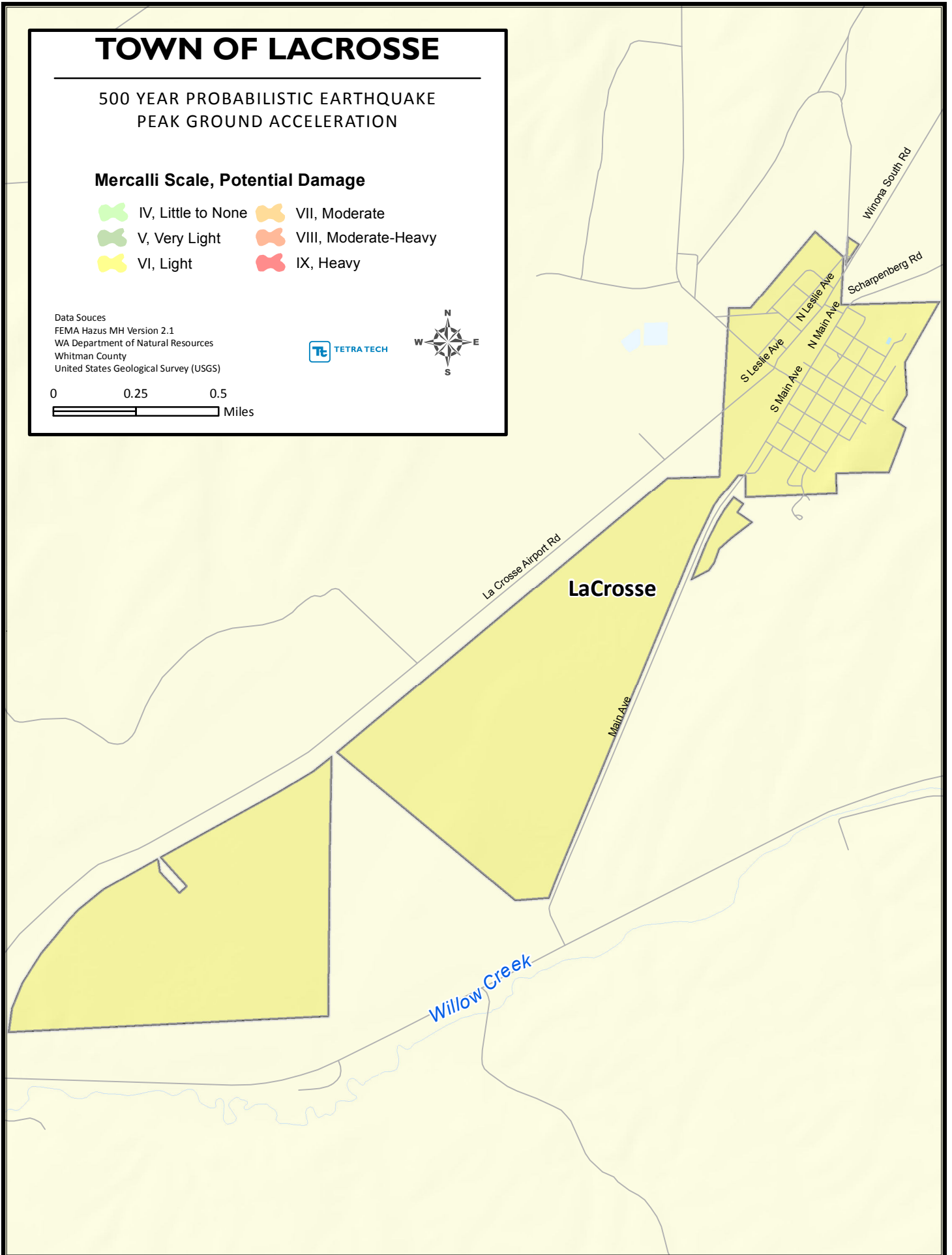
### Mercalli Scale, Potential Damage

 IV, Little to None	 VII, Moderate
 V, Very Light	 VIII, Moderate-Heavy
 VI, Light	 IX, Heavy

Data Sources  
FEMA Hazus MH Version 2.1  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)



0 0.25 0.5  
Miles



# TOWN OF LA CROSSE

## LATAH CREEK FAULT PLANNING SCENARIO PEAK GROUND ACCELERATION 6.0 MAGNITUDE

### Mercalli Scale, Potential Damage

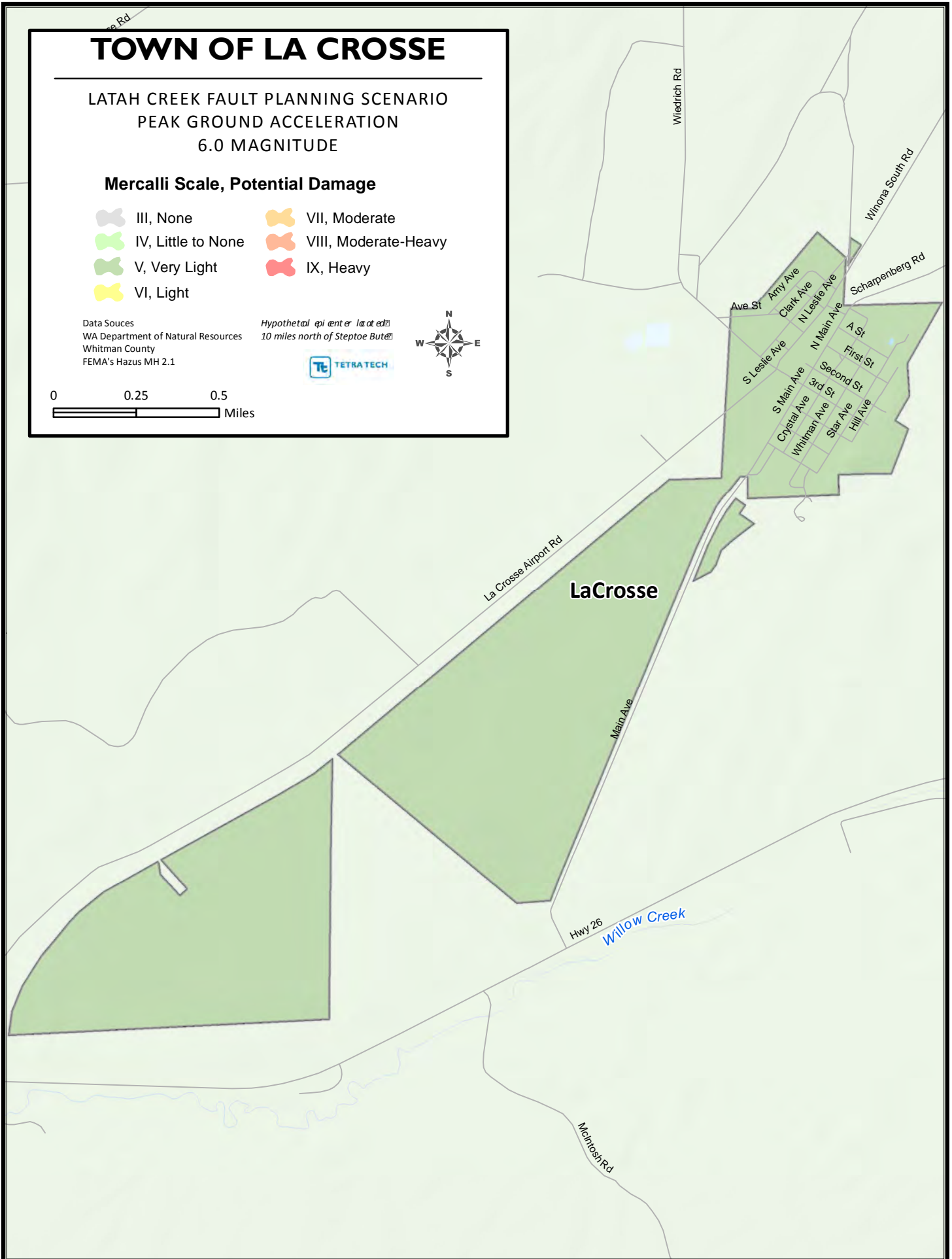
 III, None	 VII, Moderate
 IV, Little to None	 VIII, Moderate-Heavy
 V, Very Light	 IX, Heavy
 VI, Light	

Data Sources  
WA Department of Natural Resources  
Whitman County  
FEMA's Hazus MH 2.1

Hypothetical event located  
10 miles north of Steptoe Butte










0 0.25 0.5  
Miles



# TOWN OF LA CROSSE

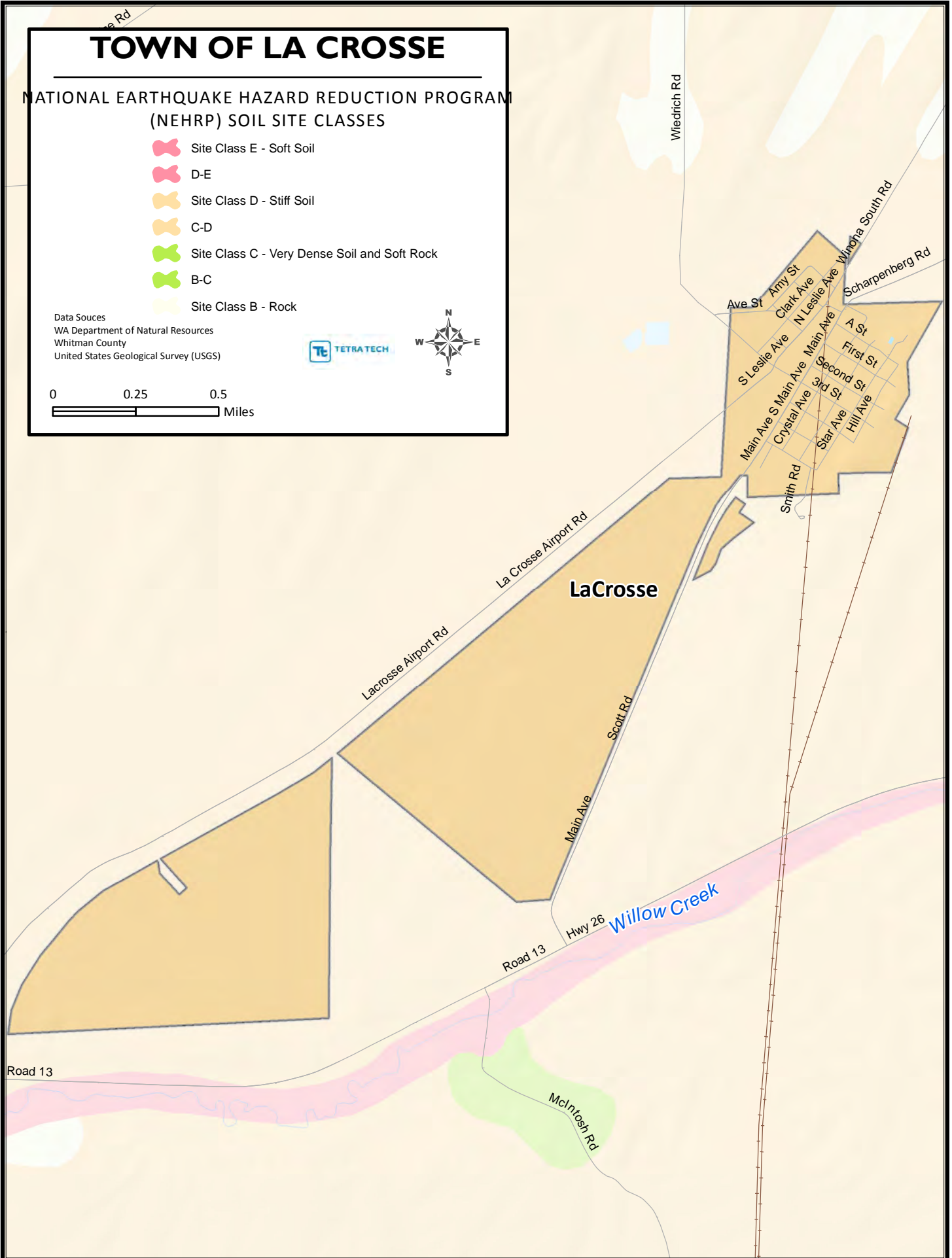
## NATIONAL EARTHQUAKE HAZARD REDUCTION PROGRAM (NEHRP) SOIL SITE CLASSES

-  Site Class E - Soft Soil
-  D-E
-  Site Class D - Stiff Soil
-  C-D
-  Site Class C - Very Dense Soil and Soft Rock
-  B-C
-  Site Class B - Rock

Data Sources  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)



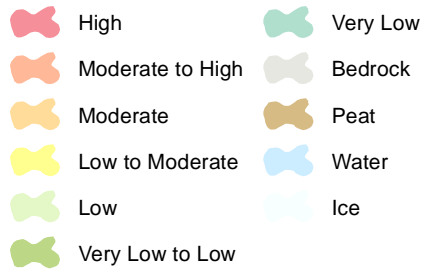
0 0.25 0.5  
Miles





# TOWN OF LA CROSSE

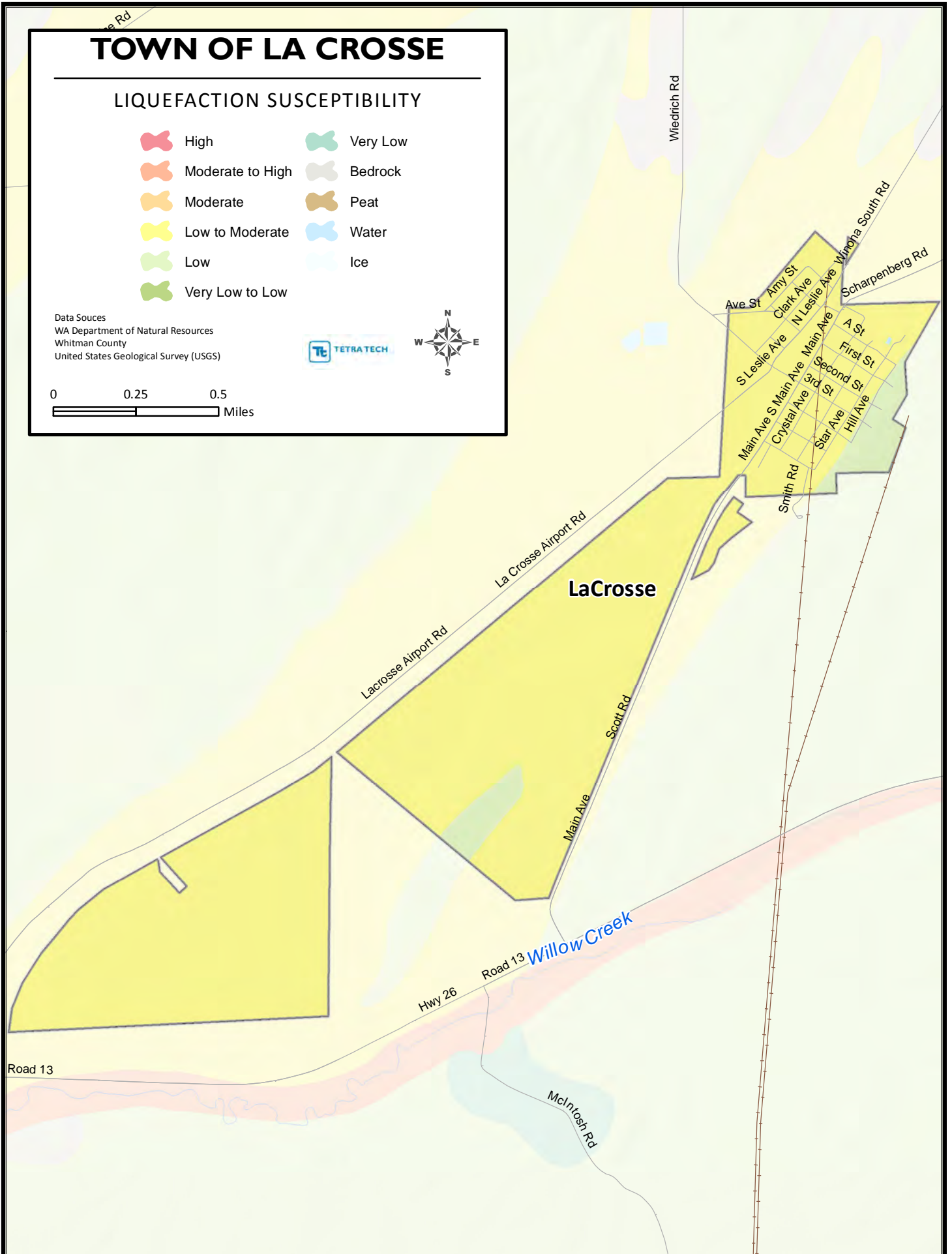
## LIQUEFACTION SUSCEPTIBILITY



Data Sources  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)





0 0.25 0.5  
Miles





# TOWN OF LA CROSSE

## FEMA FLOOD HAZARD AREAS

-  1 Percent Annual Chance Special Flood Hazard (100 Year)
-  0.2 Percent Annual Chance Special Flood Hazard (500 Year)

Data Sources  
FEMA Flood Insurance Rate Maps (Q3)

Whitman County  
WA Department of Natural Resources  
United States Geological Survey (USGS)

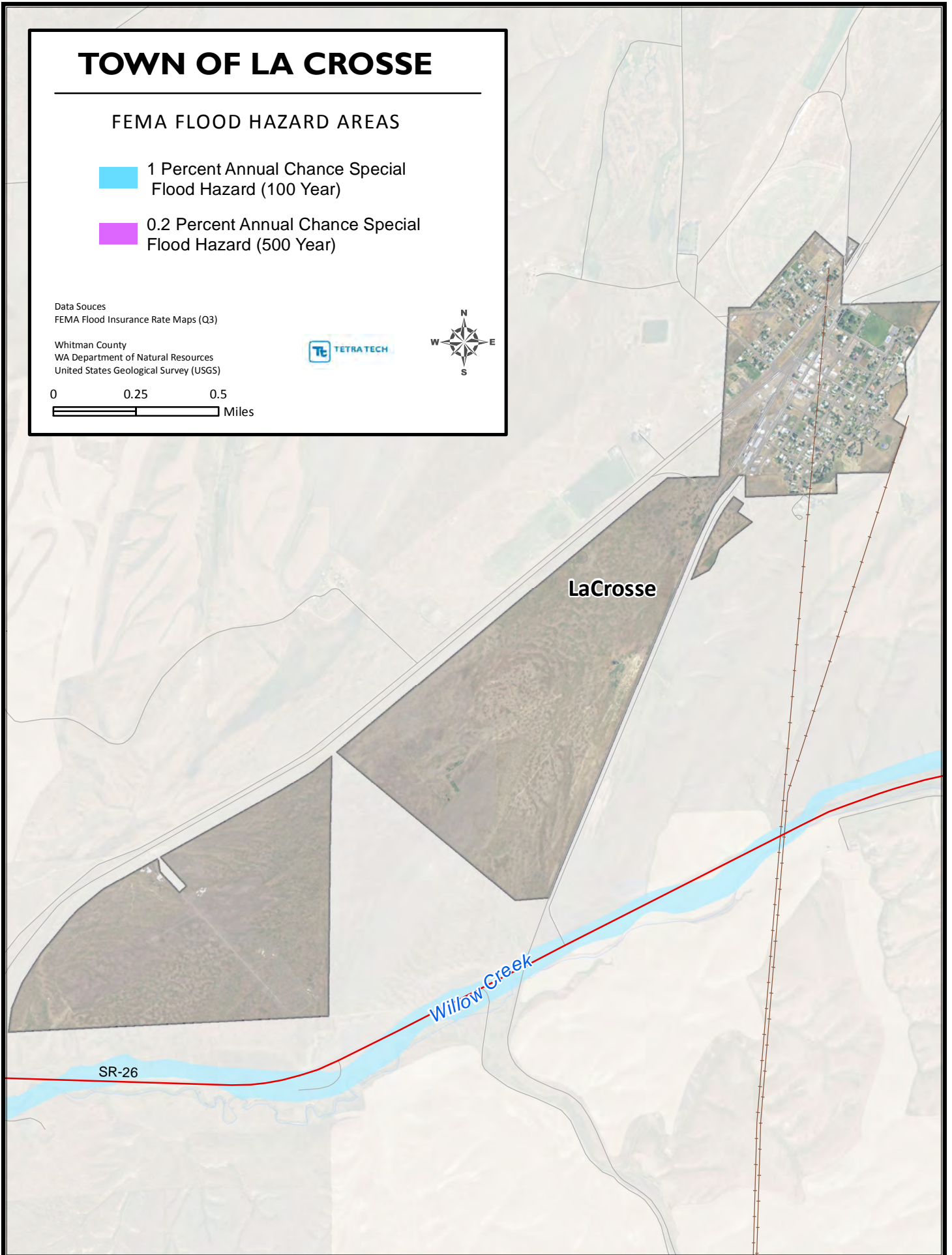


0 0.25 0.5  
Miles

LaCrosse


Willow Creek

SR-26



# TOWN OF LACROSSE


## HAZUS GENERATED FLOOD HAZARD AREA

 Hazus 1 Percent Annual Chance  
Flood Hazard Area (100 Year)

Data Sources  
Hazus Generated Flood Area Using 10 Meter DEM

Whitman County  
WA Department of Natural Resources  
United States Geological Survey (USGS)  
2009 NAIP Imagery



0 0.25 0.5  
 Miles

LaCrosse

Willow Creek

SR-26



# TOWN OF LA CROSSE

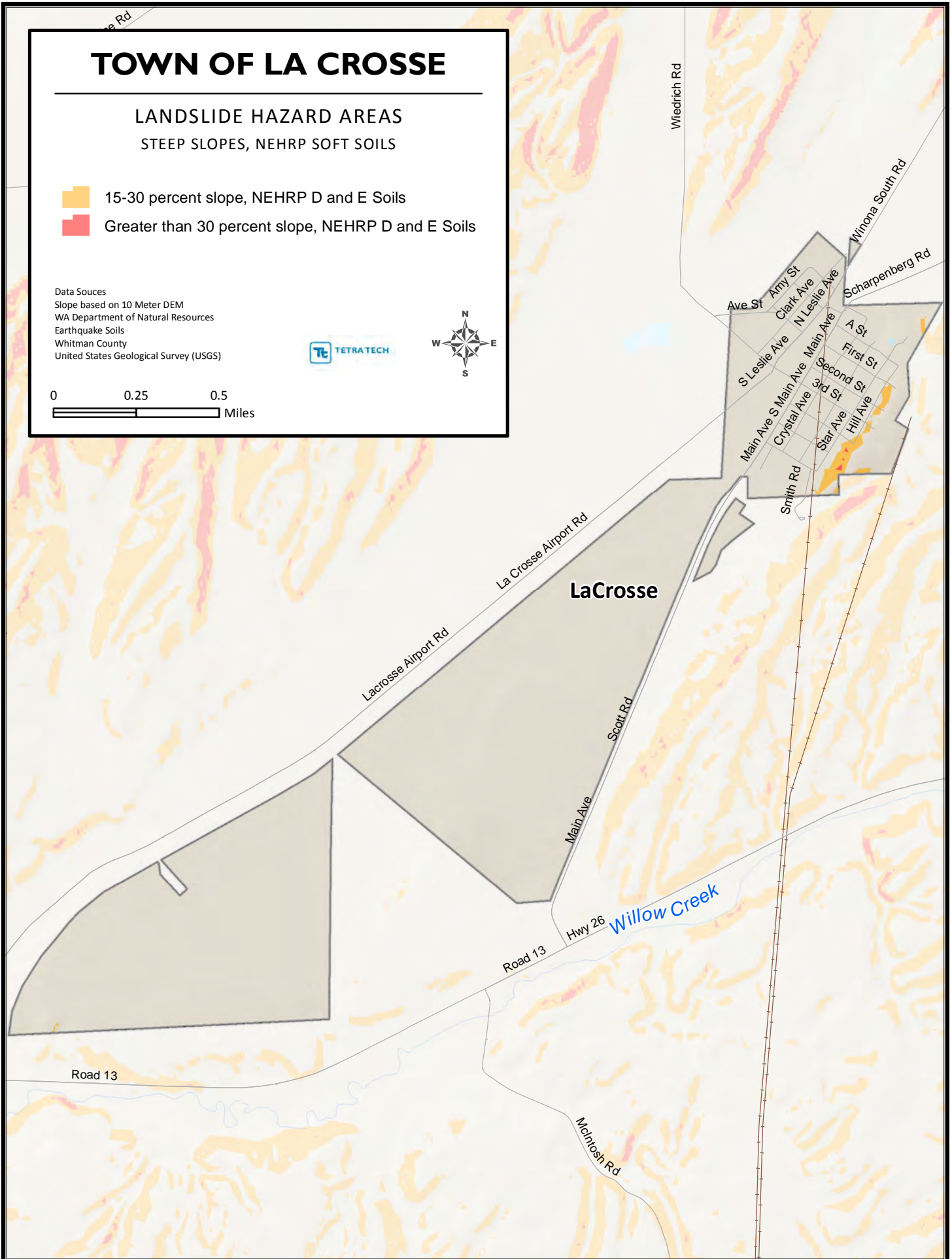
## LANDSLIDE HAZARD AREAS STEEP SLOPES, NEHRP SOFT SOILS

- 15-30 percent slope, NEHRP D and E Soils
- Greater than 30 percent slope, NEHRP D and E Soils

Data Sources  
Slope based on 10 Meter DEM  
WA Department of Natural Resources  
Earthquake Soils  
Whitman County  
United States Geological Survey (USGS)



0 0.25 0.5  
Miles





## CHAPTER 9. TOWN OF OAKESDALE ANNEX

### 9.1 HAZARD MITIGATION PLAN POINT OF CONTACT

#### Primary Point of Contact

Dennis Palmer, Mayor  
P.O. Box 246  
Oakesdale, WA 99158  
Telephone: 509-285-4020  
e-mail Address: townfoakesdale@msn.com

#### Alternate Point of Contact

Mary Degon, Clerk  
P.O. Box 246  
Oakesdale, WA 99158  
Telephone: 509-285-4020  
e-mail Address: townfoakesdale@msn.com

### 9.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—May 19, 1888
- **Current Population**—422 as 2010 census
- **Population Growth**—Based on data from the Washington State Office of Financial Management, the Town of Oakesdale has experienced a relatively flat rate of growth. The overall population increased by 1.2 percent between 2000 and 2010, an average annual increase of 0.1 percent for this time frame.
- **Location and Description**—Oakesdale is located in northeastern Whitman County, 38 miles north of Pullman at the confluence of McCoy and Spring Creeks. The town encompasses approximately 1.0 square miles at an elevation of 2461 feet above sea level. The economy in Oakesdale, like most of Whitman County, is supported by agriculture that occurs in the areas surrounding Oakesdale.
- **Brief History**—Named after Thomas F. Oakes, the former vice president of the Northern Pacific Railroad, Oakesdale was incorporated in 1888. Nestled in the picturesque Palouse hills adjacent to Steptoe Butte State Park, Oakesdale includes historic attractions such as the historical Barron Flour Mill, and the John F. Kelley Homestead Cabin that was built in 1872 located just outside of town.
- **Climate**—Oakesdale enjoys a temperate climate with an average annual temperature 46.6°F. The average annual rain fall for Oakesdale is 18.4 inches.
- **Governing Body Format**—Oakesdale is governed by a Mayor-Council form of government, and the City Council will assume the responsibility for the adoption and implementation of the recommendations of this plan. City provided services include: police, fire, roads and water supply through a Public Works Department, and code enforcement.
- **Development Trends**—Based on its projected growth, the anticipated development trends for the Town of Oakesdale are considered low to moderate, consisting of primarily residential development. Whitman County is not mandated under the State Growth Management Act to fully plan according to requirements of the law. The County and its cities have adopted critical areas and resources lands regulations pursuant to the Growth Management Act.

Whitman County does have mechanisms available to managed future development via regulations identified in a zoning ordinance and policies identified in a comprehensive plan.

### 9.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 9-1 lists all past occurrences of natural hazards in the county. Repetitive loss records are as follows:

- Number of FEMA Identified Repetitive Flood Loss Properties: 0
- Number of Repetitive Flood Loss Properties that have been mitigated: 0

### 9.4 HAZARD RISK RANKING

Table 9-2 presents the ranking of the hazards of concern.

### 9.5 CAPABILITY ASSESSMENT

The assessment of the jurisdiction's legal and regulatory capabilities is presented in Table 9-3. The assessment of the jurisdiction's administrative and technical capabilities is presented in Table 9-4. The assessment of the jurisdiction's fiscal capabilities is presented in Table 9-5. Classifications under various community mitigation programs are presented in Table 9-6.

### 9.6 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED INITIATIVES

Table 9-7 lists the initiatives that make up the jurisdiction's hazard mitigation plan. Table 9-8 identifies the priority for each initiative. Table 9-9 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

### 9.7 STATUS OF PREVIOUS PLAN INITIATIVES

Table 9-10 summarizes the current status of initiatives that were adopted by the County for the previous hazard plan. Those that are directly carried over as actions in this hazard plan are also indicated as such in Table 9-7.

### 9.8 HAZARD AREA EXTENT AND LOCATION

Hazard area extent and location maps for the Town of Oakesdale are included at the end of this chapter. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes.

TABLE 9-1. NATURAL HAZARD EVENTS		
Type of Event	Date	Preliminary Damage Assessment
Flood	Summer 2003	\$2,000
Flood (FEMA Disaster #1159)	12/26/96	Information not available
Flood (FEMA Disaster #1100)	1/26/96	\$1.6 Million for entire county
Volcanic Ash (FEMA Disaster #623)	5/21/1980	Information not available



**TABLE 9-2.  
HAZARD RISK RANKING**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Severe Weather	High, \$110,000
2	Flood (100 year)	High, \$100,000
3	Earthquake	Medium, \$25,000
4	Volcano	Low, \$11,000
5	Wild Fire	No measurable impact on structures
6	Drought	No measurable impact on structures

**TABLE 9-3.  
LEGAL AND REGULATORY CAPABILITY**

	Local Authority	State or Federal Prohibitions	Other Jurisdictional Authority	State Mandated	Comments
<b>Codes, Ordinances &amp; Requirements</b>					
Building Code	Yes	No	No	Yes	Ordinance No. 566, Dated 2/2/04
Zonings	Yes	No	No	No	OMC 4.04—Updated 1997
Subdivisions	Yes	No	No	No	OMC 7.02—Updated 1996
Stormwater Management	No	No	No	No	
Post Disaster Recovery	No	No	No	No	
Real Estate Disclosure	Yes	No	No	Yes	OMC 4.48.010 C6 Updated 5/89 State: Revised Code of Washington 64.06
Growth Management	No	No	No	Yes	Critical areas and resource lands only
Site Plan Review	Yes	No	No	Yes	OMC 4.28—Updated 1992
Special Purpose (flood management, critical areas)	Yes	No	Yes	Yes	Critical Areas OMC 2.32—Updated 11/99. Floodplain OMC 4.28— Updated 22/3/03 via Ordinance #562
<b>Planning Documents</b>					
Comprehensive Plan	No	No	No	Yes	Comprehensive plan 1975
Floodplain or Basin Plan	No	No	No	No	
Stormwater Plan	No	No	No	No	
Capital Improvement Plan	Yes	No	No	Yes	6 Year Street Plan
Habitat Conservation Plan	No	No	No	No	
Economic Development Plan	No	No	No	No	
Emergency Response Plan	No	No	No	No	
Shoreline Management Plan	No	No	No	No	
Post Disaster Recovery Plan	No	No	No	No	

**TABLE 9-4.  
ADMINISTRATIVE AND TECHNICAL CAPABILITY**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	No	
Engineers or professionals trained in building or infrastructure construction practices	Yes	Building Inspector
Planners or engineers with an understanding of natural hazards	Yes	Building Inspector
Staff with training in benefit/cost analysis	No	
Floodplain manager	Yes	Building Inspector
Surveyors	No	
Personnel skilled or trained in GIS applications	No	
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Mayor
Grant writers	Yes	City Clerk

**TABLE 9-5.  
FISCAL CAPABILITY**

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	Limited
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Don't know
Incur Debt through Private Activity Bonds	Don't know
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No

**TABLE 9-6.  
COMMUNITY CLASSIFICATIONS**

	Participating?	Classification	Date Classified
Community Rating System	No	—	—
Building Code Effectiveness Grading Schedule	Yes	3/3	2001
Public Protection	Yes	8/9*	11/2005
Storm Ready	No	—	—
Firewise	No	—	—

\* Higher classification applies to when subject property is located beyond 1,000 feet of a creditable fire hydrant and is within 5 road miles of a recognized fire station.

**TABLE 9-7.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative O-1</b> —Develop a Comprehensive Flood Hazard Management plan that will update the flood risk assessment for Oakesdale, and identify alternatives within the capabilities of Oakesdale to mitigate the impacts of flooding.							
Existing	Flood	2 4 7 9	Public Works	Unknown	General Fund Grant Funding FMA, FCAAP, PDM	Short term, depending on financing	Yes
<b>Initiative O-2</b> —Initiate damage/feasibility study to determine seismic vulnerability and identify mitigation alternatives for city owned critical facilities and infrastructure.							
Existing	Earthquake	2 4 7 9	Public Works	Unknown	General Fund Bond Issue Grant Funding: PDM, HMGP	Short term, depending on financing	Yes
<b>Initiative O-2</b> —Work with local utility providers to initiate/promote underground utilities when opportunities arise via repair or replacement of utilities.							
Existing	Severe Weather	3 6 7	City Council	Unknown	General Fund Utility Fees	Short term Ongoing	Yes
<b>Initiative O-4</b> —Initiate outreach program to educate home owners on flood proofing their basements.							
Existing	Flood	2 3 5 7	Public Works	\$1,500	Local	Short term	Yes

**TABLE 9-7.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative O-5</b> —Support countywide initiatives that promote the education of the public on the impacts of natural hazards within Whitman County, and the preparedness for and the mitigation of those impacts. This support will be in the form of dissemination of appropriate information to the residents of Oakesdale and continuing support/participation in the Whitman County Natural Hazards Mitigation Planning Partnership.							
Existing	All Hazards	2 6 7	City Council	Unknown	General Fund	Short term Ongoing	Yes
<b>Initiative O-6</b> —Consider voluntary participation in programs such as the Community Rating System, Firewise and Storm Ready programs that will provide benefits/incentives to the Citizens of Oakesdale for hazard mitigation.							
Existing	Flood, Wildfire	2 6 7 8	City Council	Unknown	General Fund	Short Term	Yes
<b>Initiative O-7</b> —Utilize information provided in the Whitman County Hazard Identification and Vulnerability Assessment to consider regulatory provisions that will reduce the vulnerability, and promote wise land use with regards to hazards that impact the Town of Oakesdale.							
Existing	All Hazards	1 3 9 10	City Council	Unknown	General Fund	Long Term	
<b>Initiative O-8</b> —Continue to coordinate and work with Whitman County Emergency Management in disaster response and preparedness. This level of coordination should include: updates to the Emergency response plan, development of post disaster action plan, training and support.							
Existing	All Hazards	2 4 6	Mayor City Council	Unknown	General Fund	Short term Ongoing	Yes

**TABLE 9-8.  
MITIGATION STRATEGY PRIORITY SCHEDULE**

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant- Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority <sup>a</sup>
O-1	4	High	High	Yes	Yes	No	Medium
O-2	4	High	High	Yes	Yes	No	Medium
O-3	3	Medium	Medium	Yes	No	No	Medium
O-4	4	Low	\$1,500	Yes	No	No	Low
O-5	3	Medium	Low	Yes	No	Yes	High
O-6	4	Low	Low	Yes	No	Yes	Medium
O-7	4	Medium	Low	Yes	No	Yes	High
O-8	3	Medium	Low	Yes	No	Yes	High

a. See Section 1.3 for definitions of high, medium and low priorities.

**TABLE 9-9.  
ANALYSIS OF MITIGATION INITIATIVES**

Hazard Type	Initiative Addressing Hazard, by Mitigation Type					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	7		5	.	7, 8	
Drought	7		5		7, 8	
Earthquake	2, 7	2	5		7, 8	
Flood	1, 6, 7	1, 4, 6	1, 4, 5, 6	1, 6	1, 6, 7, 8	1
Landslide	7		5		7, 8	
Severe Weather	6, 7	3, 4	4, 5, 6		6, 7, 8	
Volcano	7		5		7, 8	
Wildfire	6, 7	6	5, 6	6	6, 7, 8	6
<ol style="list-style-type: none"> <li>1. Prevention: Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.</li> <li>2. Property Protection: Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.</li> <li>3. Public Education and Awareness: Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.</li> <li>4. Natural Resource Protection: Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.</li> <li>5. Emergency Services: Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.</li> <li>6. Structural Projects: Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.</li> </ol>						

**TABLE 9-10.**  
**PREVIOUS ACTION PLAN IMPLEMENTATION STATUS**

Action #	Action Status			Comments
	Completed	Carry Over to Plan Update	Removed; No Longer Feasible	
1		X		Carried over as Initiative O-1 in updated plan
2		X		Carried over as Initiative O-2 in updated plan
3		X		Carried over as Initiative O-3 in updated plan
4		X		Carried over as Initiative O-4 in updated plan
5		X		Carried over as Initiative O-5 in updated plan
6		X		Carried over as Initiative O-6 in updated plan
7		X		Carried over as Initiative O-7 in updated plan
8		X		Carried over as Initiative O-8 in updated plan



# CITY OF OAKESDALE

## CRITICAL FACILITIES

- |                 |              |
|-----------------|--------------|
| ● Bridge        | ◇ Other      |
| ▲ Communication | 🏫 School     |
| ⛔ Protective    | ● Wastewater |
| ⚡ Hazmat        | ■ Water      |
| ✚ Medical       |              |









0 0.25 0.5 Miles



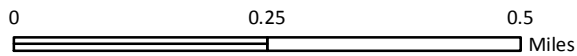
# TOWN OF OAKESDALE

## 100 YEAR PROBABILISTIC EARTHQUAKE PEAK GROUND ACCELERATION

### Mercalli Scale, Potential Damage

 IV, Little to None	 VII, Moderate
 V, Very Light	 VIII, Moderate-Heavy
 VI, Light	 IX, Heavy







Data Sources  
FEMA Hazus MH Version 2.1  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)



# TOWN OF OAKESDALE

## 500 YEAR PROBABILISTIC EARTHQUAKE PEAK GROUND ACCELERATION

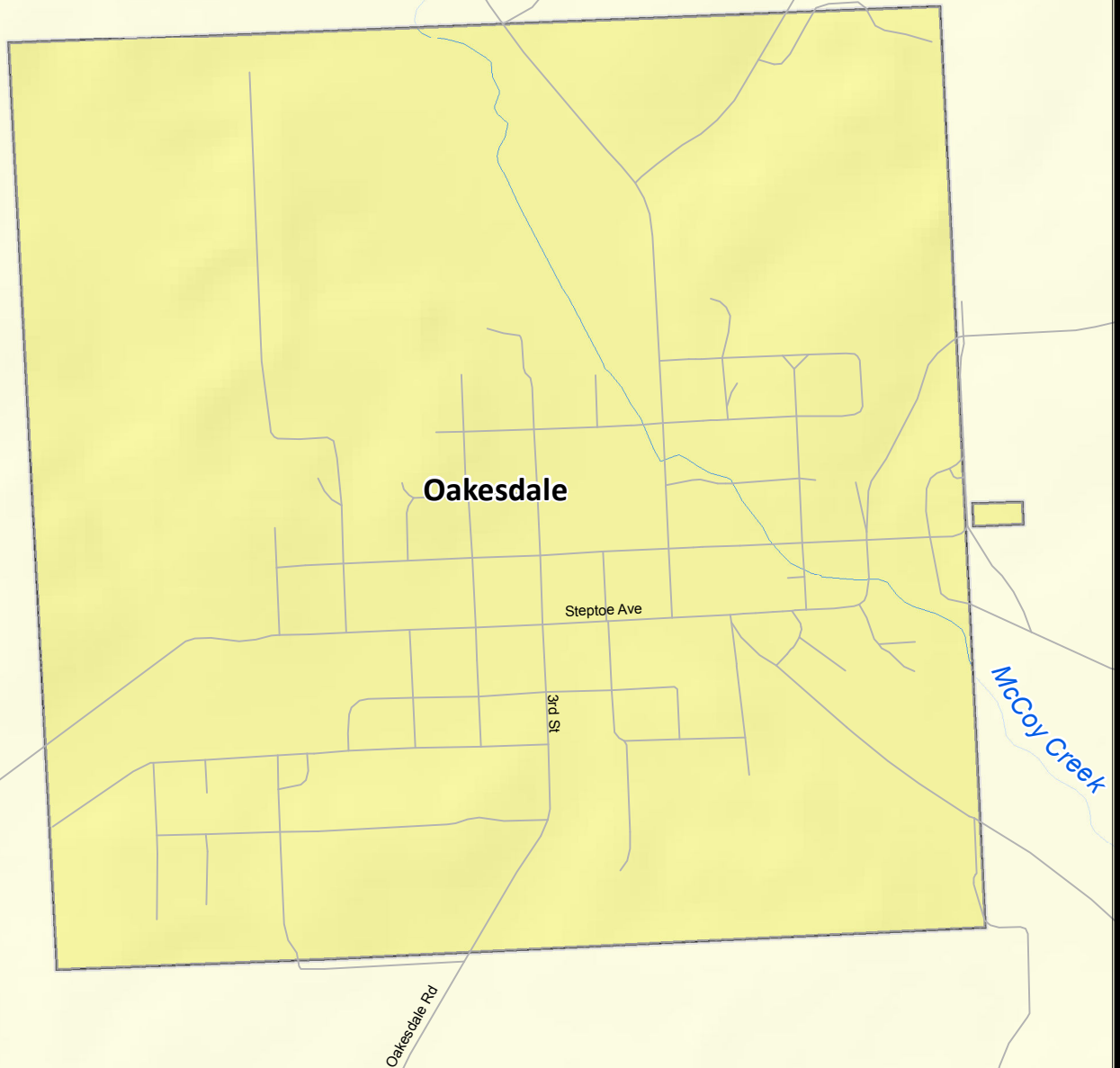
### Mercalli Scale, Potential Damage

 IV, Little to None	 VII, Moderate
 V, Very Light	 VIII, Moderate-Heavy
 VI, Light	 IX, Heavy

Data Sources  
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Whitman County  
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0 0.25 0.5  
Miles



# TOWN OF OAKESDALE

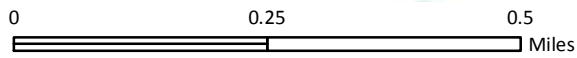
## LATAH CREEK FAULT PLANNING SCENARIO PEAK GROUND ACCELERATION 6.0 MAGNITUDE

### Mercalli Scale, Potential Damage

	III, None		VII, Moderate
	IV, Little to None		VIII, Moderate-Heavy
	V, Very Light		IX, Heavy
	VI, Light		








Data Sources  
WA Department of Natural Resources  
Whitman County  
FEMA's Hazus MH 2.1

Hypothetical event located  
10 miles north of Steptoe Butte



# TOWN OF OAKESDALE

## NATIONAL EARTHQUAKE HAZARD REDUCTION PROGRAM (NEHRP) SOIL SITE CLASSES

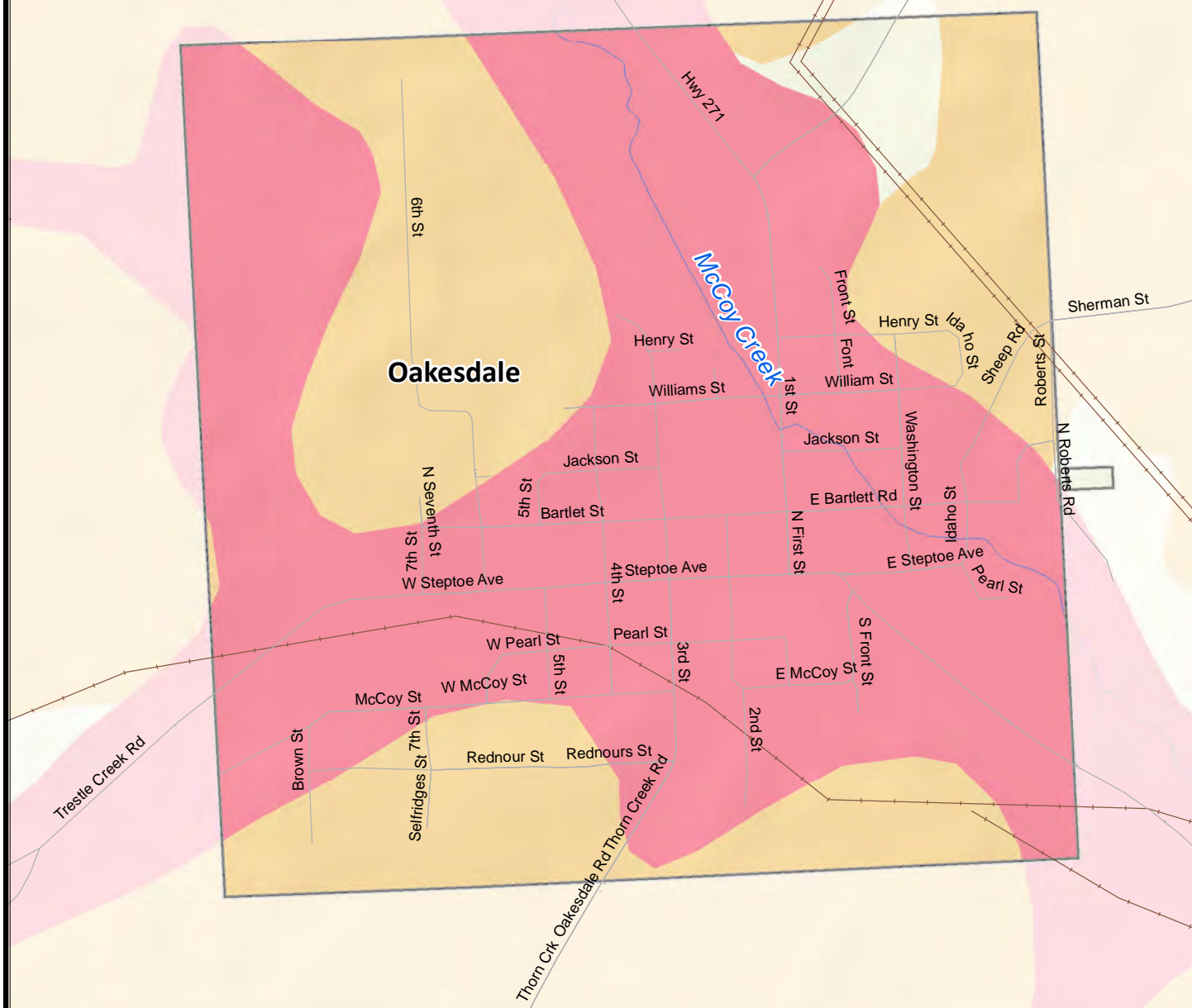
-  Site Class E - Soft Soil
-  D-E
-  Site Class D - Stiff Soil
-  C-D
-  Site Class C - Very Dense Soil and Soft Rock
-  B-C
-  Site Class B - Rock

Data Sources  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)



0                      0.25                      0.5

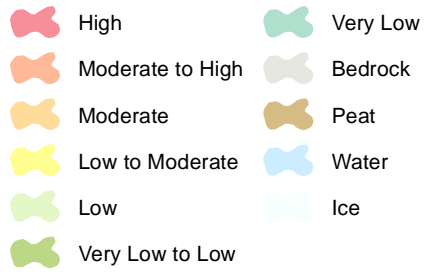
\_\_\_\_\_ Miles



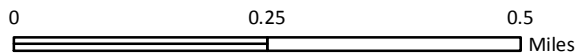


# TOWN OF OAKESDALE

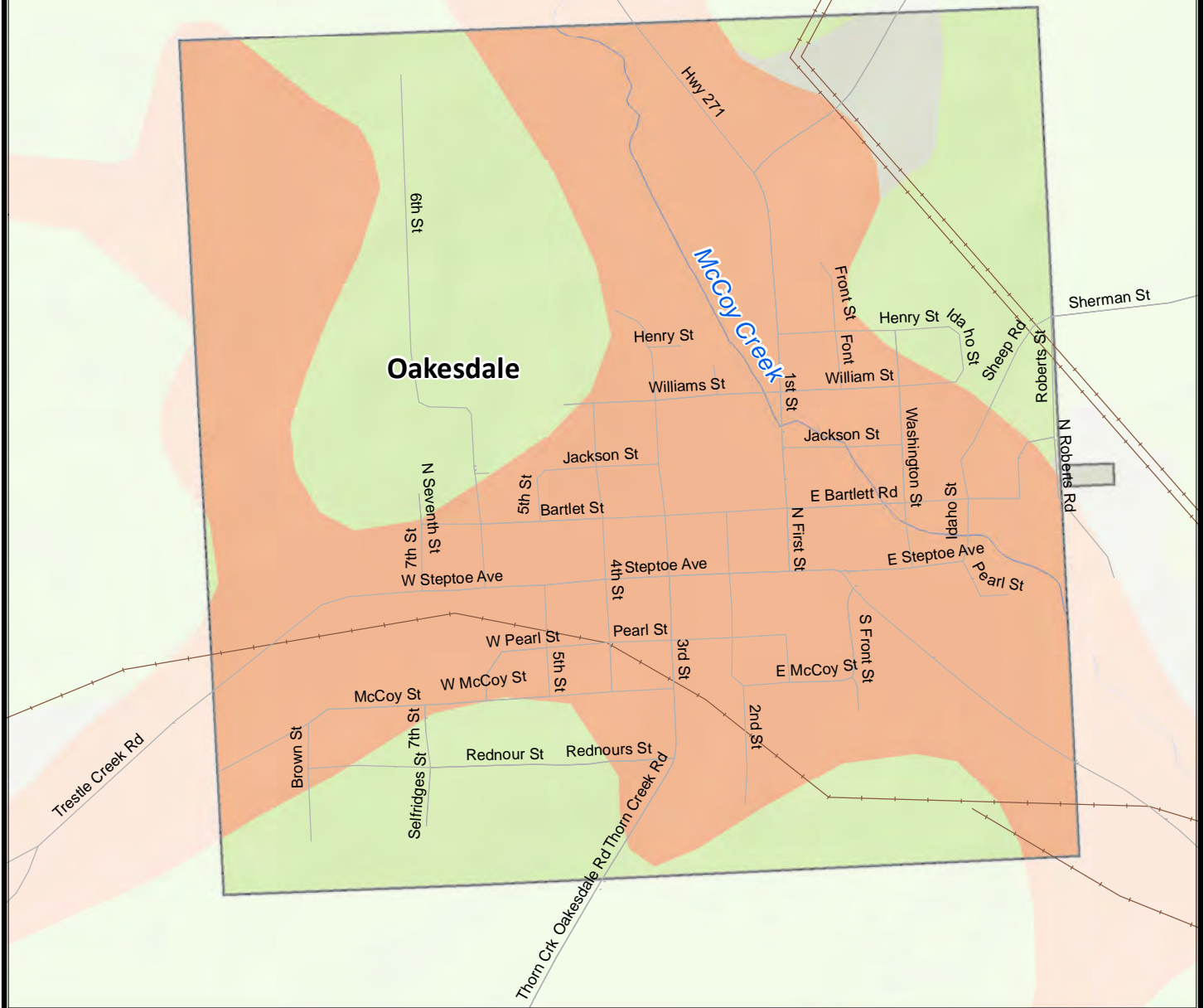
## LIQUEFACTION SUSCEPTIBILITY



Data Sources  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)





Oakesdale





# TOWN OF OAKESDALE

## FEMA FLOOD HAZARD AREAS

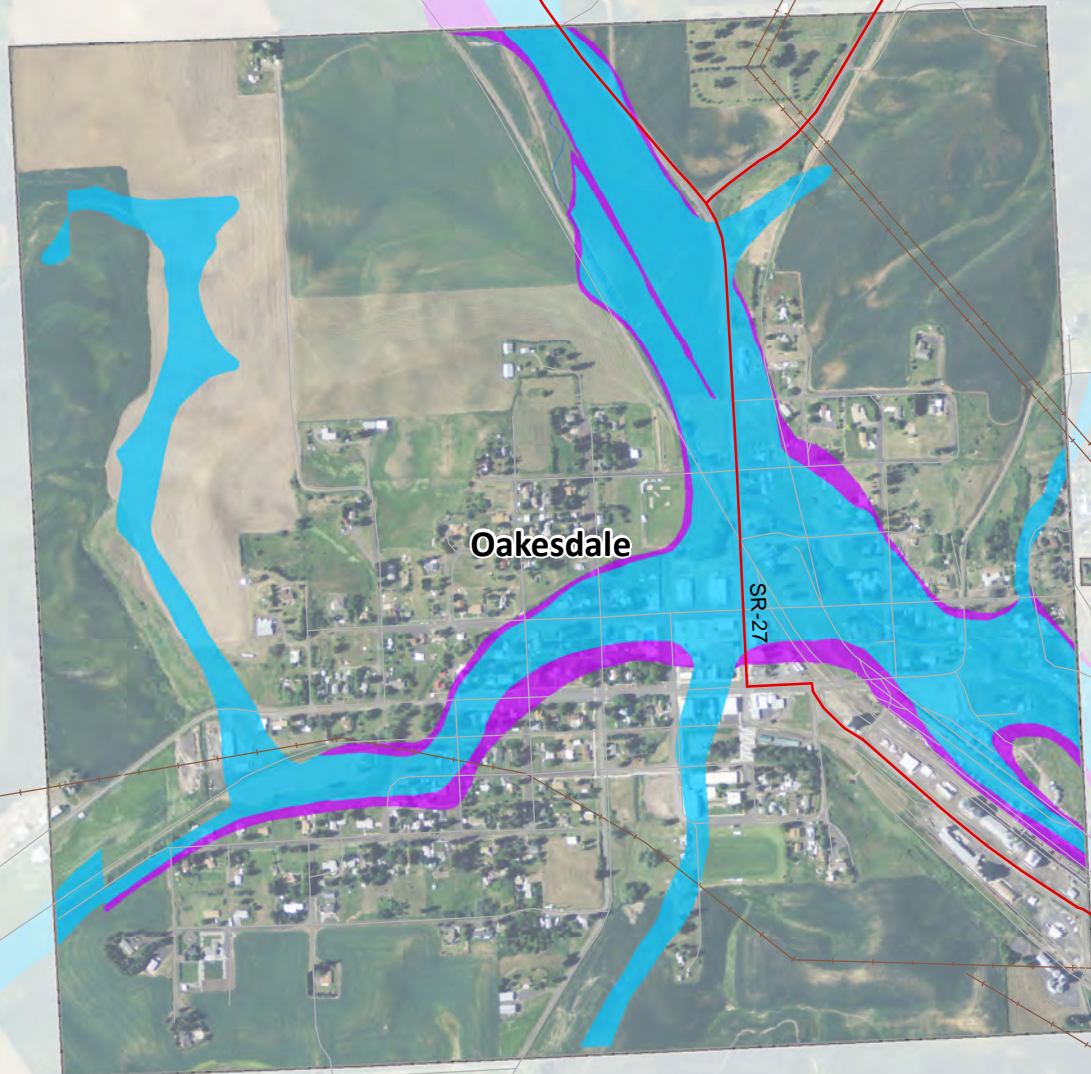
-  1 Percent Annual Chance Special Flood Hazard (100 Year)
-  0.2 Percent Annual Chance Special Flood Hazard (500 Year)

Data Sources  
FEMA Flood Insurance Rate Maps (Q3)

Whitman County  
WA Department of Natural Resources  
United States Geological Survey (USGS)




0 0.25 0.5  
Miles





# TOWN OF OAKESDALE

## HAZUS GENERATED FLOOD HAZARD AREA

 Hazus 1 Percent Annual Chance  
Flood Hazard Area (100 Year)

### Data Sources

Hazus Generated Flood Area Using 10 Meter DEM

Whitman County  
WA Department of Natural Resources  
United States Geological Survey (USGS)  
2009 NAIP Imagery



0 0.25 0.5  
Miles



# TOWN OF OAKESDALE

## LANDSLIDE HAZARD AREAS

STEEP SLOPES, NEHRP SOFT SOILS



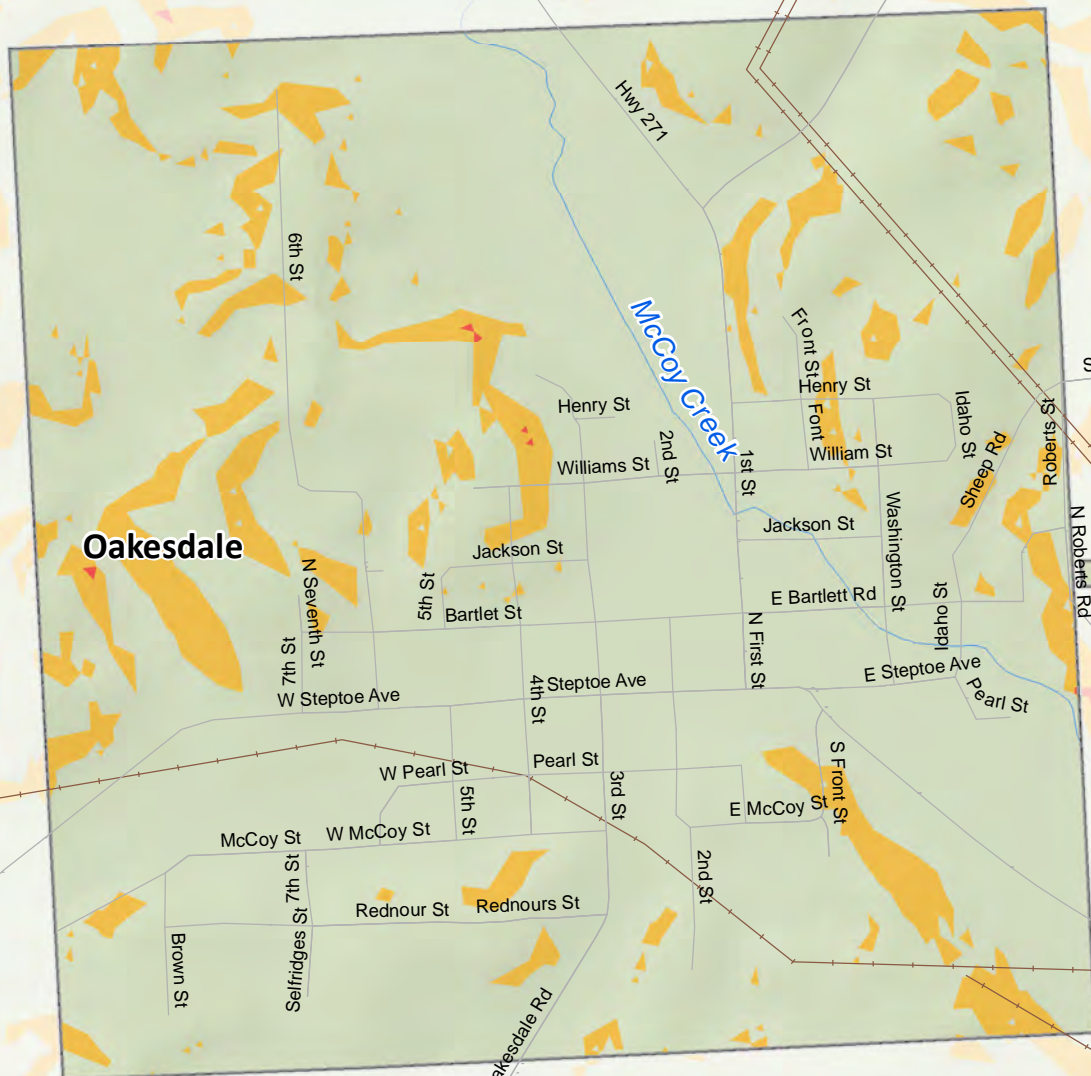
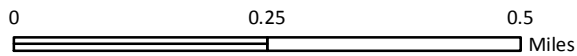
15-30 percent slope, NEHRP D and E Soils



Greater than 30 percent slope, NEHRP D and E Soils

### Data Sources

Slope based on 10 Meter DEM  
WA Department of Natural Resources  
Earthquake Soils  
Whitman County  
United States Geological Survey (USGS)





## CHAPTER 10.

### TOWN OF ST. JOHN ANNEX

#### 10.1 HAZARD MITIGATION PLAN POINT OF CONTACT

##### Primary Point of Contact

K. B. Trunkey, Mayor  
E. 1 Front Street  
St. John, WA 99171  
Telephone: 509-648-3905  
e-mail Address: stjohncable.com

##### Alternate Point of Contact

Linda Hayes, Clerk-Treasurer  
E. 1 Front Street  
St. John, WA 99171  
Telephone: 509-648-3905  
e-mail Address: stjohncable.com

#### 10.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—March 10, 1904
- **Current Population**—501 as of April 1, 2012
- **Population Growth**—Based on data from the Washington State Office of Financial Management, the Town of St. John has experienced a declining rate of growth. The overall population decreased by 8.6 percent between 2000 and 2010, an average annual decrease of 0.74 percent for this time frame.
- **Location and Description**—St. John is located in the northwest corner of Whitman County on Highway 23 between Steptoe and Sprague at an elevation of 1950 feet above sea level. As the 8th largest City within Whitman County, the community of St. John is proud of their newly reconstructed downtown infrastructure which includes a new road base, pavement, curb and gutter, sidewalks, storm drainage, street lighting, waterlines, striping and signage, making the available sites and buildings for lease all the more desirable. St. John has schools, a medical clinic, library, outdoor swimming pool, golf course, active downtown business core and industrial business locations. Residents of St. John have the highest median income of all the Whitman County communities.
- **Brief History**—St. John was founded and named in the late 1880s for settler E.T. St. John. St. John is the birthplace of the twentieth governor of Washington, Mike Lowry.
- **Climate**—St. John enjoys a temperate climate with an average low temperature of 34.3°F and an average high temperature of 60°F. The average annual rain fall for St. John is 21.3 inches.
- **Governing Body Format**—incorporated in 1904, St. John is governed by a mayor-council form of government consisting of 5 elected Council Members and an elected Mayor. This body will assume the responsibility for the adoption and implementation of this plan. The Town provides public safety, fire prevention, general administrative services, park and recreation, water/wastewater services, and street improvements to its 500 plus citizens.
- **Development Trends**—Based on its projected growth, the anticipated development trends for the Town of St. John are considered to be relatively neutral. While growth and development would be welcome by the town, none is anticipated during the next performance period for this plan. Whitman County is not mandated under the State Growth Management



Act to fully plan according to requirements of the law. The County and its cities have adopted critical areas and resources lands regulations pursuant to the Growth Management Act. Endicott does have mechanisms available to managed future development via regulations identified in a zoning ordinance and policies identified in a comprehensive plan should a growth spurt occur within the Town.

### **10.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY**

Table 10-1 lists past occurrences of natural hazards in the county. Repetitive loss records are as follows:

- Number of FEMA Identified Repetitive Flood Loss Properties: 0
- Number of Repetitive Flood Loss Properties that have been mitigated: 0

### **10.4 HAZARD RISK RANKING**

Table 10-2 presents the ranking of the hazards of concern.

### **10.5 CAPABILITY ASSESSMENT**

The assessment of the jurisdiction's legal and regulatory capabilities is presented in Table 10-3. The assessment of the jurisdiction's administrative and technical capabilities is presented in Table 10-4. The assessment of the jurisdiction's fiscal capabilities is presented in Table 10-5. Classifications under various community mitigation programs are presented in Table 10-6.

### **10.6 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED INITIATIVES**

Table 10-7 lists the initiatives that make up the jurisdiction's hazard mitigation plan. Table 10-8 identifies the priority for each initiative. Table 10-9 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

### **10.7 STATUS OF PREVIOUS PLAN INITIATIVES**

Table 10-10 summarizes the current status of initiatives that were adopted by the County for the previous hazard plan. Those that are directly carried over as actions in this hazard plan are also indicated as such in Table 10-7.

### **10.8 HAZARD AREA EXTENT AND LOCATION**

Hazard area extent and location maps for the Town of St. John are included at the end of this chapter. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes.

<b>TABLE 10-1. NATURAL HAZARD EVENTS</b>		
Type of Event	Date	Preliminary Damage Assessment
Snow Disaster (Disaster #075-60860-00)	12/2008	Asphalt damage, valve & shut off repairs
Volcano (Disaster #623)	5/21/1980	Info not available



**TABLE 10-2.  
HAZARD RISK RANKING**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Severe Weather	High
2	Earthquake	Medium
3	Flood	High
4	Volcano	Low
5	Wild Fire	High
6	Drought	High

**TABLE 10-3.  
LEGAL AND REGULATORY CAPABILITY**

	Local Authority	State or Federal Prohibitions	Other Jurisdictional Authority	State Mandated	Comments
<b>Codes, Ordinances &amp; Requirements</b>					
Building Code	Yes	No	No	Yes	Adopted 2010
Zonings	Yes	No	No	No	Adopted 2007
Subdivisions	No	No	No	No	
Stormwater Management	No	No	No	No	
Post Disaster Recovery	No	No	No	No	
Real Estate Disclosure	No	No	No	No	
Growth Management	Yes	No	No	Yes	Adopted 2003
Site Plan Review	Yes	No	No	Yes	
Special Purpose (flood management, critical areas)	Yes	No	No	No	Adopted 2003, 2007
<b>Planning Documents</b>					
Comprehensive Plan	Yes	No	No	No	Updated 2007
Floodplain or Basin Plan	Yes	No	No	Yes	
Stormwater Plan	No	No	No	No	
Capital Improvement Plan	Yes	No	No	No	
Habitat Conservation Plan	No	No	No	No	
Economic Development Plan	Yes	No	No	No	
Emergency Response Plan	Yes	No	No	No	
Shoreline Management Plan	No	No	No	No	
Post Disaster Recovery Plan	No	No	No	No	

**TABLE 10-4.  
ADMINISTRATIVE AND TECHNICAL CAPABILITY**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Anderson Perry & Assoc.
Engineers or professionals trained in building or infrastructure construction practices	Yes	Department of Public Works, Rodger Bly
Planners or engineers with an understanding of natural hazards	No	County has such resources
Staff with training in benefit/cost analysis	Yes	Frank Watson, Council Member
Floodplain manager	Yes	Floodplain Administrator, Department of Public Works
Surveyors	Yes	Anderson Perry & Assoc.
Personnel skilled or trained in GIS applications	No	Can contract for services
Scientist familiar with natural hazards in local area	Yes	Washington State University
Emergency manager	Yes	Whitman County Emergency Management
Grant writers	No	

**TABLE 10-5.  
FISCAL CAPABILITY**

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes, water, sewer
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes, but not likely

**TABLE 10-6.  
COMMUNITY CLASSIFICATIONS**

	Participating?	Classification	Date Classified
Community Rating System	No	—	—
Building Code Effectiveness Grading Schedule	Yes	5/5	2001
Public Protection	Yes	7/9*	11/1/2004
Storm Ready	No	—	—
Firewise	No	—	—

\* Higher classification applies to when subject property is located beyond 1,000 feet of a creditable fire hydrant and is within 5 road miles of a recognized fire station.

**TABLE 10-7.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative #SJ-1</b> —Description-Pleasant Valley Creek-Stream Maintenance/Enhancement. Enhance stream channel capacity through ongoing maintenance and channel improvements that will increase conveyance while enhancing the natural and beneficial functions of the stream system.							
Existing	Flood	3, 7, 8	Dept. of Public Works	\$20000.00	Grant, General Fund	Short Term  Ongoing, depends on funding	Yes
<b>Initiative #SJ-2</b> —Description-Relocate sewage treatment plant from its current location which has vulnerability to both flood and earthquake hazards.							
Existing	Flood  Earthquake	1, 3	Dept. of Public Works	5 million	Bond Issue, CIP or General Fund  Grant Funding: PDM, HMGP, FMA	Long Term, depends on funding	Yes

**TABLE 10-7.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative #SJ-3</b> —Description-Seismic retrofit/upgrade of that portion of the City’s domestic water supply system that is vulnerable to severe ground shaking due to its age and construction. This project will also include enhancement to the City’s fire hydrant spacing/distribution as mitigation for the wild land fire hazard exposure.							
Existing	Earthquake Wildfire	3, 4, 7	Dept. of Public Works		Bond Issue, CIP or General Fund  Grant Funding: Public Works Trust Fund  PDM, HMGP	Long Term, depends on funding	Yes
<b>Initiative #SJ-4</b> —Description-Work with providers of electric utility services to the City of St. John to place electric utilities underground when being repaired, replaced or enhanced as mitigation for the impacts of the severe weather hazard.							
Existing	Severe Weather	2, 3, 5, 7	St. John City Council  Dept. of Public Works		General Fund	Short Term  Ongoing	Yes
<b>Initiative #SJ-5</b> —Description-Support countywide initiatives that promote the education of the public on the impacts of natural hazards within Whitman County, and the preparedness for and the mitigation of those impacts. This support will be in the form of dissemination of appropriate information to the residents of St. John and continuing support/participation in the Whitman County Natural Hazards Mitigation Planning Partnership.							
Existing	All Hazards	2, 3, 4, 6	St. John City Council		General Fund	Short Term  Ongoing	Yes
<b>Initiative #SJ-6</b> —Description-Continue to coordinate and work with Whitman County Emergency Management in disaster response and preparedness. This level of coordination should include: updates to the Emergency response plan, development of a post disaster action plan, training and support.							
Existing	All Hazards	2, 4, 5, 6, 8	St. John City Council		General Fund	Ongoing/Sho rt Term	Yes
<b>Initiative #SJ-7</b> —Description-Construct Water Fill Station for fire department							
New	Fire	3, 5, 7, 8	St. John City Council		General Fund  Grant Funding: Public Works Trust Fund	Short Term	No

**TABLE 10-8.  
MITIGATION STRATEGY PRIORITY SCHEDULE**

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority <sup>a</sup>
SJ-1	2	High	High	Yes	Yes	No	High
SJ-2	3	High	High	Yes	Yes	No	High
SJ-3	3	High	High	Yes	Yes	No	Medium
SJ-4	3	Medium	Low	Yes	No	Yes	High
SJ-5	3	Low	Low	Yes	Yes	Yes	High
SJ-6	3	Medium	Low	Yes	No	Yes	High
SJ-7	1	High	High	Yes	Yes	No	High

a. See Section 1.3 for definitions of high, medium and low priorities.

**TABLE 10-9.**  
**ANALYSIS OF MITIGATION INITIATIVES**

Hazard Type	Initiative Addressing Hazard, by Mitigation Type					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	—	—	5	—	6	—
Drought	—	-	5	—	6	—
Earthquake	—	2, 3	5	—	6	—
Flood	1	2	5	1	6	1
Landslide	—	—	5	—	6	—
Severe Weather	—	4	5	—	6	—
Volcano	—	—	5	—	6	—
Wildfire	3, 7	4	5	—	6, 7	—

1. Prevention: Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.

2. Property Protection: Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.

3. Public Education and Awareness: Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.

4. Natural Resource Protection: Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.

5. Emergency Services: Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.

6. Structural Projects: Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.



**TABLE 10-10.  
PREVIOUS ACTION PLAN IMPLEMENTATION STATUS**

Action #	Action Status			Comments
	Completed	Carry Over to Plan Update	Removed; No Longer Feasible	
SJ-1	No	Yes		Ongoing project
SJ-2	No	Yes		Within next 5-10 years
SJ-3	Yes	No		Generator Purchased
SJ-4	No	Yes		
SJ-5	Yes	No		Decommissioned Well
SJ-6	No	Yes		
SJ-7	No	Yes		
SJ-8	No	Yes		

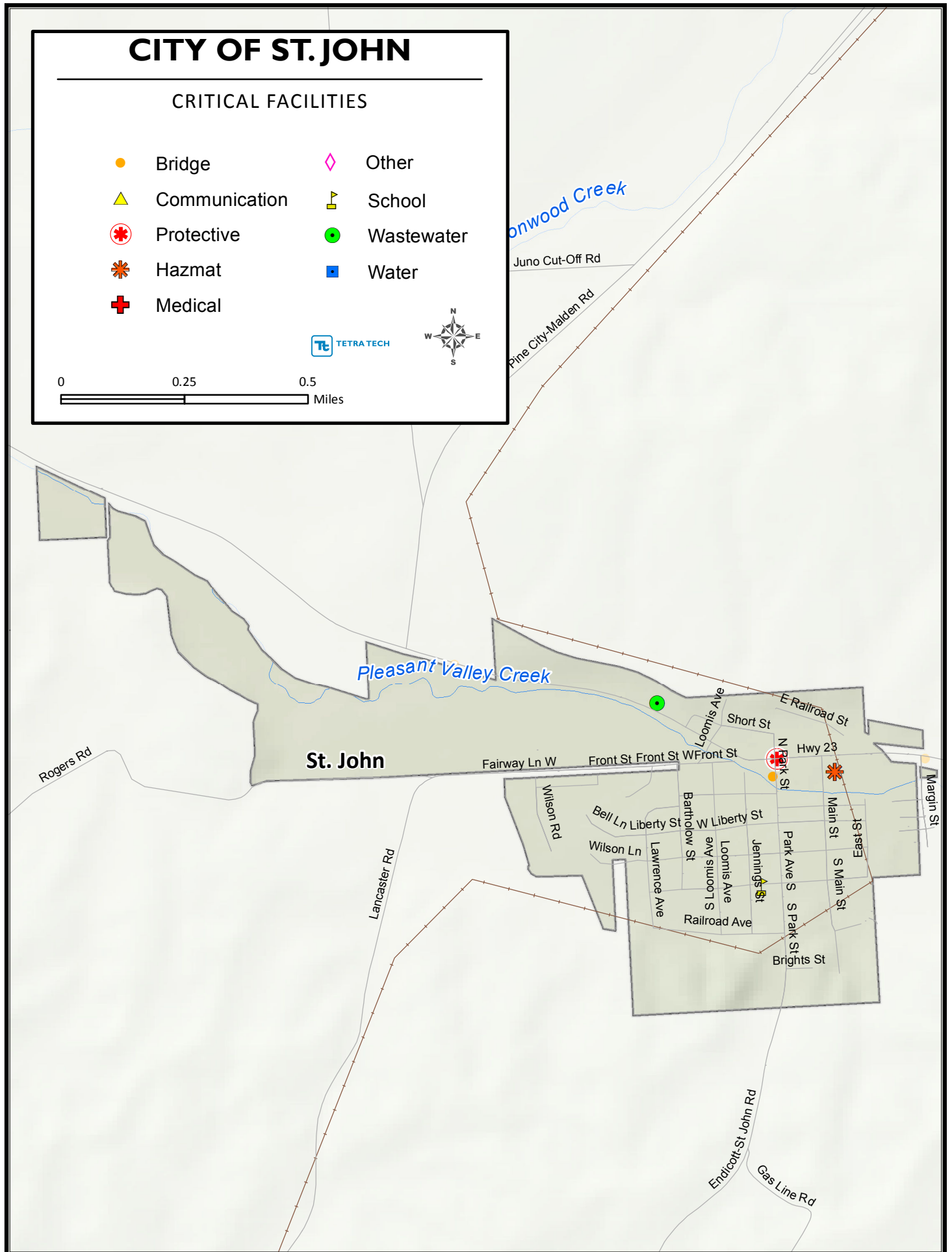
# CITY OF ST. JOHN

## CRITICAL FACILITIES

- |                 |              |
|-----------------|--------------|
| ● Bridge        | ◇ Other      |
| ▲ Communication | 🚦 School     |
| ⛔ Protective    | ● Wastewater |
| ⚡ Hazmat        | ■ Water      |
| ✚ Medical       |              |









0 0.25 0.5  
Miles



# TOWN OF ST. JOHN

## 100 YEAR PROBABILISTIC EARTHQUAKE PEAK GROUND ACCELERATION

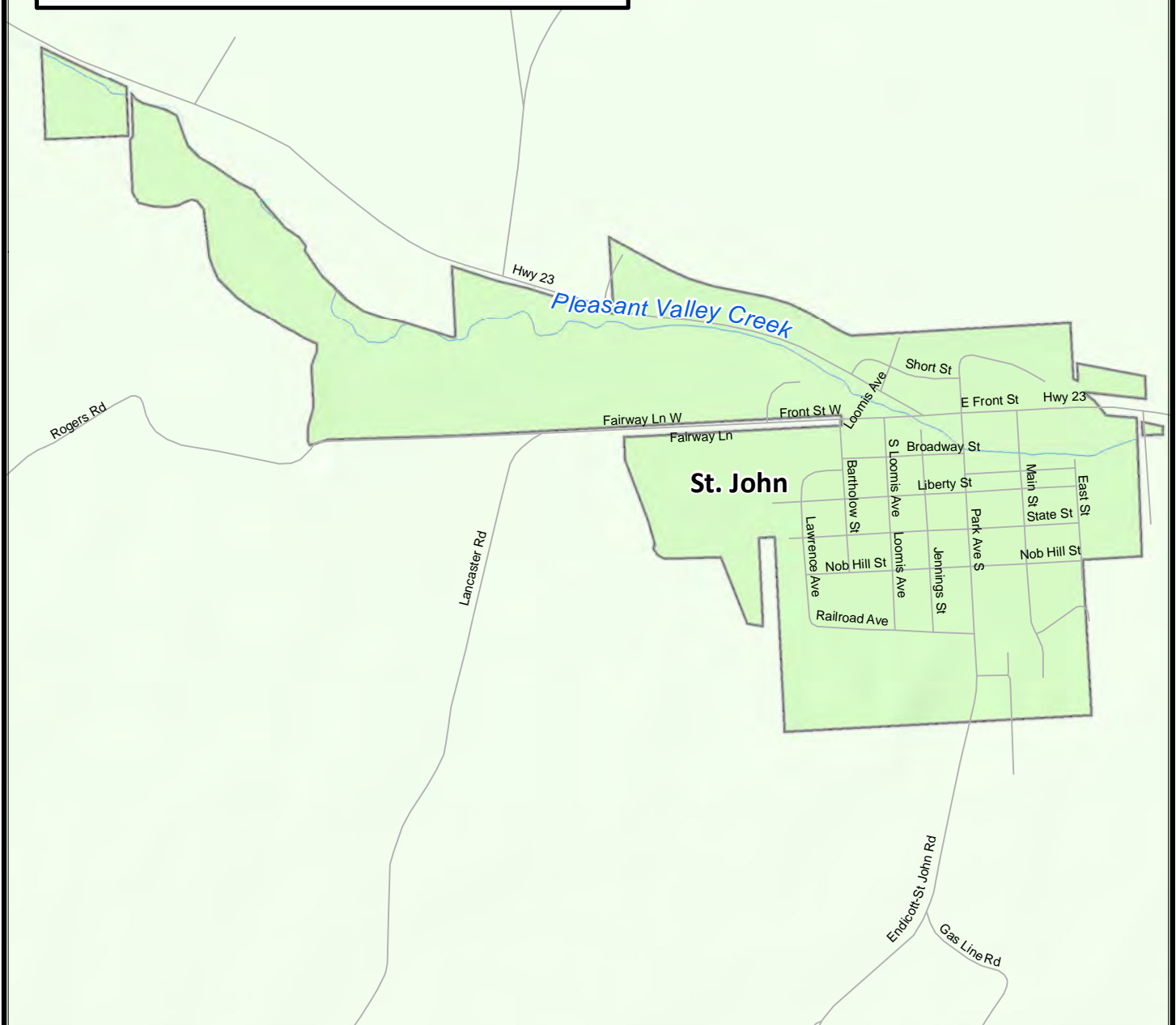
### Mercalli Scale, Potential Damage

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Data Sources  
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WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)









0 0.25 0.5  
Miles



# TOWN OF ST. JOHN

## 500 YEAR PROBABILISTIC EARTHQUAKE PEAK GROUND ACCELERATION

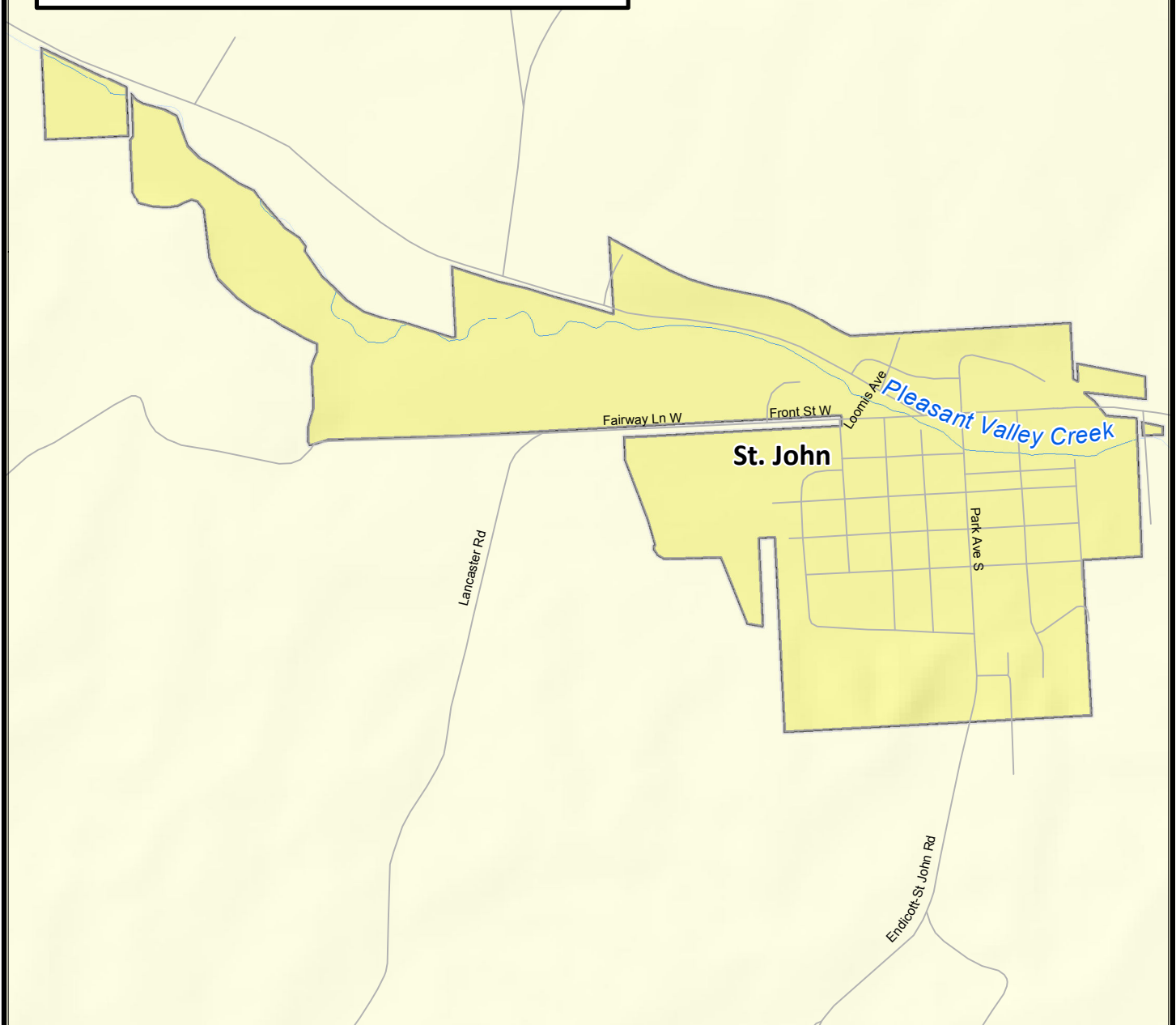
### Mercalli Scale, Potential Damage

 IV, Little to None	 VII, Moderate
 V, Very Light	 VIII, Moderate-Heavy
 VI, Light	 IX, Heavy

Data Sources  
FEMA Hazus MH Version 2.1  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)



0 0.25 0.5  
Miles



# TOWN OF ST. JOHN

## LATAH CREEK FAULT PLANNING SCENARIO PEAK GROUND ACCELERATION 6.0 MAGNITUDE

### Mercalli Scale, Potential Damage

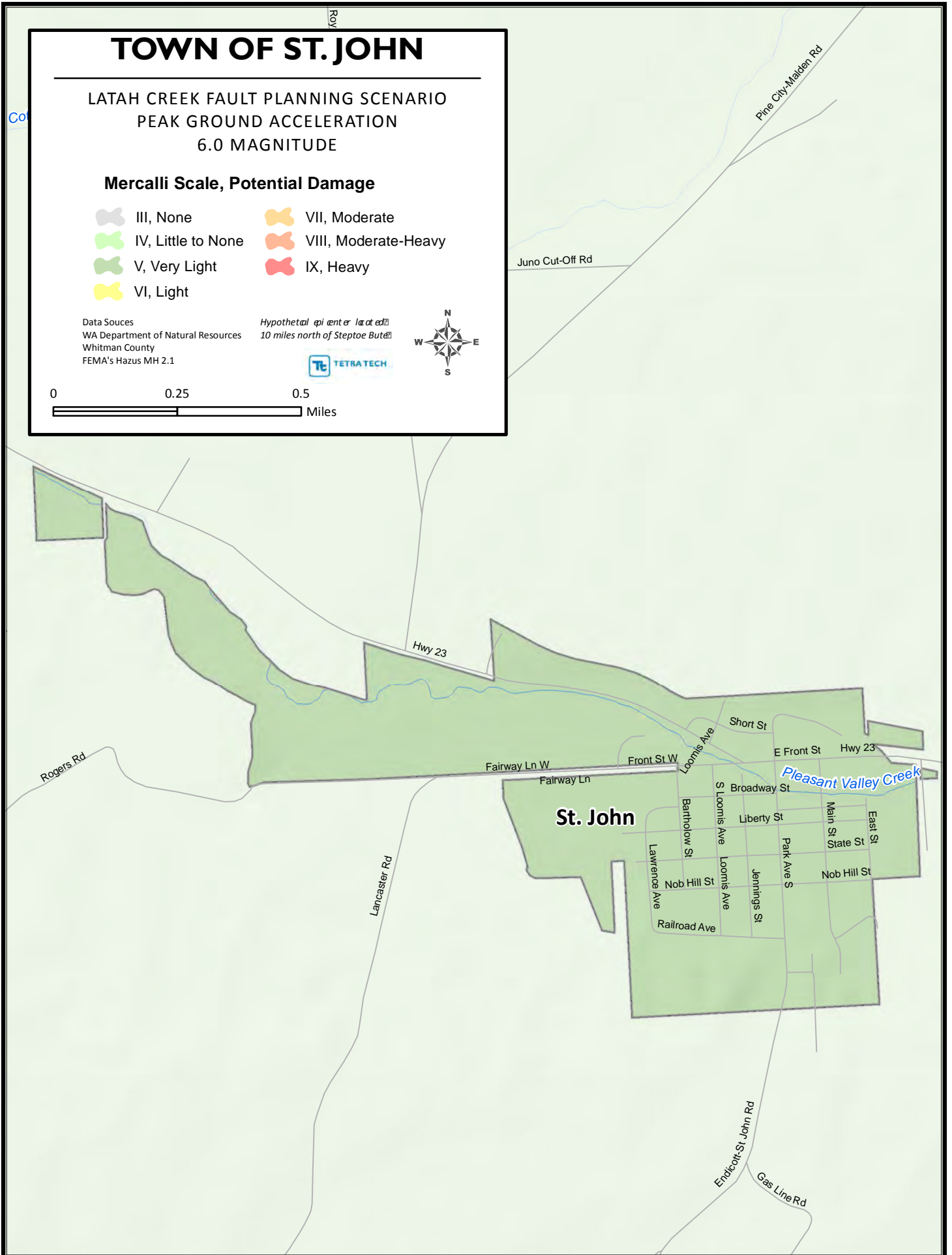
III, None	VII, Moderate
IV, Little to None	VIII, Moderate-Heavy
V, Very Light	IX, Heavy
VI, Light	

Data Sources  
WA Department of Natural Resources  
Whitman County  
FEMA's Hazus MH 2.1

Hypothetical epicenter located  
10 miles north of Steptoe Butte





0 0.25 0.5  
Miles



# TOWN OF ST. JOHN

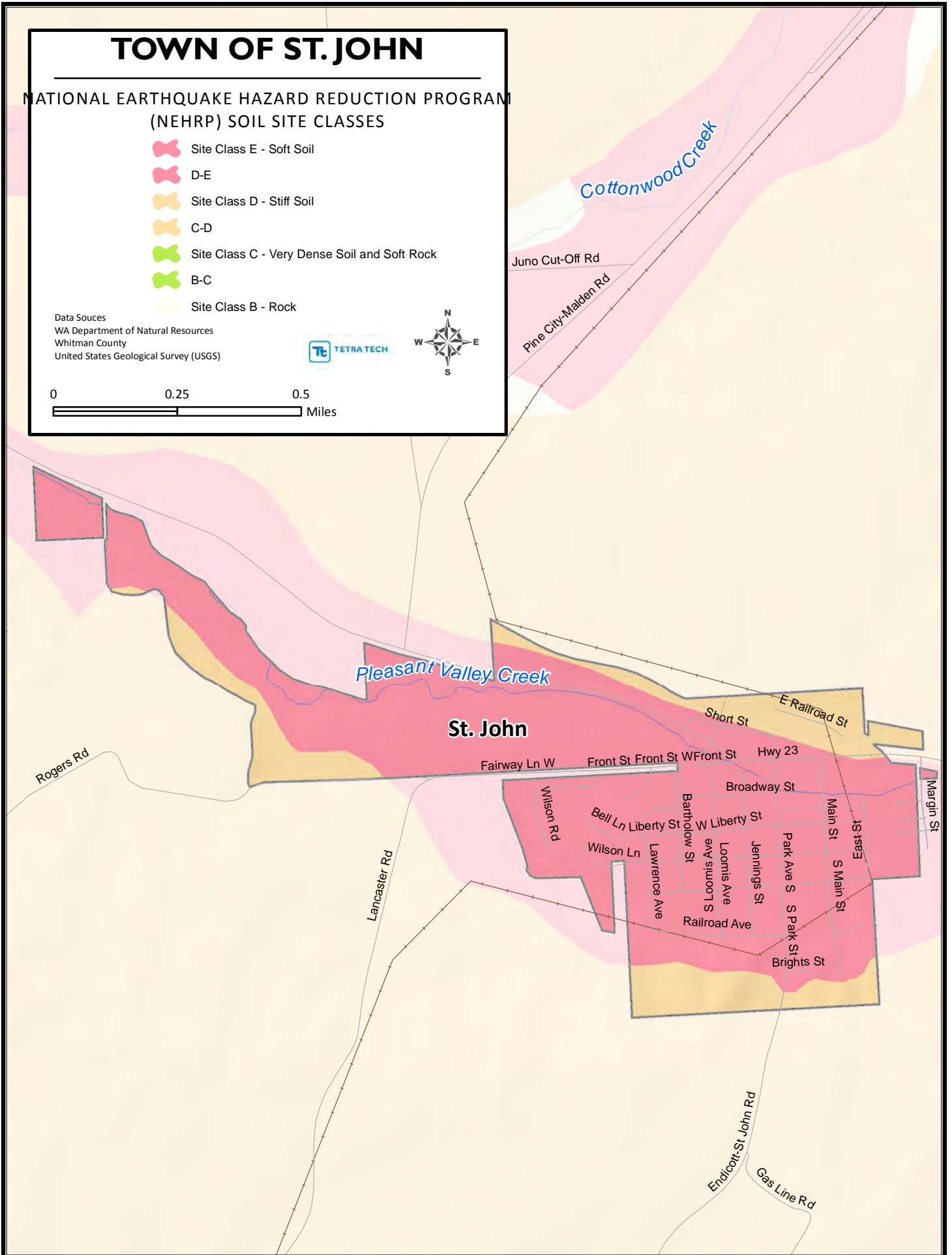
## NATIONAL EARTHQUAKE HAZARD REDUCTION PROGRAM (NEHRP) SOIL SITE CLASSES

-  Site Class E - Soft Soil
-  D-E
-  Site Class D - Stiff Soil
-  C-D
-  Site Class C - Very Dense Soil and Soft Rock
-  B-C
-  Site Class B - Rock

Data Sources  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)



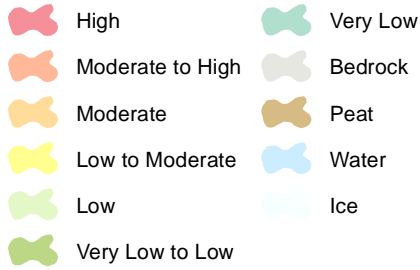
0 0.25 0.5  
Miles



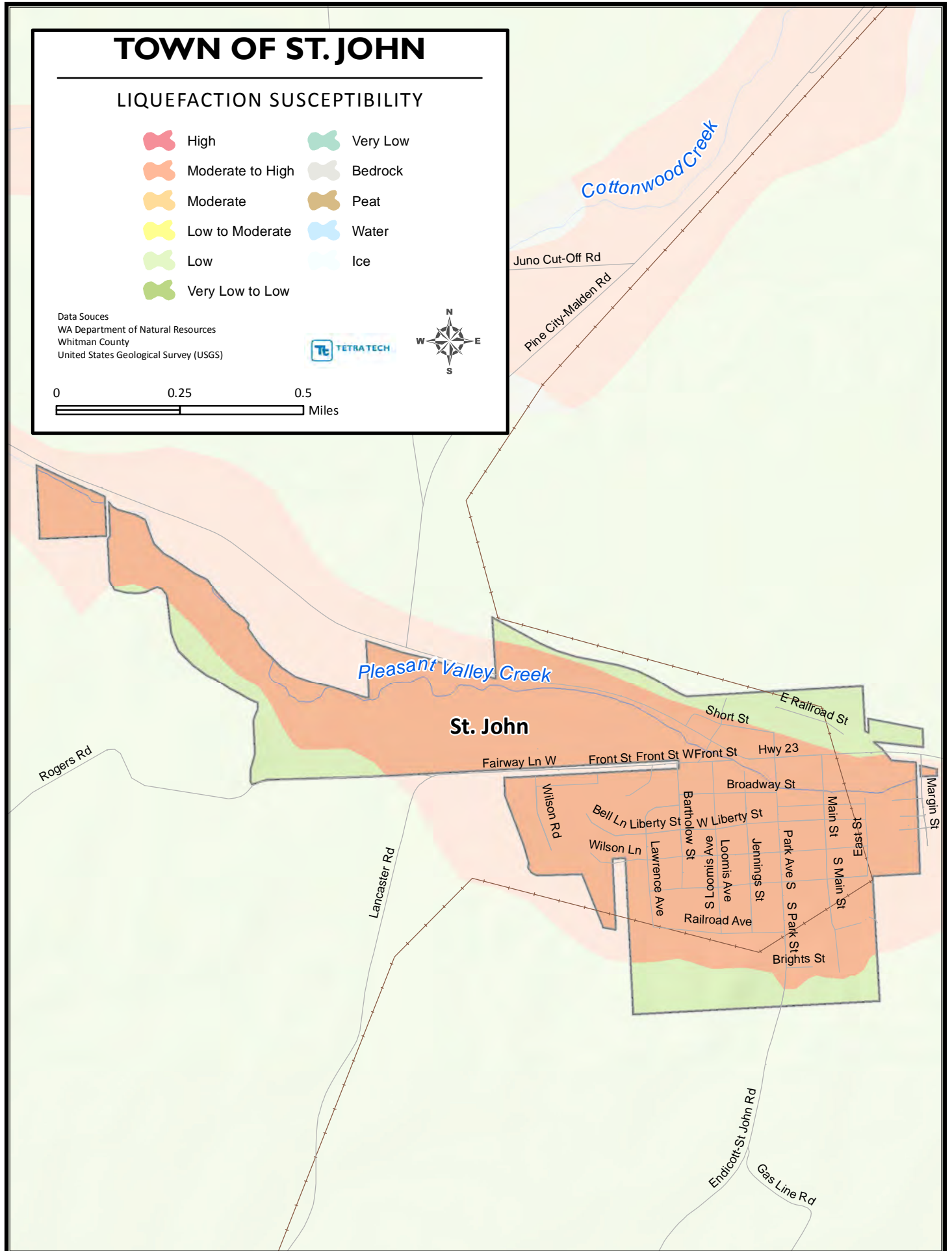
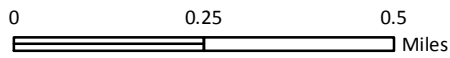


# TOWN OF ST. JOHN

## LIQUEFACTION SUSCEPTIBILITY





Data Sources  
WA Department of Natural Resources  
Whitman County  
United States Geological Survey (USGS)



# TOWN OF ST. JOHN

## FEMA FLOOD HAZARD AREAS

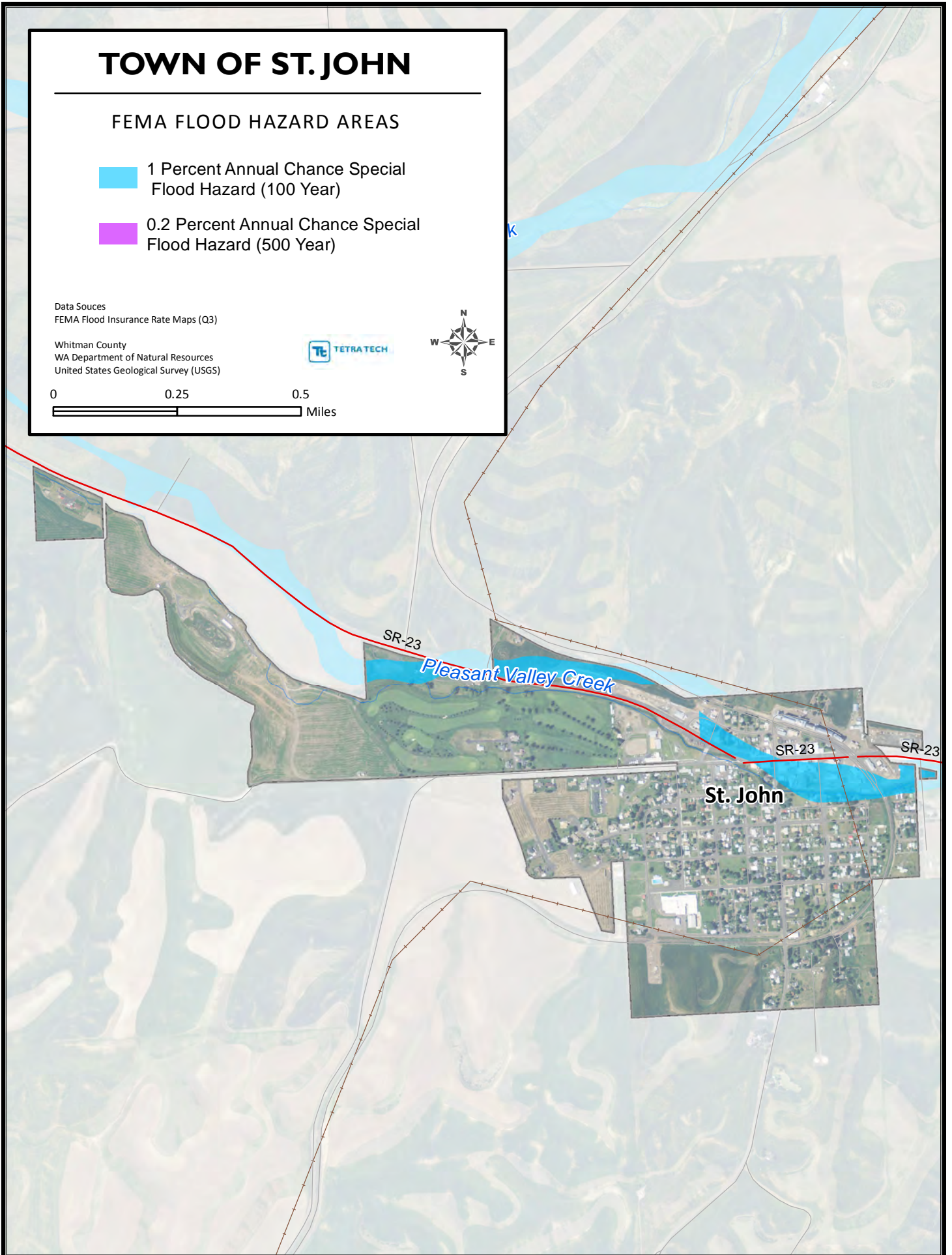
-  1 Percent Annual Chance Special Flood Hazard (100 Year)
-  0.2 Percent Annual Chance Special Flood Hazard (500 Year)

Data Sources  
FEMA Flood Insurance Rate Maps (Q3)

Whitman County  
WA Department of Natural Resources  
United States Geological Survey (USGS)




0 0.25 0.5  
Miles





# TOWN OF ST. JOHN

## HAZUS GENERATED FLOOD HAZARD AREA

 Hazus 1 Percent Annual Chance  
Flood Hazard Area (100 Year)

Data Sources  
Hazus Generated Flood Area Using 10 Meter DEM

Whitman County  
WA Department of Natural Resources  
United States Geological Survey (USGS)  
2009 NAIP Imagery





0 0.25 0.5  
Miles



# TOWN OF ST. JOHN

## LANDSLIDE HAZARD AREAS STEEP SLOPES, NEHRP SOFT SOILS

-  15-30 percent slope, NEHRP D and E Soils
-  Greater than 30 percent slope, NEHRP D and E Soils

Data Sources  
Slope based on 10 Meter DEM  
WA Department of Natural Resources  
Earthquake Soils  
Whitman County  
United States Geological Survey (USGS)



0 0.25 0.5  
Miles

Wood Creek

Juno Cut-Off Rd

Pine City-Malden Rd

Pleasant Valley Creek

St. John

Rogers Rd

Fairway Ln W

Front St Front St W Front St

Loomis Ave

Short St

E Railroad St

Hwy 23

N Park St

Main St

S Main St

Bright St

S Park St

1st St

Margin St

Wilson Rd

Bell Ln Liberty St

W Liberty St

Bartholow St

Loomis Ave

Lawrence Ave

Railroad Ave

Wilson Ln

Lawrence Ave

Railroad Ave

Bright St

S Park St

1st St

Margin St

Lancaster Rd

Endicott-St John Rd

Gas Line Rd

**PART 3—  
SPECIAL PURPOSE DISTRICT  
ANNEXES**





## **CHAPTER 11.**

### **WHITMAN COUNTY FIRE DISTRICT #7 ANNEX**

#### **11.1 HAZARD MITIGATION PLAN POINT OF CONTACT**

##### **Primary Point of Contact**

Bill Tensfeld  
PO Box 291  
Rosalia WA 99170  
Telephone: 509-523-3151  
e-mail Address: Chief@rosaliafire.org

##### **Alternate Point of Contact**

Larry Trull  
Po Box 291  
Rosalia WA 99170  
Telephone: 509-523-3151  
e-mail Address: Chief@rosaliafire.org

#### **11.2 JURISDICTION PROFILE**

Fire District #7 is a junior taxing authority. Three elected commissioners decide how tax funding is appropriated. This Board will assume the responsibility for the adoption and implementation of this plan. The district works in conjunction with the fire department of the Town of Rosalia. The purpose of the district is to provide fire protection services to the people of the district and the Town of Rosalia. Operations are funded 100 percent by property taxes. The department is serviced by 30 volunteer firefighters that protect an area of 175 square miles. Fire District #7 averages approximately 300 calls for service annually. The following is a summary of key information about the jurisdiction:

- **Population Served**—Estimated at 650 as of May 1, 2012
- **Land Area Served**—175
- **Value of Area Served**—The estimated value of the area served by the jurisdiction is \$66,000,000
- **Land Area Owned**—1 acre
- **List of Critical Infrastructure/Equipment Owned by the Jurisdiction:**
  - Pumper Tender 71    \$375,000
  - Attack Engine 71    \$190,000
  - Attack Engine 72    \$190,000
  - Attack Engine 73    \$300,000
  - Tender 71            \$175,000
  - Brush 71            \$125,000
  - Brush 72            \$125,000
  - Rescue 71            \$350,000
  - Command 71          \$45,000
- **Total Value of Critical Infrastructure/Equipment**—The total value of critical infrastructure and equipment owned by the jurisdiction is \$1,875,000
- **List of Critical Facilities Owned by the Jurisdiction:**

- Station 72 \$225,000
- **Total Value of Critical Facilities**—The total value of critical facilities owned by the jurisdiction is \$225,000
- **Current and Anticipated Service Trends**—Calls for response increase on an annual basis. Increase in population is highly likely due to the District’s location on Highway 195, halfway between Spokane and Pullman. The primary service area for Whitman County Fire District #7 is the Town of Rosalia. Rosalia’s overall population increased at a rate of 1.62 percent per year between 1990 and 2000 and saw a 0.3-percent increase from 2000 to 2005. With this rate of growth, the anticipated development trends for Rosalia are low to moderate, consisting primarily of residential development. It is anticipated that Whitman County Fire District #7’s calls for service and/or population served will increase at a similar rate.

The District’s boundaries are shown on the map at the end of this annex.

### **11.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY**

Table 11-1 lists all past occurrences of natural hazards within the jurisdiction.

### **11.4 HAZARD RISK RANKING**

Table 11-2 presents the ranking of the hazards of concern.

### **11.5 APPLICABLE REGULATIONS AND PLANS**

No existing codes, ordinances, policies or plans applicable to this hazard mitigation plan have been identified at this time.

### **11.6 CLASSIFICATION IN HAZARD MITIGATION PROGRAMS**

The jurisdiction’s classifications under various hazard mitigation programs are presented in Table 11-3.

### **11.7 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED INITIATIVES**

Table 12-4 lists the initiatives that make up the jurisdiction’s hazard mitigation plan. Table 11-5 identifies the priority for each initiative. Table 11-6 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

### **11.8 STATUS OF PREVIOUS PLAN INITIATIVES**

Table 11-7 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

**TABLE 11-1.  
NATURAL HAZARD EVENTS**

Type of Event	Date	Preliminary Damage Assessment
Wildfire	1978	Fire truck burned up in wheat fire
Volcano (FEMA Disaster #623)	5/21/1980	Information not available
Wildfire	8/19/2008	2200 acres of brush, timber and farm ground

**TABLE 11-2.  
HAZARD RISK RANKING**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Severe Weather	$3 \times (9+4+2) = 45$
2	Earthquake	$2 \times (9+4+2) = 30$
3	Wildfire	$3 \times (3+2+1) = 18$
4	Flood	$3 \times (3+0+1) = 12$
5	Landslide	$2 \times (3+0+0) = 6$
6	Dam Failure	$1 \times (0+0+3) = 3$
6	Drought	$3 \times (0+0+1) = 3$
6	Volcano	$1(3+0+0) = 3$

**TABLE 11-3.  
COMMUNITY CLASSIFICATIONS**

	Participating?	Classification	Date Classified
Public Protection	Yes	8/9*	10/1/2005
Storm Ready	No	—	—
Firewise	No	—	—

**TABLE 11-4.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative FD7#1</b> — Coordinate with Rosalia to continue promotion/implementation of water conservation program that includes reducing leaks and replacing infrastructure to reduce consumption of water. Implemented water conservation program via rate study, timed park automatic sprinkler systems, public information – To implement water conservation programs, reduce water use in City Parks, and inform public of conservation issues.							
Existing	Drought	3, 5, 6, 7	Rosalia City Council	Low	Utility Rates, CIP Fund · Existing 6% utility tax on electricity · Proposing utility tax on natural gas	Ongoing	Yes, #2
<b>Initiative FD7#2</b> — Acquire property in Thorton & Pine City: drill well and construct 25, 000 gallon reservoir							
New and Existing	All Hazards	3, 5, 9	Rosalia City Council, WCFD #7	High	Grant funding for property purchase.  Bond Issue, CIP funding, Public Works Trust Fund for well/reservoir	Long-Term, depends on funding	Yes, #3
<b>Initiative FD7#3</b> — Non-structural seismic retrofits: tie down equipment, computers, etc. at District owned facilities							
Existing	Earthquake	3, 4, 5	WCFD #7	Low	District Funding, FEMA Hazard Mitigation Grants	Long-Term, depends on funding	Yes, #4
<b>Initiative FD7#4</b> — Public information program: create/distribute brochures on property protection from the impacts of natural hazards							
New and Existing	All Hazards	2, 6, 7	Rosalia City Council, WCFD #7	Low	General Fund	Short-term, ongoing	Yes, #5
<b>Initiative FD7#5</b> —Description-Support countywide initiatives that promote the education of the public on the impacts of natural hazards within Whitman County, and the preparedness for and the mitigation of those impacts. This support will be in the form of dissemination of appropriate information to the residents of St. John and continuing support/participation in the Whitman County Natural Hazards Mitigation Planning Partnership.							
New and Existing	All Hazards	2, 3, 4, 6	WCFD #7	Low	General Fund	Short Term, ongoing	Yes, #7

**TABLE 11-4.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative FD7#6</b> —Consider voluntary participation in the Firewise program that will provide benefits/incentives to the Citizens of Whitman County Fire District #7 service area for hazard mitigation.							
New and Existing	Wildfire	2, 6, 7, 8	WCFD #7	Low	General Fund	Short-term	Yes, #8
<b>Initiative FD7#7</b> — Description-Continue to coordinate and work with Whitman County Emergency Management in disaster response and preparedness. This level of coordination should include updates to the Emergency response plan, development of a post disaster action plan, training and support.							
New and Existing	All Hazards	2, 4, 6	WCFD #7, Whitman County Emergency Management	Low	District Funds	Ongoing	Yes, #9
<b>Initiative FD7#8</b> — Partner with the other Whitman County Fire Districts and Whitman County Emergency Management on the development of a Community Wildfire Protection Plan pursuant to Washington Department of Natural Resources guidelines.							
New and Existing	Wildfire	2, 4, 6	WCFD #7, Whitman County Emergency Management	High	District Funds, FEMA Grants (AFG EMPG, Fire Grants)	Long-term, depends on funding	No

**TABLE 11-5.  
MITIGATION STRATEGY PRIORITY SCHEDULE**

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant- Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority <sup>a</sup>
1	4	Medium	Low	Yes	Yes	Yes	High
2	3	High	High	Yes	Yes	No	Medium
3	3	High	Medium	Yes	Yes	No	Medium
4	3	Medium	Low	Yes	No	Yes	High
5	4	High	Low	Yes	Yes	Yes	High
6	4	Medium	Low	Yes	No	No	Medium
7	3	High	Low	Yes	Yes	Yes	High
8	3	High	High	Yes	Yes	No	Medium

a. See Section 1.3 for definitions of high, medium and low priorities.

**TABLE 11-6.  
ANALYSIS OF MITIGATION INITIATIVES**

Hazard Type	Initiative Addressing Hazard, by Mitigation Type					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	2		4, 5		7	
Drought	1, 2		4, 5	1	7	
Earthquake	2	3	4, 5		7	
Flood	2		4, 5		7	
Landslide	2		4, 5		7	
Severe Weather	2		4, 5		7	
Volcano	2		4, 5		7	
Wildfire	2, 6, 8	6	4, 6, 8	6	6, 7, 8	6

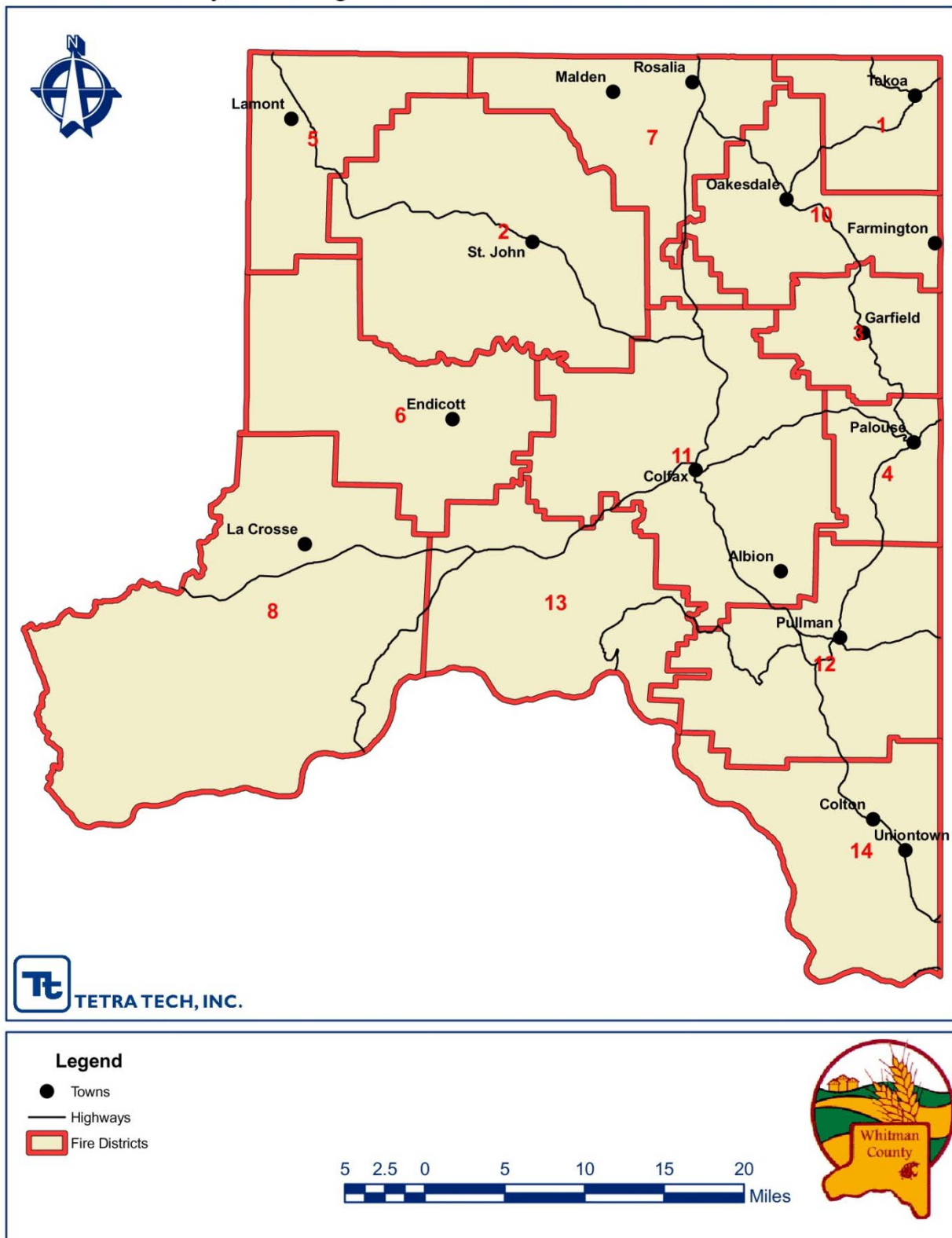
1. Prevention: Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
2. Property Protection: Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
3. Public Education and Awareness: Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
4. Natural Resource Protection: Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
5. Emergency Services: Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
6. Structural Projects: Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.



**TABLE 11-7.  
PREVIOUS ACTION PLAN IMPLEMENTATION STATUS**

Action #	Action Status			Comments
	Completed	Carry Over to Plan Update	Removed; No Longer Feasible	
1	✓			Rosalia has acquired and installed a generator for the sewage treatment facility
2		✓		Now FD7#1
3		✓		Now FD7#2
4		✓		Now FD7#3
5		✓		Now FD7#4
6	✓			Action completed: <a href="http://www.rosaliafire.org/">http://www.rosaliafire.org/</a>
7		✓		Now FD7#5
8		✓		Now FD7#6
9		✓		Now FD7#7

## Fire Districts Whitman County, Washington



## CHAPTER 12. WHITMAN COUNTY PUBLIC HOSPITAL DISTRICT #1A ANNEX

### 12.1 HAZARD MITIGATION PLAN POINT OF CONTACT

#### Primary Point of Contact

Bill Whitman, Disaster Preparedness Coordinator  
835 SE Bishop Blvd.  
Pullman, WA 99163  
Telephone: 509-336-7480  
e-mail: bill.whitman@pullmanregional.org

#### Alternate Point of Contact

Dorcas Hirzel, Quality & Knowledge Mgmt.  
835 SE Bishop Blvd.  
Pullman, WA 99163  
Telephone: 509-336-7523  
e-mail: dorcas.hirzel@pullmanregional.org

### 12.2 JURISDICTION PROFILE

Whitman County Public Hospital District #1A's Pullman Regional Hospital is a licensed, 42-bed, acute-care, critical-access hospital in Pullman, Washington. Services provided include acute care (medical/surgical, intensive care, obstetrics), an emergency department staffed by board certified emergency physicians, and inpatient and outpatient surgical services including robotically assisted surgery. Ancillary services include extensive diagnostic capabilities in Laboratory and Cardiopulmonary functions as well as imaging services (MRI, CT, Mammography, Nuclear Medicine, Ultrasound, and general radiography). Physical, occupational, speech and massage therapies, audiology services, genetic counseling, and acupuncture are outpatient services provided at the Summit Health & Therapy Services building located on Summit Court near the hospital.

The public hospital district was established in 1976 with a Board of five commissioners which was expanded to seven commissioners in 1991. The members of the Board are elected for a term of six years and the roles of President, Vice-President, and Secretary are elected annually by the full Board. One of their duties is to appoint a superintendent (administrator) to manage the operations of the District. The Board of Commissioners governs the public hospital district and will assume responsibility for adoption and implementation of this plan. The City of Pullman residents supported a bond to build a new state-of-the art healthcare facility and the new facility opened for business on December 16, 2004. The hospital serves the Pullman residents and students of Washington State University, as well as surrounding communities located in Washington and Idaho, generally within a 35 to 50 mile radius. Pullman Regional Hospital employs approximately 420 employees and has a credentialed medical staff of 106 physicians, 55 of whom are on the active medical staff and an additional 24 credentialed allied health providers.

The following is a summary of key information about the District:

- **Population Served**—The Public Hospital District (PHD) population is 34,502 as of 2010, however the primary service area encompasses approximately 50,000. The census change since 2000 has been a 17.2-percent increase.
- **Land Area Served**—The PHD serves the eastern portion of Whitman County from Uniontown in the south and north to Palouse, as well as population in bordering Idaho.
- **Value of Area Served**—The estimated value of the area served by the jurisdiction is \$2.61 billion.

- **Land Area Owned**—52 acres located in southeast Pullman city limits.
- **List of Critical Infrastructure/Equipment Owned by the District:**
  - Medical equipment located within the hospital facility that includes surgical, laboratory, radiological, emergency, and intensive care equipment.
- **Total Value of Critical Infrastructure/Equipment**—The total value of critical infrastructure and equipment owned by the District is estimated to be in excess of \$1 million.
- **List of Critical Facilities Owned by the District:**
  - Pullman Regional Hospital Building
  - Summit Therapy & Health Services Building
  - Medical Office Building
- **Total Value of Critical Facilities**—The total value of critical facilities owned by the jurisdiction is estimated to be in excess of \$10 million.
- **Current and Anticipated Service Trends**—We will continue to invest in technology and grow services, e.g. daVinci robotic assisted surgery, as well as electronic medical records management to meet ongoing Meaningful Use criteria; and continue to expand partnerships, e.g. physician recruitment, specialty clinics. Increased involvement in education activities with community partners working toward improvement of overall health of our community.

## **12.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY**

Table 12-1 lists all past occurrences of natural hazards within the jurisdiction.

## **12.4 HAZARD RISK RANKING**

Table 12-2 presents the ranking of the hazards of concern.

## **12.5 APPLICABLE REGULATIONS AND PLANS**

No existing codes, ordinances, policies or plans applicable to this hazard mitigation plan have been identified at this time.

## **12.6 CLASSIFICATION IN HAZARD MITIGATION PROGRAMS**

The jurisdiction's classifications under various hazard mitigation programs are presented in Table 12-3.

## **12.7 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED INITIATIVES**

Table 12-4 lists the initiatives that make up the jurisdiction's hazard mitigation plan. Table 12-5 identifies the priority for each initiative. Table 12-6 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

**TABLE 12-1.  
NATURAL HAZARD EVENTS**

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Winter storm	1825	2009	\$63,928.67 (for City of Pullman)
Flood	n/a	1998	Information not available
Flood	1159	12/26/1996	Less than \$1 million, all Public Assistance
Flood	1100	01/26/1996	Information not available
Volcanic Ash	623	05/21/1980	Information not available

**TABLE 12-2.  
HAZARD RISK RANKING**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Flood	36
2	Severe Storm	24
3	Volcano	10
4	Landslide	7
5	Earthquake	6
6	Wildland Fire	5
7	Drought	5
8	Dam Failure	3

**TABLE 12-3.  
COMMUNITY CLASSIFICATIONS**

	Participating?	Classification	Date Classified
Public Protection	No	—	—
Storm Ready	No	—	—
Firewise	No	—	—

**TABLE 12-4.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>Initiative WCPHD1A#1</b> — Support countywide initiatives that promote the education of the public on the impacts of natural hazards within Whitman County, and the preparedness for and the mitigation of those impacts. This support will be in the form of dissemination of appropriate information to the residents of St. John and continuing support/participation in the Whitman County Natural Hazards Mitigation Planning Partnership.						
New and Existing	All Hazards	2, 3, 4, 6	Whitman County Public Hospital District #1A	Low	General Fund	Short Term Ongoing
<b>Initiative WCPHD1A#2</b> —Continue to coordinate and work with Whitman County Emergency Management in disaster response and preparedness. This level of coordination should include: updates to the Emergency response plan, development of a post disaster action plan, training and support.						
New and Existing	All Hazards	2, 4, 6	Whitman County Public Hospital District #1A, Whitman County Emergency Management	Low	District Funds	Ongoing
<b>Initiative WCPHD1A#3</b> —develop a continuity of operations plan that takes into account all probable scenarios for natural hazard events assessed in this plan update.						
New and Existing	All Hazards	2, 4, 6	Whitman County Public Hospital District #1A	Medium	District Funds	Long-term, depends on funding
<b>Initiative WCPHD1A#4</b> - Identify facilities in need of non-structural seismic retrofitting and implement projects on those facilities with identified need.						
Existing	Earthquake	3, 5	Whitman County Public Hospital District #1A	High	District funds, FEMA mitigation grants	Long-term, depends on funding



**TABLE 12-5.  
MITIGATION STRATEGY PRIORITY SCHEDULE**

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority <sup>a</sup>
1	4	Medium	Low	Yes	No	Yes	High
2	3	Medium	Low	Yes	No	Yes	High
3	3	High	High	Yes	Yes	No	Medium
4	2	High	High	Yes	Yes	No	medium

a. See Section 1.3 for definitions of high, medium and low priorities.

**TABLE 12-6.  
ANALYSIS OF MITIGATION INITIATIVES**

Hazard Type	Initiative Addressing Hazard, by Mitigation Type					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	3	—	1	—	2, 3	—
Drought	3	—	1	—	2, 3	—
Earthquake	3	4	1	—	2, 3	—
Flood	3	—	1	—	2, 3	—
Landslide	3	—	1	—	2, 3	—
Severe Weather	3	—	1	—	2, 3	—
Volcano	3	—	1	—	2, 3	—
Wildfire	3	—	1	—	2, 3	—

1. Prevention: Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
2. Property Protection: Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
3. Public Education and Awareness: Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
4. Natural Resource Protection: Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
5. Emergency Services: Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
6. Structural Projects: Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.



## **CHAPTER 13.**

### **WHITMAN COUNTY PUBLIC HOSPITAL DISTRICT #3 ANNEX**

#### **13.1 HAZARD MITIGATION PLAN POINT OF CONTACT**

##### **Primary Point of Contact**

Gary R Burns – Safety Officer  
1200 W. Fairview  
Colfax, WA 99111  
Phone: (509)397-5752  
E-mail address: burnsg@whmc.org

##### **Alternate Point of Contact**

None designated

#### **13.2 JURISDICTION PROFILE**

Whitman County Public Hospital District #3 (PHD#3) owns and operates Whitman County Hospital, a 48 bed acute care facility, currently acting as a 25 bed Critical Access hospital. PHD#3 is one of 3 hospital districts servicing Whitman County. Services provided include: acute care hospital, emergency room, and related ancillary procedures (lab, x-ray, therapy, etc.) associated with those services. The District Hospital is a governmental entity and a political subdivision of the State of Washington. It was created by the Washington State Legislature to provide hospital services and other health care services for the residents of this district. The community hospital was built in the late 1960s and officially opened its doors in 1968. The community hospital became a junior taxing district in 1988 to officially become Whitman County Public Hospital District #3.

A five-member board of commissioners governs PHD#3 and will assume responsibility for the adoption and implementation of this plan. The members of this board are elected commissioners for a term of six years. Elections are staged so no more than one-third of the board is up for election at one time. The board is required to elect a president, president-elect and a secretary. One of their duties is to appoint an administrator. The Board delegates the day-to-day operations of the district to the administrator.

PHD#3 is a municipal government entity. As such, it is funded per levies and the county collects property taxes for property owners within the district boundary. These tax revenues are used to support the purpose for PHD#3, which is to provide health care to the members of the district area. PHD#3 can levy taxes on an “as needed” basis pending voter approval based on a 60-percent majority.

PHD#3 employs approximately 200 employees and according to 2012 statistics, had over 16,000 outpatient visits and approximately 600 hospital admissions.

The following is a summary of key information about the jurisdiction:

- **Population Served**— All of Whitman County (44,500)
- **Land Area Served**—PHD#3 serves all of Whitman County, mostly a 10 to 15 mile radius in and around the City of Colfax.
- **Value of Area Served**—According to the Whitman County Treasures Office, the assessed valuation for PHD#3 for regular levies is \$529,402,287 and special levies \$527,009,645.
- **Land Area Owned**—49 acres in southwestern Colfax.

- **List of Critical Infrastructure/Equipment Owned by the Jurisdiction:** Medical equipment located within the hospital facility that includes: surgical, laboratory and radiological equipment.
- **Total Value of Critical Infrastructure/Equipment—**\$11,300,000
- **List of Critical Facilities Owned by the Jurisdiction:**
  - Main hospital building
  - Physical therapy building
  - Medical office building
  - A mobile home.
- **Total Value of Critical Facilities—**The total value of all buildings owned by PHD#3 is \$350,000,000.
- **Current and Anticipated Service Trends—**PHD#3 has seen steady and consistent growth in services for Whitman County. In anticipation of further outpatient activity and a variety of other healthcare related areas, the Whitman County Surgery Center was an addition of space to the current hospital building, adding much needed facilities to accommodate the growing community needs for quality healthcare. New construction in 2009 added and additional square feet for patient care. Based on the data tracked by the Washington State Office of Financial Management, the portion of Whitman County serviced by PHD#3 has experienced a relatively flat rate of growth. The overall population has increased only 5 percent between 1990 and 2000 and has averaged 0.8 percent per year from 2000 to 2005. With this rate of growth, the anticipated service trends for PHD#3 would be considered remain consistent with current levels. However, factors such as aging spread of contagious diseases or other health related factors can impact service volumes for this type of district without a net increase in population.

### **13.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY**

Table 13-1 lists all past occurrences of natural hazards within the jurisdiction.

### **13.4 HAZARD RISK RANKING**

Table 13-2 presents the ranking of the hazards of concern.

### **13.5 APPLICABLE REGULATIONS AND PLANS**

PHD#3 has a disaster plan that directs their response to disaster events. The Whitman County Community is considered as a “critical” facility by Whitman County Emergency Management. There is also a Hospital Campus Master Plan that directs facility capital improvements.

### **13.6 CLASSIFICATION IN HAZARD MITIGATION PROGRAMS**

The jurisdiction’s classifications under various hazard mitigation programs are presented in Table 13-3.

### 13.7 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED INITIATIVES

Table 13-4 lists the initiatives that make up the jurisdiction's hazard mitigation plan. Table 13-5 identifies the priority for each initiative. Table 13-6 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

### 13.8 STATUS OF PREVIOUS PLAN INITIATIVES

Table 13-7 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

<b>TABLE 13-1. NATURAL HAZARD EVENTS</b>		
Type of Event	Date	Preliminary Damage Assessment
Wildland Fire	Annually	No damage to facilities
Volcano (FEMA Disaster #623)	5/21/1980	Information not available

<b>TABLE 13-2. HAZARD RISK RANKING</b>		
Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Severe Weather	High
2	Drought	High
3	Earthquake	Medium
4	Wild Fire	Low
5	Flood	High
6	Volcano	Low

<b>TABLE 13-3. COMMUNITY CLASSIFICATIONS</b>			
	Participating?	Classification	Date Classified
Community Rating System (CRS)	No	—	—
Public Protection (City of Colfax)	N/A	6/9*	N/A
Firewise	No	—	—
Storm Ready	N/A	The City of Colfax is designated as "Storm Ready"	August 2005
* Higher classification applies to when subject property is located beyond 1,000 feet of a creditable fire hydrant and is within 5 road miles of a recognized fire station.			

**TABLE 13-4.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative PHD#3-1</b> — Structural seismic retrofit of hospital facility according to Hospital Campus Master Plan.							
Existing	Earthquake	3, 5	PHD#3	High	General Fund, Grant Funding: PDM/HMGP	Short Term, depends on funding	Yes, #1
<b>Initiative PHD#3-2</b> — Non-structural seismic retrofit of hospital facilities according to Hospital Campus Master Plan. This retrofit would include update of heating/AC/air filtration system that would mitigate secondary impacts from wild land fire events.							
Existing	Earthquake Wildfire	3, 5	PHD#3	High	General Fund, Grant Funding: PDM/HMGP	Short Term, depends on funding	Yes, #2
<b>Initiative PHD#3-3</b> — Support County Wide Initiatives that promote the education of the public on the impacts of natural hazards within Whitman County, and the preparedness for and the mitigation of those impacts. This support will be in the form dissemination of appropriate information to the residents of Colfax and continuing support/participation in the Whitman County Natural Hazards Mitigation Planning Partnership.							
New and Existing	All Hazards	2, 6, 7	PHD#3	Low	General Fund	Ongoing, Short Term	Yes, #3
<b>Initiative PHD#3-4</b> — Utilize information provided in the Whitman County Hazard Identification and Vulnerability Assessment to consider emergency management provisions that will reduce the vulnerability to, and enhance the preparedness for the impacts of natural hazards that PHD#3 has exposure.							
New and Existing	All Hazards	1, 3, 9, 10	PHD#3	Low	General Fund	Long Term	Yes, #4
<b>Initiative PHD#3-5</b> — Continue to coordinate and work with Whitman County Emergency Management in disaster response and preparedness. This level of coordination should include: updates to the Emergency response plan, development of a post disaster action plan, training and support.							
New and Existing	All Hazards	2, 4, 6	PHD#3	Low	General Fund	Ongoing, Short Term	Yes, #4



**TABLE 13-5.  
MITIGATION STRATEGY PRIORITY SCHEDULE**

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority <sup>a</sup>
1	2	High	High (\$3 M)	Yes	Yes	Yes	High
2	2	High	High (\$3 M)	Yes	Yes	Yes	High
3	3	Low	Low	Yes	Yes	Yes	High
4	4	Medium	Low	Yes	No	Yes	High
5	3	High	Low	Yes	Yes	Yes	High

a. See Section 1.3 for definitions of high, medium and low priorities.

**TABLE 13-6.  
ANALYSIS OF MITIGATION INITIATIVES**

Hazard Type	Initiative Addressing Hazard, by Mitigation Type					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	4	—	3	—	5	—
Drought	4	—	3	—	5	—
Earthquake	4	1, 2	3	—	5	1, 2
Flood	4	—	3	—	5	—
Landslide	4	—	3	—	5	—
Severe Weather	4	—	3	—	5	—
Volcano	4	—	3	—	5	—
Wildfire	4	—	3	—	5	—

1. Prevention: Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
2. Property Protection: Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
3. Public Education and Awareness: Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
4. Natural Resource Protection: Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
5. Emergency Services: Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
6. Structural Projects: Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.

**TABLE 13-7.  
PREVIOUS ACTION PLAN IMPLEMENTATION STATUS**

Action #	Action Status			Comments
	Completed	Carry Over to Plan Update	Removed; No Longer Feasible	
1		✓		Now PHD#3-1
2		✓		Now PHD#3-2
3		✓		Now PHD#3-3
4		✓		Now PHD#3-4
5		✓		Now PHD#3-5

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**APPENDIX A.**  
**PLANNING PARTNER EXPECTATIONS**

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## PLANNING PARTNER EXPECTATIONS

### ACHIEVING DMA COMPLIANCE FOR ALL PLANNING PARTNERS

One of the goals of the multi-jurisdictional approach to hazard mitigation planning is to achieve compliance with the Disaster Mitigation Act (DMA) for all participating members in the planning effort. DMA compliance must be certified for each member in order to maintain eligibility for the benefits under the DMA. To achieve compliance for all partners, the plan must clearly document how each planning partner that is seeking eligibility from the plan, participated in the plan's development. The best way to do this is to clearly define "participation". For this planning process, "participation" has been defined as addressing the following items:

- ✓ **The Estimated level of effort.** It is estimated that the total time commitment to meet these "participation" requirements for a planning partner not participating on the Steering Committee would be ***approximately 40 hours over the 12 to 14 month period.*** Approximately sixty percent of this time would be allocated to meeting items F through L described below.
- ✓ **Participate in the process.** This means to support the process to the best of your capabilities. This planning process will utilize a Steering Committee that will assume responsibility for many of the planning milestones prescribed for this process. This committee will be representative of the whole. This committee will meet periodically throughout the process and provide direction and guidance to the planning team. Steering Committee meetings are not mandatory meetings for all planning partners. This means that if you are not on the committee, your attendance is not required. However, it is our hope that all planning partners will attempt to remain engaged with this process. This process is anticipated to take 12 to 14 months to complete. It will be easy to become disconnected with the process objectives if you do not participate in some of these meetings to some degree.

The planning team will also request support from the partnership during the public involvement phase of the planning process. Support could be in the form of providing venues for public meetings, attending these meetings as meeting participants, providing technical support, etc.

- ✓ **Consistency Review.** All planning partners will be asked to identify their capabilities during this process. This capability assessment will require a review of existing documents (plans, studies and ordinances) pertinent to each jurisdiction to identify policies or recommendations that are consistent with those in the "parent" plan or have policies and recommendations that complement the hazard mitigation initiatives selected (i.e.: comp plans, basin plans or hazard specific plans).

- ✓ **Action Review.** All previous planning partners will be required to perform a review of the strategies from your prior action plan to determine those that have been accomplished and how they were accomplished; and why those that have not been accomplished were not completed. The planning team (Tetra Tech and Whitman County Emergency Management) will be available to assist with this task.
- ✓ **Plan must be adopted by each jurisdiction.**

One of the benefits to multi-jurisdictional planning is the ability to pool resources. This means more than monetary resources. Resources such as staff time, meeting locations, media resources, technical expertise will all need to be utilized to generate a successful plan. In addition, these resources can be pooled such that decisions can be made by a peer group applying to the whole and thus reducing the individual level of effort of each planning partner. This will be accomplished by the formation of a steering committee made up of planning partners and other “stakeholders” within the planning area. The size and makeup of this steering committee will be determined by the planning partnership. This body will assume the decision making responsibilities on behalf of the entire partnership. This will streamline the planning process by reducing the number of meetings that will need to be attended by each planning partner. The assembled Steering Committee for this effort will meet monthly on an as needed basis as determined by the planning team, and will provide guidance and decision making during all phases of the plan’s development.

With the above participation requirements in mind, each partner will be asked to aid this process by being prepared to develop its section of the plan. To be an eligible planning partner in this effort, each Planning Partner will be asked to provide the following:

- A. A “Letter of Intent to participate” or Resolution to participate to the Planning Team (see exhibit A).
- B. Designate a lead point of contact for this effort. This designee will be listed as the hazard mitigation point of contact for your jurisdiction in the plan.
- C. Approve the Steering Committee.
- D. If requested, provide support in the form of mailing list, possible meeting space, and public information materials, such as newsletters, newspapers or direct mailed brochures, required to implement the public involvement strategy developed by the Steering Committee.
- E. Participate in the process. There will be many opportunities as this plan evolves to participate. Opportunities such as:
  - a. Steering Committee meetings
  - b. Public meetings or open houses

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- c. Workshops/ Planning Partner specific training sessions
- d. Public review and comment periods prior to adoption

At each and every one of these opportunities, attendance will be recorded. Attendance records will be used to document participation for each planning partner. No thresholds will be established as minimum levels of participation. However, each planning partner should attempt to attend all possible meetings and events.

- F. There will be one **mandatory** workshop that all planning partners will be required to attend. This workshop will cover the proper completion of the jurisdictional annex template which is the basis for each partner's jurisdictional chapter in the plan. Failure to have a representative at this workshop will disqualify the planning partner from participation in this effort. The schedule for this workshop will be such that all committed planning partners will be able to attend.
- G. After participation in the mandatory template workshop, each partner will be required to complete their template and provide it to the planning team in the time frame established by the Steering Committee. Technical assistance in the completion of these templates will be available from the planning team. Failure to complete your template in the required time frame *may* lead to disqualification from the partnership.
- H. Each partner will be asked to perform a "consistency review" of all technical studies, plans, ordinances specific to hazards to determine the existence of any not consistent with the same such documents reviewed in the preparation of the County (parent) Plan. For example, if your community has a floodplain management plan that makes recommendations that are not consistent with any of the County's Basin Plans, that plan will need to be reviewed for probable incorporation into the plan for your area.
- I. Each partner will be asked to review the Risk Assessment and identify hazards and vulnerabilities specific to its jurisdiction. Contract resources will provide the jurisdiction specific mapping and technical consultation to aid in this task, but the determination of risk and vulnerability will be up to each partner.
- J. Each partner will be asked to review and determine if the mitigation recommendations chosen in the parent plan will meet the needs of its jurisdiction. Projects within each jurisdiction consistent with the parent plan recommendations will need to be identified and prioritized, and reviewed to determine their benefits vs. costs.
- K. Each partner will be required to create its own action plan that identifies each project, who will oversee the task, how it will be financed and when it is estimated to occur.
- L. Each partner will be required to formally adopt the plan.

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Templates and instructions to aid in the compilation of this information will be provided to all committed planning partners. Each partner will be asked to complete their templates in a timely manner and according to the timeline specified by the Steering Committee.

**\*\* Note\*\*:** Once this plan is completed, and FEMA approval has been determined for each partner, maintaining that eligibility will be dependent upon each partner implementing the plan implementation-maintenance protocol identified in the plan.

**Exhibit A**  
**Example Letter of Intent to Participate**

**Whitman County Hazard Mitigation Planning Partnership**  
C/O Rob Flaner, Tetra Tech, Inc.  
90 South Blackwood Ave.  
Eagle, ID 83616

Dear Whitman County Planning Partnership,

Please be advised that the \_\_\_\_\_ (*insert City or district name*) is committed to participating in the update to the Whitman County Natural Hazards Mitigation Plan. As the Chief Administrative Official for this jurisdiction, I certify that I will commit all necessary resources in order to meet Partnership expectations as outlined in the “Planning Partners expectations” document provided by the planning team, in order to obtain Disaster Mitigation Act (DMA) compliance for our jurisdiction.

Mr./Ms. \_\_\_\_\_ will be our jurisdiction’s point of contact for this process and they can be reached at (*insert: address, phone number and e-mail address*).

Sincerely,

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## Exhibit B

### Planning Team Contact information

Name	Representing	Address	Phone	e-mail
Fran Martin	Whitman County EM	North 310 Main St. Colfax, WA 99111	(509)397-6280	<a href="mailto:FranM@co.whitman.wa.us">FranM@co.whitman.wa.us</a>
Rob Flaner	Tetra Tech, Inc.	90 S. Blackwood Ave Eagle, ID 83616	(208) 939-4391	<a href="mailto:Rob.flaner@tetrattech.com">Rob.flaner@tetrattech.com</a>
Ed Whitford	Tetra Tech, Inc.	10101 271st Street, Stanwood, WA. 98292	(360) 336-3071	<a href="mailto:Ed.whitford@tetrattech.com">Ed.whitford@tetrattech.com</a>
Beverly O'Dea	Tetra Tech, Inc	1420 fifth Ave, Suite 600 Seattle, WA 98101-2357	(253)301-1330	<a href="mailto:Laura.hendrix@tetrattech.com">Laura.hendrix@tetrattech.com</a>

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**APPENDIX B.**  
**PROCEDURES FOR LINKING TO**  
**THE HAZARD MITIGATION PLAN UPDATE**

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## **APPENDIX B. PROCEDURES FOR LINKING TO THE HAZARD MITIGATION PLAN UPDATE**

Not all eligible local governments within Whitman County are included in the Whitman County Hazard Mitigation Plan Update. It is assumed that some or all of these non-participating local governments may choose to “link” to the Plan at some point to gain eligibility for programs under the federal Disaster Mitigation Act. In addition, some of the current partnership may not continue to meet eligibility requirements due to a lack of participation as prescribed by the plan. The following “linkage” procedures define the requirements established by the Plan’s Steering Committee and all planning partners for dealing with an increase or decrease in the number of planning partners linked to this plan. It should be noted that a currently non-participating jurisdiction within the defined planning area is not obligated to link to this plan. These jurisdictions can chose to do their own “complete” plan that addresses all required elements of section 201.6 of 44 CFR.

### **INCREASING THE PARTNERSHIP THROUGH LINKAGE**

The annual time period for the linkage process will be from January to May during any year. Eligible linking jurisdictions are instructed to complete all of the following procedures during this time frame:

- The eligible jurisdiction requests a “Linkage Package” by contacting the Point of Contact (POC) for the plan:

Name  
Title  
Address  
City, State ZIP  
Phone  
e-mail

The POC will provide a linkage packages that includes:

- Copy of Volume 1 and 2 of the plan
  - Planning partner’s expectations package.
  - A sample “letter of intent” to link to the Hazard Mitigation Plan Update.
  - A Special Purpose District or City template and instructions.
  - Catalog of Hazard Mitigation Alternatives
  - A “request for technical assistance” form.
  - A copy of Section 201.6 of Chapter 44, the Code of Federal Regulations (44 CFR), which defines the federal requirements for a local hazard mitigation plan.
- The new jurisdiction will be required to review both volumes of the Hazard Mitigation Plan Update, which includes the following key components for the planning area:
    - The planning area risk assessment
    - Goals and objectives
    - Plan implementation and maintenance procedures

- Comprehensive review of alternatives
- County-wide initiatives.

Once this review is complete, the jurisdiction will complete its specific annex using the template and instructions provided by the POC. Technical assistance can be provided upon request by completing the request for technical assistance (TA) form provided in the linkage package. This TA may be provided by the POC or any other resource within the Planning Partnership such as a member of the Steering Committee or a currently participating City or Special Purposes District partner. The POC will determine who will provide the TA and the possible level of TA based on resources available at the time of the request.

- The new jurisdiction will be required to develop a public involvement strategy that ensures the public's ability to participate in the plan development process. At a minimum, the new jurisdiction must make an attempt to solicit public opinion on hazard mitigation at the onset of this linkage process and a minimum of one public meeting to present their draft jurisdiction specific annex for comment, prior to adoption by the governing body. The Planning Partnership will have resources available to aid in the public involvement strategy such as the Plan website. However, it will be the new jurisdiction's responsibility to implement and document this strategy for incorporation into its annex. It should be noted that the Jurisdictional Annex templates ***do not*** include a section for the description of the public process. This is because the original partnership was covered under a uniform public involvement strategy that covered the planning area described in Volume 1 of the plan. Since new partners were not addressed by that strategy, they will have to initiate a new strategy, and add a description of that strategy to their annex. For consistency, new partners are encouraged to follow the public involvement format utilized by the initial planning effort as described in Volume 1 of the plan.
- Once their public involvement strategy is completed and they have completed their template, the new jurisdiction will submit the completed package to the POC for a pre-adoption review to ensure conformance with the Regional plan format.
- The POC will review for the following:
  - Documentation of Public Involvement strategy
  - Conformance of template entries with guidelines outlined in instructions
  - Chosen initiatives are consistent with goals, objectives and mitigation catalog of the Planning Area Hazard Mitigation Plan Update
  - A Designated point of contact
  - A ranking of risk specific to the jurisdiction.

The POC may utilize members of the Steering Committee or other resources to complete this review. All proposed linked annexes will be submitted to the Steering Committee for review and comment prior to submittal for state approval.

- Plans approved and accepted by the Steering Committee will be forwarded to the Washington Emergency Management Division for review with a cover letter stating the forwarded plan meets local approved plan standards and whether the plan is submitted with local adoption or for criteria met/plan not adopted review.
- The Washington Emergency Management Division will reviews plans for federal compliance. Non-Compliant plans are returned to the Lead agency for correction. Compliant plans are forwarded to FEMA for review with annotation as to the adoption status.

- FEMA reviews the new jurisdiction's plan in association with the approved plan to ensure DMA compliance. FEMA notifies new jurisdiction of results of review with copies to the Washington Emergency Management Division and approved planning authority.
- New jurisdiction corrects plan shortfalls (if necessary) and resubmits to the Washington Emergency Management Division through the approved plan lead agency.
- For plans with no shortfalls from the FEMA review that have not been adopted, the new jurisdiction governing authority adopts the plan (if not already accomplished) and forwards adoption resolution to FEMA with copies to lead agency and the Washington Emergency Management Division.
- FEMA regional director notifies new jurisdiction governing authority of plan approval.

The new jurisdiction plan is then included with the regional plan with the commitment from the new jurisdiction to participate in the ongoing plan implementation and maintenance.

## DECREASING THE PARTNERSHIP

The eligibility afforded under this process to the planning partnership can be rescinded in two ways. First, a participating planning partner can ask to be removed from the partnership. This may be done because the partner has decided to develop its own plan or has identified a different planning process for which it can gain eligibility. A partner that wishes to voluntarily leave the partnership shall inform the POC of this desire in writing. This notification can occur any time during the calendar year. A jurisdiction wishing to pursue this avenue is advised to make sure that it is eligible under the new planning effort, to avoid any period of being out of compliance with the Disaster Mitigation Act.

After receiving this notification, the POC shall immediately notify both the Washington Emergency Management Division and FEMA in writing that the partner in question is no longer covered by the Hazard Mitigation Plan Update, and that the eligibility afforded that partner under this plan should be rescinded based on this notification.

The second way a partner can be removed from the partnership is by failure to meet the participation requirements specified in the "Planning Partner Expectations" package provided to each partner at the beginning of the process, or the plan maintenance and implementation procedures specified under chapter 7 in Volume 1 of the plan. Each partner agreed to these terms by adopting the plan.

Eligibility status of the planning partnership will be monitored by the POC. The determination of whether a partner is meeting its participation requirements will be based on the following parameters:

- Are progress reports being submitted annually by the specified time frames?
- Are partners notifying the POC of changes in designated points of contact?
- Are the partners supporting the Steering Committee by attending designated meetings or responding to needs identified by the body?
- Are the partners continuing to be supportive as specified in the Planning Partners expectations package provided to them at the beginning of the process?

Participation in the plan does not end with plan approval. This partnership was formed on the premise that a group of planning partners would pool resources and work together to strive to reduce risk within the planning area. Failure to support this premise lessens the effectiveness of this effort. The following procedures will be followed to remove a partner due to the lack of participation:

- The POC will advise the Steering Committee of this pending action and provide evidence or justification for the action. Justification may include: multiple failures to submit annual progress reports, failure to attend meetings determined to be mandatory by the Steering Committee, failure to act on the partner's action plan, or inability to reach designated point of contact after a minimum of five attempts.
- The Steering Committee will review information provided by POC, and determine action by a vote. The Steering Committee will invoke the voting process established in the ground rules established during the formation of this body.
- Once the Steering Committee has approved an action, the POC will notify the planning partner of the pending action in writing via certified mail. This notification will outline the grounds for the action, and ask the partner if it is their desire to remain as a partner. This notification shall also clearly identify the ramifications of removal from the partnership. The partner will be given 30 days to respond to the notification.
- Confirmation by the partner that they no longer wish to participate or failure to respond to the notification shall trigger the procedures for voluntary removal discussed above.
- Should the partner respond that they would like to continue participation in the partnership, they must clearly articulate an action plan to address the deficiencies identified by the POC. This action plan shall be reviewed by the Steering Committee to determine whether the actions are appropriate to rescind the action. Those partners that satisfy the Steering Committee's review will remain in the partnership, and no further action is required.
- Automatic removal from the partnership will be implemented for partners where these actions have to be initiated more than once in a 5 year planning cycle.

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**APPENDIX C.**  
**JURISDICTIONAL ANNEX INSTRUCTIONS AND TEMPLATE**  
**FOR MUNICIPALITIES**

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# INSTRUCTIONS FOR COMPLETING MUNICIPALITY ANNEX TEMPLATE

This document provides instructions for completing the annex template for city and county governments participating in multi-partner hazard mitigation planning. Assistance in completing the template will be available in the form of a workshop for all planning partners or one-on-one visits with each partner, depending on funding availability. Any questions on completing the template should be directed to:

Rob Flaner

Tetra Tech, Inc.

90 South Blackwood Ave.

Eagle, ID 83616

(208) 939-4391

e-mail: rflaner@msn.com

Please provide both a hard copy and digital copy of the completed template to Tetra Tech upon completion.

## ***Associated Materials:***

Along with the annex template and these instructions, you have been provided with other materials with information that is needed for completing the template. Be sure to review these materials **before** you begin the process of filling in the template:

- Summary-of-loss matrix for the hazard mitigation plan
- Results from the hazard mitigation plan questionnaire
- Catalog of mitigation alternatives
- Fact sheet on Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation Grant Program (PDM)

## ***A Note About Software:***

The template for the municipal jurisdiction annex is a Microsoft Word document in a format that will be used in the final plan. Partners are asked to use this template so that a uniform product will be completed for each partner. Partners who do not have Microsoft Word capability may prepare the document in other formats, and the planning team will convert it to the Word format.

## CHAPTER NUMBER AND TITLE

In the chapter title at the top of Page 1, type in the complete official name of your jurisdiction (The City of Metropolis, Jefferson County, etc.). At this time, also change the name in the “header” box on Page 3, using the same wording.

Note that the template is set up as Chapter “X.” Please leave all references to “X” in the template as they are. Once all templates are received, chapter numbering will be assigned for incorporation into the final plan.

## HAZARD MITIGATION PLAN POINT OF CONTACT

Please provide the name, title, mailing address, telephone number, and e-mail address for the primary point of contact for your jurisdiction. This should be the person responsible for monitoring, evaluating and updating the annex for your jurisdiction. This person should also be the principle liaison between your jurisdiction and the Steering Committee overseeing development of this plan.

In addition, designate an alternate point of contact. This would be a person to contact should the primary point of contact be unavailable or no longer employed by the jurisdiction.

## JURISDICTION PROFILE

Provide information specific to your jurisdiction as indicated, in a style similar to the example provided in the box at right. This should be information that was not provided in the overall mitigation plan document. For population data, use the most current population figure for your jurisdiction based on an official means of tracking (e.g., the U.S. Census or state office of financial management).

## JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

### Chronological List of Hazard Events

In Table X-1, list in chronological order (most recent first) any natural hazard event that has caused damage to your jurisdiction since 1975. Include the date of the event and the estimated dollar amount of damage it caused. Please refer to the summary of natural hazard events within risk assessment of the overall hazard mitigation plan. Potential sources of damage information include:

- Preliminary damage estimates your jurisdiction filed with the county or state
- Insurance claims data
- Newspaper archives
- Other plans/documents that deal with emergency management (safety element of a comprehensive plan, emergency response plan, etc.)
- Citizen input.

### Repetitive Loss Properties

A repetitive loss property is any property for which FEMA has paid two or more flood insurance claims in excess of \$1,000 in any rolling 10-year period since 1978. In the space provided in the text for Section X.3, indicate

#### **Example Jurisdiction Profile:**

Date of Incorporation—1858

**Current Population**—17,289 as of July 2006

**Population Growth**—Based on the data tracked by the California Department of Finance, Arcata has experienced a relatively flat rate of growth. The overall population has increased only 3.4% since 2000 and has averaged 0.74% per year from 1990 to 2007

**Location and Description**—The City of Arcata is located on California's redwood coast, approximately 760 miles north of Los Angeles and 275 miles north of San Francisco. The nearest seaport is Eureka, five miles south on Humboldt Bay. Arcata is the home of Humboldt State University and is situated between the communities of McKinleyville to the north and Blue Lake to the east. It sits at the intersection of US Highway 101 and State Route 299.

**Brief History**—The Arcata area was settled during the California gold rush in the 1850s as a supply center for miners. As the gold rush died down, timber and fishing became the area's major economic resource. Arcata was incorporated in 1858 and by 1913 the Humboldt Teachers College, a predecessor to today's Humboldt State University was founded in Arcata. Recently, the presence of the college has come to shape Arcata's population into a young, liberal, and educated crowd. In 1981 Arcata developed the Arcata Marsh and Wildlife sanctuary, an innovative environmentally friendly, sewage treatment enhancement system.

**Climate**—Arcata's weather is typical of the Northern California coast, with mild summers and cool, wet winters. It rarely freezes in the winter and it is rarely hot in the summer. Annual average rainfall is over 40 inches, with 80% of that falling in the six-month period of November through April. The average year-round temperature is 59°F. Humidity averages between 72 and 87 percent. Prevailing winds are from the north, and average 5 mph.

**Governing Body Format**—The City of Arcata is governed by a five-member City Council. The City consists of six departments: Finance, Environmental Services, Community Development, Public Works, Police and the City Manager's Office. The City has 13 Committees, Commissions and Task Forces, which report to the City Council.

**Development Trends**—Anticipated development levels for Arcata are low to moderate, consisting primarily of residential development. The majority of recent development has been infill. Residentially, there has been a focus on affordable housing and a push for more secondary mother-in-law units on properties.

the number of any FEMA-identified Repetitive Flood Loss properties in your jurisdiction (your technical assistance provider will be able to help you confirm this information). If you have none, indicate “none” in the space provided.

Next, indicate the number (if any) of repetitive loss structures in your jurisdiction that have been mitigated. Mitigated for this exercise means that flood protection has been provided to the structure. If you do not know the answer to this question, the planning team will provide it for you.

## HAZARD RISK RANKING

The risk ranking performed for the overall planning area is presented in the risk assessment section of the overall hazard mitigation plan. However, each jurisdiction has differing degrees of risk exposure and vulnerability and therefore needs to rank risk for its own area, using the same methodology as used for the overall planning area. The risk-ranking exercise assesses two variables for each hazard: its probability of occurrence; and its potential impact on people, property and the economy. A detailed discussion of the concepts associated with risk ranking is provided in the overall hazard mitigation plan. The instructions below outline steps for assessing risk in your jurisdiction to develop results that are to be included in the template.

### Determine Probability of Occurrence for Each Hazard

A probability factor is assigned based on how often a hazard is likely to occur. In Table 1, list the probability of occurrence for each hazard as it pertains to your jurisdiction, along with its probability factor, as follows:

- High—Hazard event is likely to occur within 25 years (Probability Factor = 3)
- Medium—Hazard event is likely to occur within 100 years (Probability Factor = 2)
- Low—Hazard event is not likely to occur within 100 years (Probability Factor = 1)
- None—If there is no exposure to a hazard, there is no probability of occurrence (Probability Factor = 0)

TABLE 1. HAZARD PROBABILITY OF OCCURRENCE		
Hazard Type	Probability	Probability Factor

The probability of occurrence of a hazard event is generally based on past hazard events in an area. For example, if your jurisdiction has experienced two damaging floods in the last 25 years, the probability of occurrence is high for flooding and scores a 3 under this category. If your jurisdiction has experienced no damage from landslides in the last 100 years, your probability of occurrence for landslide is low, and scores a 1 under this category.

## Determine Potential Impacts of Each Hazard

The impact of each hazard was divided into three categories: impacts on people, impacts on property, and impacts on the economy. These categories were also assigned weighted values. Impact on people was assigned a weighting factor of 3, impact on property was assigned a weighting factor of 2 and impact on the economy was assigned a weighting factor of 1. Steps to assess each type of impact are described below.

### Impacts on People

To assess impacts on people, values are assigned based on the percentage of the total *population exposed* to the hazard event. The degree of impact on individuals will vary and is not measurable, so the calculation assumes for simplicity and consistency that all people exposed to a hazard because they live in a hazard zone will be equally impacted when a hazard event occurs. In Table 2, list the potential impact of each hazard on people in your jurisdiction, along with its impact factor, as follows:

- High Impact—50% or more of the population is exposed to a hazard (Impact Factor = 3)
- Medium Impact—25% to 49% of the population is exposed to a hazard (Impact Factor = 2)
- Low Impact—25% or less of the population is exposed to the hazard (Impact Factor = 1)
- No impact—None of the population is exposed to a hazard (Impact Factor = 0)

TABLE 2. HAZARD IMPACT ON PEOPLE			
Hazard Type	Impact	Impact Factor	Weighted Impact Factor (Unweighted Factor x 3)

### Impacts on Property

To assess impacts on property, values are assigned based on the percentage of the total *property value exposed* to the hazard event. In Table 3, enter the cost estimates for potential damage to exposed structures, taken from the “Summary of Loss” matrix provided with these instructions.

TABLE 3. COST ESTIMATES FOR POTENTIAL DAMAGE TO STRUCTURES	
Hazard type	Estimate of Potential Dollar Losses to Exposed Structures

In Table 4, list the potential impact of each hazard on property in your jurisdiction, along with its impact factor. Determine impact based on damage estimates from Table 3, as follows:

- High Impact—30% or more of the total assessed property value is exposed to a hazard (Impact Factor = 3)
- Medium Impact—15% to 29% of the total assessed property value is exposed to a hazard (Impact Factor = 2)
- Low Impact—14% or less of the total assessed property value is exposed to the hazard (Impact Factor = 1)
- No impact—None of the total assessed property value is exposed to a hazard (Impact Factor = 0)

TABLE 4. HAZARD IMPACT ON PROPERTY			
Hazard Type	Impact	Impact Factor	Weighted Impact Factor (Unweighted Factor x 2)

### Impacts on the Economy

To assess impacts on the economy, values are assigned based on the percentage of the total **property value vulnerable** to the hazard event. Values represent estimates of the loss from a major event of each hazard in comparison to the total assessed value of property in the county. For some hazards, such as wildland fire, landslide and severe weather, vulnerability is the same as exposure due to the lack of loss estimation tools specific to those hazards. In Table 5, list the potential impact of each hazard on the economy in your jurisdiction, along with its impact factor, as follows:

- High Impact—Estimated loss from the hazard is 20% or more of the total assessed property value (Impact Factor = 3)
- Medium Impact—Estimated loss from the hazard is 10% to 19% of the total assessed property value (Impact Factor = 2)
- Low Impact—Estimated loss from the hazard is 8% or less of the total assessed property value (Impact Factor = 1)
- No impact—No loss is estimated from the hazard (Impact Factor = 0)

TABLE 5. HAZARD IMPACT ON THE ECONOMY			
Hazard Type	Impact	Impact Factor	Weighted Impact Factor (Unweighted Factor x 1)

### Determine Risk Rating for Each Hazard

A risk rating for each hazard is determined by multiplying the assigned probability factor by the sum of the weighted impact factors for people, property and the economy:

- Risk Rating = Probability Factor x Weighted Impact Factor {people + property + economy}

Using the results developed in Tables 1, 2, 4 and 5, complete Table 6 to calculate a risk rating for each hazard of concern.



TABLE 6. HAZARD RISK RATING			
Hazard Type	Probability Factor (P)	Sum of Weighted Impact Factors on People, Property & Economy (I)	Risk Rating (P x I)

## Complete Risk Ranking in Template

Once Table 6 has been completed above, complete Table X-2 in your template. The hazard with the highest risk rating in Table 6 should be listed at the top of Table X-2 and given a rank of 1; the hazard with the second highest rating should be listed second with a rank of 2; and so on. Two hazards with equal risk ratings should be given the same rank.

It is important to note that this exercise should not override your subjective assessment of relative risk based on your knowledge of the history of natural hazard events in your jurisdiction. If this risk ranking exercise generates results other than what you know based on substantiated data and documentation, you may alter the ranking based on this knowledge. If this is the case, please note this fact in the comments at the end of the template. Remember, one of the purposes of this exercise is to support the selection and prioritization of initiatives in your plan. If you identify an initiative with a high priority that mitigates the risk of a hazard you have ranked low, that project will not be competitive in the grant arena.

## CAPABILITY ASSESSMENT

### Legal and Regulatory Capability

Describe the legal authorities available to your jurisdiction and/or enabling legislation at the state level affecting planning and land management tools that can support hazard mitigation initiatives. In Table X-3, indicate “Yes” or “No” for each listed code, ordinance, requirement or planning document in each of the following columns:

- Local Authority—Enter “Yes” if your jurisdiction has prepared or adopted the identified item; otherwise, enter “No.” If yes, then enter the code or ordinance number and its date of adoption in the comments column.
- State or Federal Prohibitions—Enter “Yes” if there are any state or federal regulations or laws that would prohibit local implementation of the identified item; otherwise, enter “No.”
- Other Regulatory Authority—Enter “Yes” if there are any regulations that may impact your initiative that are enforced or administered by another agency (e.g., a state agency or special purpose district); otherwise, enter “No.”

- State Mandated—Enter “Yes” if state laws or other requirements enable or require the listed item to be implemented at the local level; otherwise, enter “No.”

## **Administrative and Technical Capability**

This section requires you to take inventory of the staff/personnel resources available to your jurisdiction to help with hazard mitigation planning and implementation of specific mitigation actions.

Complete Table X-4 by indicating whether your jurisdiction has access to each of the listed personnel resources. Enter “Yes” or “No” in the column labeled “Available?”. If yes, then enter the department and position title in the right-hand column.

## **Financial Resources**

Identify what financial resources (other than the Hazard Mitigation Grant Program and the Pre-Disaster Mitigation Grant Program) are available to your jurisdiction for implementing mitigation initiatives.

Complete Table X-5 by indicating whether each of the listed financial resources is accessible to your jurisdiction. Enter “Yes” if the resource is fully accessible to your jurisdiction. Enter “No” if there are limitations or prerequisites that may hinder your eligibility for this resource.

## **Community Mitigation Related Classifications**

Complete Table X-6 to indicate your jurisdiction’s participation in various national programs related to natural hazard mitigation. For each program enter “Yes” or “No” in the second column to indicate whether your jurisdiction participates. If yes, then enter the classification that your jurisdiction has earned under the program in the third column and the date on which that classification was issued in the fourth column; enter “N/A” in these columns if your jurisdiction is not participating.

## **HAZARD MITIGATION ACTION PLAN**

### **Action Plan Matrix**

Identify the initiatives your jurisdiction would like to pursue with this plan. Refer to the mitigation catalog for mitigation options you might want to consider. Be sure to consider the following factors in your selection of initiatives:

- Select initiatives that are consistent with the overall goals, objectives and guiding principles of the hazard mitigation plan.
- Identify projects where benefits exceed costs.
- Include any project that your jurisdiction has committed to pursuing regardless of grant eligibility.
- Know what is and is not grant-eligible under the HMGP and PDM (see fact sheet provided). Listing HMGP or PDM as a potential funding source for an ineligible project will be a red flag when this plan goes through review. If you have projects that are not HMGP or PDM grant eligible, but do mitigate part or all of the hazard and may be eligible for other grant programs sponsored by other agencies, include them in this section.
- Although you should identify at least one initiative for your highest ranked risk, a hazard-specific project is not required for every hazard. If you have not identified an earthquake related project, and an earthquake occurs that causes damage in your jurisdiction, you are not discounted from HMGP project grant eligibility.

Complete Table X-7 for all the initiatives you have identified:

- Enter the initiative number and description.
- Indicate whether the initiative mitigates hazards for new or existing assets.
- Identify the specific hazards the initiative will mitigate.
- Identify by number the mitigation plan objectives that the initiative addresses. These have been provided in the Steering Committee meeting minutes that were forwarded to you in the past.
- Indicate who will be the lead in administering the project. This will most likely be your governing body.
- Identify funding sources for the project. If it is a grant, include the funding sources for the cost share. Refer to your fiscal capability assessment (Table X-5) to identify possible sources of funding.
- Indicate the time line as “short term” (1 to 5 years) or “long term” (5 years or greater).

**Wording Your Initiative Descriptions:**

Descriptions of your initiatives need not provide great detail. That will come when you apply for a project grant. Provide enough information to identify the project’s scope and impact. The following are typical descriptions for an action plan initiative:

- **Initiative 1**—Address Repetitive Loss properties. Through targeted mitigation, acquire, relocate or retrofit the five repetitive loss structures in the County as funding opportunities become available.
- **Initiative 2**—Perform a non-structural, seismic retrofit of City Hall.
- **Initiative 3**—Acquire floodplain property in the Smith subdivision.
- **Initiative 4**—Enhance the County flood warning capability by joining the NOAA “Storm Ready” program.

Technical assistance will be available to your jurisdiction in completing this section during the technical assistance visit.

## Prioritization of Mitigation Initiatives

Complete the information in Table X-8 as follows:

- Initiative #—Indicate the initiative number from Table X-7.
- # of Objectives Met—Enter the number of objectives the initiative will meet.
- Benefits—Enter “High,” “Medium” or “Low” as follows:
  - High: Project will have an immediate impact on the reduction of risk exposure to life and property.
  - Medium: Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.
  - Low: Long-term benefits of the project are difficult to quantify in the short term.
- Costs—Enter “High,” “Medium” or “Low” as follows:
  - High: Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.
  - Medium: Could budget for under existing work-plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
  - Low: Possible to fund under existing budget. Project is part of, or can be part of an existing ongoing program.

If you know the estimated cost of a project because it is part of an existing, ongoing program, indicate the amount.

- Do Benefits Exceed the Cost?—Enter “Yes” or “No.” This is a qualitative assessment. Enter “Yes” if the benefit rating (high, medium or low) is the same as or higher than the cost rating (high benefit/high cost; high benefit/medium cost; medium benefit/low cost; etc.). Enter “No” if the benefit rating is lower than the cost rating (medium benefit/high cost, low benefit/medium cost; etc.)
- Is the Project Grant-Eligible?—Enter “Yes” or “No.” Refer to the fact sheet on HMGP and PDM.
- Can Project Be Funded Under Existing Program Budgets?—Enter “Yes” or “No.” In other words, is this initiative currently budgeted for, or would it require a new budget authorization or funding from another source such as grants?
- Priority—Enter “High,” “Medium” or “Low” as follows:
  - High: Project meets multiple plan objectives, benefits exceed cost, funding is secured under existing programs, or is grant eligible, and project can be completed in 1 to 5 years (i.e., short term project) once funded.
  - Medium: Project meets at least 1 plan objective, benefits exceed costs, requires special funding authorization under existing programs, grant eligibility is questionable, and project can be completed in 1 to 5 years once funded.
  - Low: Project will mitigate the risk of a hazard, benefits exceed costs, funding has not been secured, project is not grant eligible, and time line for completion is long term (5 to 10 years).

This prioritization is a simple review to determine that the initiatives you have identified meet one of the primary objectives of the Disaster Mitigation Act. It is not the detailed benefit/cost analysis required for HMGP/PDM project grants. The prioritization will identify any projects whose probable benefits will not exceed the probable costs.

## Analysis of Mitigation Actions

Complete Table X-9 summarizing the mitigation actions by hazard of concern and the following six mitigation types:

- Prevention—Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
- Property Protection—Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
- Public Education and Awareness—Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
- Natural Resource Protection—Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.

- **Emergency Services**—Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
- **Structural Projects**—Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.

This exercise demonstrates that the jurisdiction has selected a comprehensive range of actions.

## **FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY**

In this section, identify any future studies, analyses, reports, or surveys your jurisdiction needs to better understand its vulnerability to identified or currently unidentified risks. These could be needs based on federal or state agency mandates such as EPA's Bio-terrorism assessment requirement for water districts.

## **ADDITIONAL COMMENTS**

Use this section to add any additional information pertinent to hazard mitigation and your jurisdiction not covered in this template.





# CHAPTER X. [INSERT JURISDICTION NAME] ANNEX

## X.1 HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

[Name, Title]  
[Street Address]  
[City, State ZIP]  
Telephone: [Phone #]  
e-mail Address: [email address]

### Alternate Point of Contact

[Name, Title]  
[Street Address]  
[City, State ZIP]  
Telephone: [Phone #]  
e-mail Address: [email address]

## X.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—[Insert Date of Incorporation]
- **Current Population**—[Insert Population] as of [Insert Date of Population Count]
- **Population Growth**—[Insert Discussion of Population Growth]
- **Location and Description**—[Insert Description of Location, Surroundings, Key Geographic Features]
- **Brief History**—[Insert Summary Discussion of Jurisdiction's History]
- **Climate**—[Insert Summary Discussion of Climate]
- **Governing Body Format**—[Insert Summary Description of Governing Body]
- **Development Trends**—[Insert Summary Description of Development]

## X.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table X-1 lists all past occurrences of natural hazards within the jurisdiction. Repetitive loss records are as follows:

- Number of FEMA Identified Repetitive Flood Loss Properties: [Insert #]
- Number of Repetitive Flood Loss Properties that have been mitigated: [Insert #]

## X.4 HAZARD RISK RANKING

Table X-2 presents the ranking of the hazards of concern.

## X.5 CAPABILITY ASSESSMENT

The assessment of the jurisdiction's legal and regulatory capabilities is presented in Table X-3. The assessment of the jurisdiction's administrative and technical capabilities is presented in Table X-4. The assessment of the jurisdiction's fiscal capabilities is presented in Table X-5. Classifications under various community mitigation programs are presented in Table X-6.

## **X.6 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED INITIATIVES**

Table X-7 lists the initiatives that make up the jurisdiction's hazard mitigation plan. Table X-8 identifies the priority for each initiative. Table X-9 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

## **X.7 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY**

[Insert text, if any]

## **X.8 ADDITIONAL COMMENTS**

[Insert text, if any]

TABLE X-1. NATURAL HAZARD EVENTS	
-------------------------------------	--

[illegible]

**TABLE X-2.**  
**HAZARD RISK RANKING**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1		
2		
3		
4		
5		
6		
7		
8		
9		

<b>TABLE X-3.</b> <b>LEGAL AND REGULATORY CAPABILITY</b>					
	Local Authority	State or Federal Prohibitions	Other Jurisdictional Authority	State Mandated	Comments
<b>Codes, Ordinances &amp; Requirements</b>					
Building Code					
Zonings					
Subdivisions					
Stormwater Management					
Post Disaster Recovery					
Real Estate Disclosure					
Growth Management					
Site Plan Review					
Special Purpose (flood management, critical areas)					
<b>Planning Documents</b>					
General or Comprehensive Plan					
Floodplain or Basin Plan					
Stormwater Plan					
Capital Improvement Plan					
Habitat Conservation Plan					
Economic Development Plan					
Emergency Response Plan					
Shoreline Management Plan					
Post Disaster Recovery Plan					
<b>Other</b>					
Other					

**TABLE X-4.  
ADMINISTRATIVE AND TECHNICAL CAPABILITY**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices		
Engineers or professionals trained in building or infrastructure construction practices		
Planners or engineers with an understanding of natural hazards		
Staff with training in benefit/cost analysis		
Floodplain manager		
Surveyors		
Personnel skilled or trained in GIS applications		
Scientist familiar with natural hazards in local area		
Emergency manager		
Grant writers		

**TABLE X-5.  
FISCAL CAPABILITY**

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	
Capital Improvements Project Funding	
Authority to Levy Taxes for Specific Purposes	
User Fees for Water, Sewer, Gas or Electric Service	
Incur Debt through General Obligation Bonds	
Incur Debt through Special Tax Bonds	
Incur Debt through Private Activity Bonds	
Withhold Public Expenditures in Hazard-Prone Areas	
State Sponsored Grant Programs	
Development Impact Fees for Homebuyers or Developers	
Other	

**TABLE X-6.  
COMMUNITY CLASSIFICATIONS**

	Participating?	Classification	Date Classified
Community Rating System			
Building Code Effectiveness Grading Schedule			
Public Protection			
Storm Ready			
Firewise			

**TABLE X-7.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>Initiative #—Description</b>						
<b>Initiative #—Description</b>						
<b>Initiative #—Description</b>						
<b>Initiative #—Description</b>						
<b>Initiative #—Description</b>						
<b>Initiative #—Description</b>						
<b>Initiative #—Description</b>						



TABLE X-8. MITIGATION STRATEGY PRIORITY SCHEDULE	
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[illegible]

a. See Section \_\_\_\_ for definitions of high, medium and low priorities.

**TABLE X-9.**  
**ANALYSIS OF MITIGATION INITIATIVES**

[illegible]

Notes:

1. **Prevention:** Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
2. **Property Protection:** Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
3. **Public Education and Awareness:** Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
4. **Natural Resource Protection:** Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
5. **Emergency Services:** Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
6. **Structural Projects:** Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.

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**APPENDIX D.**  
**JURISDICTIONAL ANNEX INSTRUCTIONS AND TEMPLATE**  
**FOR MUNICIPALITY UPDATES**

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# INSTRUCTIONS FOR COMPLETING MUNICIPALITY UPDATE ANNEX TEMPLATE

This document provides instructions for completing the annex template for city and county governments participating in multi-partner hazard mitigation planning. Assistance in completing the template will be available in the form of a workshop for all planning partners or one-on-one visits with each partner, depending on funding availability. Any questions on completing the template should be directed to:

Rob Flaner

Tetra Tech, Inc.

90 South Blackwood Ave.

Eagle, ID 83616

(208) 939-4391

e-mail: rflaner@msn.com

Please provide both a hard copy and digital copy of the completed template to Tetra Tech upon completion.

## ***Associated Materials:***

Along with the annex template and these instructions, you have been provided with other materials with information that is needed for completing the template. Be sure to review these materials **before** you begin the process of filling in the template:

- Summary-of-loss matrix for the hazard mitigation plan
- Results from the hazard mitigation plan questionnaire
- Catalog of mitigation alternatives
- Fact sheet on Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation Grant Program (PDM)

## ***A Note About Software:***

The template for the municipal jurisdiction annex is a Microsoft Word document in a format that will be used in the final plan. Partners are asked to use this template so that a uniform product will be completed for each partner. Partners who do not have Microsoft Word capability may prepare the document in other formats, and the planning team will convert it to the Word format.

## CHAPTER NUMBER AND TITLE

In the chapter title at the top of Page 1, type in the complete official name of your jurisdiction (The City of Metropolis, Jefferson County, etc.). At this time, also change the name in the “header” box on Page 3, using the same wording.

Note that the template is set up as Chapter “X.” Please leave all references to “X” in the template as they are. Once all templates are received, chapter numbering will be assigned for incorporation into the final plan.

## HAZARD MITIGATION PLAN POINT OF CONTACT

Please provide the name, title, mailing address, telephone number, and e-mail address for the primary point of contact for your jurisdiction. This should be the person responsible for monitoring, evaluating and updating the annex for your jurisdiction. This person should also be the principle liaison between your jurisdiction and the Steering Committee overseeing development of this plan.

In addition, designate an alternate point of contact. This would be a person to contact should the primary point of contact be unavailable or no longer employed by the jurisdiction.

## JURISDICTION PROFILE

Provide information specific to your jurisdiction as indicated, in a style similar to the example provided in the box at right. This should be information that was not provided in the overall mitigation plan document. For population data, use the most current population figure for your jurisdiction based on an official means of tracking (e.g., the U.S. Census or state office of financial management).

## JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

### Chronological List of Hazard Events

In Table X-1, list in chronological order (most recent first) any natural hazard event that has caused damage to your jurisdiction since 1975. Include the date of the event and the estimated dollar amount of damage it caused. Please refer to the summary of natural hazard events within risk assessment of the overall hazard mitigation plan. Potential sources of damage information include:

- Preliminary damage estimates your jurisdiction filed with the county or state
- Insurance claims data
- Newspaper archives
- Other plans/documents that deal with emergency management (safety element of a comprehensive plan, emergency response plan, etc.)
- Citizen input.

### Repetitive Loss Properties

A repetitive loss property is any property for which FEMA has paid two or more flood insurance claims in excess of \$1,000 in any rolling 10-year period since 1978. In the space provided in the text for Section X.3, indicate the number of any FEMA-identified Repetitive Flood Loss properties in your jurisdiction (your technical assistance provider will be able to help you confirm this information). If you have none,

#### **Example Jurisdiction Profile:**

Date of Incorporation—1858

**Current Population**—17,289 as of July 2006

**Population Growth**—Based on the data tracked by the California Department of Finance, Arcata has experienced a relatively flat rate of growth. The overall population has increased only 3.4% since 2000 and has averaged 0.74% per year from 1990 to 2007

**Location and Description**—The City of Arcata is located on California's redwood coast, approximately 760 miles north of Los Angeles and 275 miles north of San Francisco. The nearest seaport is Eureka, five miles south on Humboldt Bay. Arcata is the home of Humboldt State University and is situated between the communities of McKinleyville to the north and Blue Lake to the east. It sits at the intersection of US Highway 101 and State Route 299.

**Brief History**—The Arcata area was settled during the California gold rush in the 1850s as a supply center for miners. As the gold rush died down, timber and fishing became the area's major economic resource. Arcata was incorporated in 1858 and by 1913 the Humboldt Teachers College, a predecessor to today's Humboldt State University was founded in Arcata. Recently, the presence of the college has come to shape Arcata's population into a young, liberal, and educated crowd. In 1981 Arcata developed the Arcata Marsh and Wildlife sanctuary, an innovative environmentally friendly, sewage treatment enhancement system.

**Climate**—Arcata's weather is typical of the Northern California coast, with mild summers and cool, wet winters. It rarely freezes in the winter and it is rarely hot in the summer. Annual average rainfall is over 40 inches, with 80% of that falling in the six-month period of November through April. The average year-round temperature is 59°F. Humidity averages between 72 and 87 percent. Prevailing winds are from the north, and average 5 mph.

**Governing Body Format**—The City of Arcata is governed by a five-member City Council. The City consists of six departments: Finance, Environmental Services, Community Development, Public Works, Police and the City Manager's Office. The City has 13 Committees, Commissions and Task Forces, which report to the City Council.

**Development Trends**—Anticipated development levels for Arcata are low to moderate, consisting primarily of residential development. The majority of recent development has been infill. Residentially, there has been a focus on affordable housing and a push for more secondary mother-in-law units on properties.

indicate “none” in the space provided.

Next, indicate the number (if any) of repetitive loss structures in your jurisdiction that have been mitigated. Mitigated for this exercise means that flood protection has been provided to the structure. If you do not know the answer to this question, the planning team will provide it for you.

## HAZARD RISK RANKING

The risk ranking performed for the overall planning area is presented in the risk assessment section of the overall hazard mitigation plan. However, each jurisdiction has differing degrees of risk exposure and vulnerability and therefore needs to rank risk for its own area, using the same methodology as used for the overall planning area. The risk-ranking exercise assesses two variables for each hazard: its probability of occurrence; and its potential impact on people, property and the economy. A detailed discussion of the concepts associated with risk ranking is provided in the overall hazard mitigation plan. The instructions below outline steps for assessing risk in your jurisdiction to develop results that are to be included in the template.

### Determine Probability of Occurrence for Each Hazard

A probability factor is assigned based on how often a hazard is likely to occur. In Table 1, list the probability of occurrence for each hazard as it pertains to your jurisdiction, along with its probability factor, as follows:

- High—Hazard event is likely to occur within 25 years (Probability Factor = 3)
- Medium—Hazard event is likely to occur within 100 years (Probability Factor = 2)
- Low—Hazard event is not likely to occur within 100 years (Probability Factor = 1)
- None—If there is no exposure to a hazard, there is no probability of occurrence (Probability Factor = 0)

TABLE 1. HAZARD PROBABILITY OF OCCURRENCE		
Hazard Type	Probability	Probability Factor



The probability of occurrence of a hazard event is generally based on past hazard events in an area. For example, if your jurisdiction has experienced two damaging floods in the last 25 years, the probability of occurrence is high for flooding and scores a 3 under this category. If your jurisdiction has experienced no damage from landslides in the last 100 years, your probability of occurrence for landslide is low, and scores a 1 under this category.

Determine Potential Impacts of Each Hazard

The impact of each hazard was divided into three categories: impacts on people, impacts on property, and impacts on the economy. These categories were also assigned weighted values. Impact on people was assigned a weighting factor of 3, impact on property was assigned a weighting factor of 2 and impact on the economy was assigned a weighting factor of 1. Steps to assess each type of impact are described below.

Impacts on People

To assess impacts on people, values are assigned based on the percentage of the total *population exposed* to the hazard event. The degree of impact on individuals will vary and is not measurable, so the calculation assumes for simplicity and consistency that all people exposed to a hazard because they live in a hazard zone will be equally impacted when a hazard event occurs. In Table 2, list the potential impact of each hazard on people in your jurisdiction, along with its impact factor, as follows:

- High Impact—50% or more of the population is exposed to a hazard (Impact Factor = 3)
- Medium Impact—25% to 49% of the population is exposed to a hazard (Impact Factor = 2)
- Low Impact—25% or less of the population is exposed to the hazard (Impact Factor = 1)
- No impact—None of the population is exposed to a hazard (Impact Factor = 0)

TABLE 2. HAZARD IMPACT ON PEOPLE			
Hazard Type	Impact	Impact Factor	Weighted Impact Factor (Unweighted Factor x 3)

Impacts on Property

To assess impacts on property, values are assigned based on the percentage of the total *property value exposed* to the hazard event. In Table 3, enter the cost estimates for potential damage to exposed structures, taken from the “Summary of Loss” matrix provided with these instructions.

<b>TABLE 3. COST ESTIMATES FOR POTENTIAL DAMAGE TO STRUCTURES</b>	
<b>Hazard type</b>	<b>Estimate of Potential Dollar Losses to Exposed Structures</b>

In Table 4, list the potential impact of each hazard on property in your jurisdiction, along with its impact factor. Determine impact based on damage estimates from Table 3, as follows:

- High Impact—30% or more of the total assessed property value is exposed to a hazard (Impact Factor = 3)
- Medium Impact—15% to 29% of the total assessed property value is exposed to a hazard (Impact Factor = 2)
- Low Impact—14% or less of the total assessed property value is exposed to the hazard (Impact Factor = 1)
- No impact—None of the total assessed property value is exposed to a hazard (Impact Factor = 0)

<b>TABLE 4. HAZARD IMPACT ON PROPERTY</b>			
<b>Hazard Type</b>	<b>Impact</b>	<b>Impact Factor</b>	<b>Weighted Impact Factor (Unweighted Factor x 2)</b>

### Impacts on the Economy

To assess impacts on the economy, values are assigned based on the percentage of the total **property value vulnerable** to the hazard event. Values represent estimates of the loss from a major event of each hazard in comparison to the total assessed value of property in the county. For some hazards, such as wildland fire, landslide and severe weather, vulnerability is the same as exposure due to the lack of loss estimation tools specific to those hazards. In Table 5, list the potential impact of each hazard on the economy in your jurisdiction, along with its impact factor, as follows:

- High Impact—Estimated loss from the hazard is 20% or more of the total assessed property value (Impact Factor = 3)
- Medium Impact—Estimated loss from the hazard is 10% to 19% of the total assessed property value (Impact Factor = 2)
- Low Impact—Estimated loss from the hazard is 8% or less of the total assessed property value (Impact Factor = 1)
- No impact—No loss is estimated from the hazard (Impact Factor = 0)

TABLE 5. HAZARD IMPACT ON THE ECONOMY			
Hazard Type	Impact	Impact Factor	Weighted Impact Factor (Unweighted Factor x 1)

### Determine Risk Rating for Each Hazard

A risk rating for each hazard is determined by multiplying the assigned probability factor by the sum of the weighted impact factors for people, property and the economy:

- Risk Rating = Probability Factor x Weighted Impact Factor {people + property + economy}

Using the results developed in Tables 1, 2, 4 and 5, complete Table 6 to calculate a risk rating for each hazard of concern.

<b>TABLE 6. HAZARD RISK RATING</b>			
Hazard Type	Probability Factor (P)	Sum of Weighted Impact Factors on People, Property & Economy (I)	Risk Rating (P x I)

## Complete Risk Ranking in Template

Once Table 6 has been completed above, complete Table X-2 in your template. The hazard with the highest risk rating in Table 6 should be listed at the top of Table X-2 and given a rank of 1; the hazard with the second highest rating should be listed second with a rank of 2; and so on. Two hazards with equal risk ratings should be given the same rank.

It is important to note that this exercise should not override your subjective assessment of relative risk based on your knowledge of the history of natural hazard events in your jurisdiction. If this risk ranking exercise generates results other than what you know based on substantiated data and documentation, you may alter the ranking based on this knowledge. If this is the case, please note this fact in the comments at the end of the template. Remember, one of the purposes of this exercise is to support the selection and prioritization of initiatives in your plan. If you identify an initiative with a high priority that mitigates the risk of a hazard you have ranked low, that project will not be competitive in the grant arena.

## CAPABILITY ASSESSMENT

### Legal and Regulatory Capability

Describe the legal authorities available to your jurisdiction and/or enabling legislation at the state level affecting planning and land management tools that can support hazard mitigation initiatives. In Table X-3, indicate “Yes” or “No” for each listed code, ordinance, requirement or planning document in each of the following columns:

- **Local Authority**—Enter “Yes” if your jurisdiction has prepared or adopted the identified item; otherwise, enter “No.” If yes, then enter the code or ordinance number and its date of adoption in the comments column.
- **State or Federal Prohibitions**—Enter “Yes” if there are any state or federal regulations or laws that would prohibit local implementation of the identified item; otherwise, enter “No.”
- **Other Regulatory Authority**—Enter “Yes” if there are any regulations that may impact your initiative that are enforced or administered by another agency (e.g., a state agency or special purpose district); otherwise, enter “No.”

- State Mandated—Enter “Yes” if state laws or other requirements enable or require the listed item to be implemented at the local level; otherwise, enter “No.”

## **Administrative and Technical Capability**

This section requires you to take inventory of the staff/personnel resources available to your jurisdiction to help with hazard mitigation planning and implementation of specific mitigation actions.

Complete Table X-4 by indicating whether your jurisdiction has access to each of the listed personnel resources. Enter “Yes” or “No” in the column labeled “Available?”. If yes, then enter the department and position title in the right-hand column.

## **Financial Resources**

Identify what financial resources (other than the Hazard Mitigation Grant Program and the Pre-Disaster Mitigation Grant Program) are available to your jurisdiction for implementing mitigation initiatives.

Complete Table X-5 by indicating whether each of the listed financial resources is accessible to your jurisdiction. Enter “Yes” if the resource is fully accessible to your jurisdiction. Enter “No” if there are limitations or prerequisites that may hinder your eligibility for this resource.

## **Community Mitigation Related Classifications**

Complete Table X-6 to indicate your jurisdiction’s participation in various national programs related to natural hazard mitigation. For each program enter “Yes” or “No” in the second column to indicate whether your jurisdiction participates. If yes, then enter the classification that your jurisdiction has earned under the program in the third column and the date on which that classification was issued in the fourth column; enter “N/A” in these columns if your jurisdiction is not participating.

## **HAZARD MITIGATION ACTION PLAN**

### **Action Plan Matrix**

Identify the initiatives your jurisdiction would like to pursue with this plan. Refer to the mitigation catalog for mitigation options you might want to consider. Be sure to consider the following factors in your selection of initiatives:

- Select initiatives that are consistent with the overall goals, objectives and guiding principles of the hazard mitigation plan.
- Identify projects where benefits exceed costs.
- Include any project that your jurisdiction has committed to pursuing regardless of grant eligibility.
- Know what is and is not grant-eligible under the HMGP and PDM (see fact sheet provided). Listing HMGP or PDM as a potential funding source for an ineligible project will be a red flag when this plan goes through review. If you have projects that are not HMGP or PDM grant eligible, but do mitigate part or all of the hazard and may be eligible for other grant programs sponsored by other agencies, include them in this section.
- Although you should identify at least one initiative for your highest ranked risk, a hazard-specific project is not required for every hazard. If you have not identified an earthquake related project, and an earthquake occurs that causes damage in your jurisdiction, you are not discounted from HMGP project grant eligibility.

Complete Table X-7 for all the initiatives you have identified:

- Enter the initiative number and description.
- Indicate whether the initiative mitigates hazards for new or existing assets.
- Identify the specific hazards the initiative will mitigate.
- Identify by number the mitigation plan objectives that the initiative addresses. These have been provided in the Steering Committee meeting minutes that were forwarded to you in the past.
- Indicate who will be the lead in administering the project. This will most likely be your governing body.
- Identify funding sources for the project. If it is a grant, include the funding sources for the cost share. Refer to your fiscal capability assessment (Table X-5) to identify possible sources of funding.
- Indicate the time line as “short term” (1 to 5 years) or “long term” (5 years or greater).
- Enter “Yes” or “No” to indicate whether this initiative was included in the previous version of this hazard mitigation plan.

#### **Wording Your Initiative Descriptions:**

Descriptions of your initiatives need not provide great detail. That will come when you apply for a project grant. Provide enough information to identify the project’s scope and impact. The following are typical descriptions for an action plan initiative:

- **Initiative 1**—Address Repetitive Loss properties. Through targeted mitigation, acquire, relocate or retrofit the five repetitive loss structures in the County as funding opportunities become available.
- **Initiative 2**—Perform a non-structural, seismic retrofit of City Hall.
- **Initiative 3**—Acquire floodplain property in the Smith subdivision.
- **Initiative 4**—Enhance the County flood warning capability by joining the NOAA “Storm Ready” program.

Technical assistance will be available to your jurisdiction in completing this section during the technical assistance visit.

## **Prioritization of Mitigation Initiatives**

Complete the information in Table X-8 as follows:

- Initiative #—Indicate the initiative number from Table X-7.
- # of Objectives Met—Enter the number of objectives the initiative will meet.
- Benefits—Enter “High,” “Medium” or “Low” as follows:
  - High: Project will have an immediate impact on the reduction of risk exposure to life and property.
  - Medium: Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.
  - Low: Long-term benefits of the project are difficult to quantify in the short term.
- Costs—Enter “High,” “Medium” or “Low” as follows:
  - High: Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.
  - Medium: Could budget for under existing work-plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.

- Low: Possible to fund under existing budget. Project is part of, or can be part of an existing ongoing program.

If you know the estimated cost of a project because it is part of an existing, ongoing program, indicate the amount.

- Do Benefits Exceed the Cost?—Enter “Yes” or “No.” This is a qualitative assessment. Enter “Yes” if the benefit rating (high, medium or low) is the same as or higher than the cost rating (high benefit/high cost; high benefit/medium cost; medium benefit/low cost; etc.). Enter “No” if the benefit rating is lower than the cost rating (medium benefit/high cost, low benefit/medium cost; etc.)
- Is the Project Grant-Eligible?—Enter “Yes” or “No.” Refer to the fact sheet on HMGP and PDM.
- Can Project Be Funded Under Existing Program Budgets?—Enter “Yes” or “No.” In other words, is this initiative currently budgeted for, or would it require a new budget authorization or funding from another source such as grants?
- Priority—Enter “High,” “Medium” or “Low” as follows:
  - High: Project meets multiple plan objectives, benefits exceed cost, funding is secured under existing programs, or is grant eligible, and project can be completed in 1 to 5 years (i.e., short term project) once funded.
  - Medium: Project meets at least 1 plan objective, benefits exceed costs, requires special funding authorization under existing programs, grant eligibility is questionable, and project can be completed in 1 to 5 years once funded.
  - Low: Project will mitigate the risk of a hazard, benefits exceed costs, funding has not been secured, project is not grant eligible, and time line for completion is long term (5 to 10 years).

This prioritization is a simple review to determine that the initiatives you have identified meet one of the primary objectives of the Disaster Mitigation Act. It is not the detailed benefit/cost analysis required for HMGP/PDM project grants. The prioritization will identify any projects whose probable benefits will not exceed the probable costs.

## Analysis of Mitigation Actions

Complete Table X-9 summarizing the mitigation actions by hazard of concern and the following six mitigation types:

- Prevention—Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
- Property Protection—Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
- Public Education and Awareness—Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.



- **Natural Resource Protection**—Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- **Emergency Services**—Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
- **Structural Projects**—Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.

This exercise demonstrates that the jurisdiction has selected a comprehensive range of actions.

## STATUS OF PREVIOUS PLAN INITIATIVES

In this section, provide a status report of actions recommended in your previous hazard mitigation plan. You must be able to reconcile your original action plan to meet FEMA requirements for plan updates. Enter all the recommended actions from your previous plan in Table X-10 and put an X in one of the following three columns for each action to indicate its status:

- **Completed**—If the action has been completed, place a check mark in this column and enter a brief explanation in the “Comments” column (e.g., “Action #WC31 was completed by the Public Works Department on 3/12/2009”). Ongoing actions, such as annual outreach projects or maintenance activities, should also be indicated as “Completed,” with a statement about the ongoing nature of the action provided in the “Comments” column (e.g., “Ongoing action, implemented annually by Community Development Department”).
- **Carry Over to Plan Update**—If you did not complete an action and want to carry it over to your updated action plan, place a check mark in this column, and enter an explanatory statement in the comment section (e.g., “Action carried over as Action #WC14 in updated action plan”).
- **Removed; No Longer Feasible**—If you want to remove an action because you have determined that it is no longer feasible, place a check mark in this column. “No longer feasible” means that you have determined that you do not have the capability to implement the action or that the action does not serve the best interest of your jurisdiction. Lack of funding does not mean that it is no longer feasible, unless the sole source of funding for an action is no longer available. Place a comment in the comment section explaining why the action is no longer feasible (e.g., “Action no longer considered feasible due to lack of political support to complete it.”)

## FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

In this section, identify any future studies, analyses, reports, or surveys your jurisdiction needs to better understand its vulnerability to identified or currently unidentified risks. These could be needs based on federal or state agency mandates such as EPA’s Bio-terrorism assessment requirement for water districts.

## ADDITIONAL COMMENTS

Use this section to add any additional information pertinent to hazard mitigation and your jurisdiction not covered in this template.



# CHAPTER X. [INSERT JURISDICTION NAME] ANNEX

## X.1 HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

[Name, Title]  
[Street Address]  
[City, State ZIP]  
Telephone: [Phone #]  
e-mail Address: [email address]

### Alternate Point of Contact

[Name, Title]  
[Street Address]  
[City, State ZIP]  
Telephone: [Phone #]  
e-mail Address: [email address]

## X.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—[Insert Date of Incorporation]
- **Current Population**—[Insert Population] as of [Insert Date of Population Count]
- **Population Growth**—[Insert Discussion of Population Growth]
- **Location and Description**—[Insert Description of Location, Surroundings, Key Geographic Features]
- **Brief History**—[Insert Summary Discussion of Jurisdiction's History]
- **Climate**—[Insert Summary Discussion of Climate]
- **Governing Body Format**—[Insert Summary Description of Governing Body]
- **Development Trends**—[Insert Summary Description of Development]

## X.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table X-1 lists all past occurrences of natural hazards within the jurisdiction. Repetitive loss records are as follows:

- Number of FEMA Identified Repetitive Flood Loss Properties: [Insert #]
- Number of Repetitive Flood Loss Properties that have been mitigated: [Insert #]

## X.4 HAZARD RISK RANKING

Table X-2 presents the ranking of the hazards of concern.

## X.5 CAPABILITY ASSESSMENT

The assessment of the jurisdiction's legal and regulatory capabilities is presented in Table X-3. The assessment of the jurisdiction's administrative and technical capabilities is presented in Table X-4. The assessment of the jurisdiction's fiscal capabilities is presented in Table X-5. Classifications under various community mitigation programs are presented in Table X-6.

## **X.6 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED INITIATIVES**

Table X-7 lists the initiatives that make up the jurisdiction's hazard mitigation plan. Table X-8 identifies the priority for each initiative. Table X-9 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

## **X.7 STATUS OF PREVIOUS PLAN INITIATIVES**

Table X-10 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

## **X.8 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY**

[Insert text, if any]

## **X.9 ADDITIONAL COMMENTS**

[Insert text, if any]

**TABLE X-1.  
NATURAL HAZARD EVENTS**

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment

**TABLE X-2.  
HAZARD RISK RANKING**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1		
2		
3		
4		
5		
6		
7		
8		
9		

<b>TABLE X-3.</b> <b>LEGAL AND REGULATORY CAPABILITY</b>					
	Local Authority	State or Federal Prohibitions	Other Jurisdictional Authority	State Mandated	Comments
<b>Codes, Ordinances &amp; Requirements</b>					
Building Code					
Zoning Code					
Subdivisions					
Stormwater Management					
Post Disaster Recovery					
Real Estate Disclosure					
Growth Management					
Site Plan Review					
Special Purpose (flood management, critical areas)					
<b>Planning Documents</b>					
General or Comprehensive Plan					
Floodplain or Basin Plan					
Stormwater Plan					
Capital Improvement Plan					
Habitat Conservation Plan					
Economic Development Plan					
Emergency Response Plan					
Shoreline Management Plan					
Post Disaster Recovery Plan					
<b>Other</b>					
Other					

**TABLE X-4.  
ADMINISTRATIVE AND TECHNICAL CAPABILITY**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices		
Engineers or professionals trained in building or infrastructure construction practices		
Planners or engineers with an understanding of natural hazards		
Staff with training in benefit/cost analysis		
Floodplain manager		
Surveyors		
Personnel skilled or trained in GIS applications		
Scientist familiar with natural hazards in local area		
Emergency manager		
Grant writers		

**TABLE X-5.  
FISCAL CAPABILITY**

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	
Capital Improvements Project Funding	
Authority to Levy Taxes for Specific Purposes	
User Fees for Water, Sewer, Gas or Electric Service	
Incur Debt through General Obligation Bonds	
Incur Debt through Special Tax Bonds	
Incur Debt through Private Activity Bonds	
Withhold Public Expenditures in Hazard-Prone Areas	
State Sponsored Grant Programs	
Development Impact Fees for Homebuyers or Developers	
Other	



TABLE X-6. COMMUNITY CLASSIFICATIONS			
	Participating?	Classification	Date Classified
Community Rating System			
Building Code Effectiveness Grading Schedule			
Public Protection			
Storm Ready			
Firewise			

TABLE X-7. HAZARD MITIGATION ACTION PLAN MATRIX							
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative #</b> —Description							
<b>Initiative #</b> —Description							
<b>Initiative #</b> —Description							
<b>Initiative #</b> —Description							
<b>Initiative #</b> —Description							
<b>Initiative #</b> —Description							
<b>Initiative #</b> —Description							

TABLE X-8. MITIGATION STRATEGY PRIORITY SCHEDULE	
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[illegible]

a. See Section \_\_\_\_ for definitions of high, medium and low priorities.

**TABLE X-9.**  
**ANALYSIS OF MITIGATION INITIATIVES**

[illegible]

Notes:

1. **Prevention:** Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
2. **Property Protection:** Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
3. **Public Education and Awareness:** Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
4. **Natural Resource Protection:** Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
5. **Emergency Services:** Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
6. **Structural Projects:** Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.

TABLE X-10. PREVIOUS ACTION PLAN IMPLEMENTATION STATUS	
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
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27	28
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85	86
87	88
89	90
91	92
93	94
95	96
97	98
99	100

[illegible]



Whitman County  
**Hazard Mitigation Plan Update**  
**Volume 2: Planning Partner Annexes**

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**APPENDIX E.**  
**JURISDICTIONAL ANNEX INSTRUCTIONS AND TEMPLATE**  
**FOR SPECIAL-PURPOSE DISTRICTS**

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# INSTRUCTIONS FOR COMPLETING SPECIAL-PURPOSE DISTRICT ANNEX TEMPLATE

This document provides instructions for completing the annex template for special-purpose districts participating in multi-partner hazard mitigation planning. Assistance in completing the template will be available in the form of a workshop for all planning partners or one-on-one visits with each partner, depending on funding availability. Any questions on completing the template should be directed to:

Rob Flaner

Tetra Tech, Inc.

90 South Blackwood Ave.

Eagle, ID 83616

(208) 939-4391

e-mail: rflaner@msn.com

Please provide both a hard copy and digital copy of the completed template to Tetra Tech upon completion.

## ***Associated Materials:***

Along with the annex template and these instructions, you have been provided with other materials with information that is needed for completing the template. Be sure to review these materials **before** you begin the process of filling in the template:

- Summary-of-loss matrix for the hazard mitigation plan
- Results from the hazard mitigation plan questionnaire
- Catalog of mitigation alternatives
- Fact sheet on Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation Grant Program (PDM)

## ***A Note About Software:***

The template for the special-purpose district annex is a Microsoft Word document in a format that will be used in the final plan. Partners are asked to use this template so that a uniform product will be completed for each partner. Partners who do not have Microsoft Word capability may prepare the document in other formats, and the planning team will convert it to the Word format.

## CHAPTER NUMBER AND TITLE

In the chapter title at the top of Page 1, type in the complete official name of your jurisdiction (West County Fire Protection District #1, Burgville Flood Protection District, etc.). At this time, also change the name in the “header” box on Page 3, using the same wording.

Note that the template is set up as Chapter “X.” Please leave all references to “X” in the template as they are. Once all templates are received, chapter numbering will be assigned for incorporation into the final plan.

## HAZARD MITIGATION PLAN POINT OF CONTACT

Please provide the name, title, mailing address, telephone number, and e-mail address for the primary point of contact for your jurisdiction. This should be the person responsible for monitoring, evaluating and updating the annex for your jurisdiction. This person should also be the principle liaison between your jurisdiction and the Steering Committee overseeing development of this plan.

In addition, designate an alternate point of contact. This would be a person to contact should the primary point of contact be unavailable or no longer employed by the jurisdiction.

## JURISDICTION PROFILE

### Narrative Profile

Please provide a brief summary to profile your jurisdiction. Include the purpose of the jurisdiction, the date of inception, the type of organization, the number of employees, the mode of operation (i.e., how operations are funded), the type of governing body, and who has adoptive authority. Describe who the jurisdiction's customers are (if applicable, include number of users or subscribers). Include a geographical description of the service area.

Provide information in a style similar to the example provided in the box at right. This should be information that was not provided in the overall mitigation plan document.

### Summary Information

Complete the bulleted list of summary information as follows:

- **Population Served**—List the estimated population that your jurisdiction provides services to. If you do not know this number directly, create an estimate (e.g., the number of service connections times the average household size for the service area based on Census data).
- **Land Area Served**—Enter the service area of your jurisdiction in acres or square miles.
- **Value of Area Served**—Enter the approximate assessed value of your service area. If you do not have this information, the County should be able to provide a number using the County Assessor's database.
- **Land Area Owned**—Enter the area of property owned by the jurisdiction in acres or square miles.
- **List of Critical Infrastructure/Equipment Owned by the Jurisdiction**—List all infrastructure and equipment that is critical to your jurisdiction's operations and is located in a natural hazard risk zone. Briefly describe the item and give its estimated replacement-cost value. Examples are as follows:
  - Fire Districts—Apparatus and equipment housed in a facility that is located in a natural hazard risk zone. This is the equipment that is essential for you to deliver services to this area should a natural hazard occur. It is not necessary to provide a detailed inventory of each engine and truck and its contents. A summary will suffice, such as "5 Engines, 2 ladders, and their contents." Do not list reserve equipment.
  - Dike/Flood Control Districts—Miles of levees, pump stations, retention/detention ponds, tide gates, miles of ditches, etc., within natural hazard risk zones.
  - Water Districts—Total length of pipe (it is not necessary to specify size and type), pump stations, treatment facilities, dams and reservoirs, within natural hazard risk zones.

#### **Example Jurisdiction Narrative Profile:**

- Humboldt Community Services District is a special-purpose district created in 1952 to provide water, sewer, and street lighting to the unincorporated area surrounding the City of Eureka known as Pine Hill & Cutten. The District's designated service areas expanded throughout the years to include other unincorporated areas of Humboldt County known as Myrtle town, Humboldt Hill, Fields Landing, King Salmon, and Freshwater. A five-member elected Board of Directors governs the District. The Board assumes responsibility for the adoption of this plan; the General Manager will oversee its implementation. As of April 30, 2007, the District serves 7,305 water connections and 6,108 sewer connections, with a current staff of 21. Funding comes primarily through rates and revenue bonds..

- Public Utility Districts—Miles of power line (above ground and underground), generators, power generating sub-stations, miles of pipeline, etc., within natural hazard risk zones.
- School Districts—Anything within natural hazard risk zones, besides school buildings, that is critical for you to operate (e.g., school buses if you own a fleet of school buses).
- **Total Value of Critical Infrastructure/Equipment**—Enter total replacement-cost value of the critical infrastructure and equipment listed above.
- **List of Critical Facilities Owned by the Jurisdiction**—List all buildings and other facilities that are critical to your jurisdiction’s operations and are located in a natural hazard risk zone. Briefly describe the facility and give its estimated replacement-cost value.
- **Total Value of Critical Facilities**—Enter total replacement-cost value of the critical facilities listed above.
- **Current and Anticipated Service Trends**—Enter a brief description on how your jurisdiction’s services are projected to expand in the foreseeable future and why. Note any identified capital improvements needed to meet the projected expansion. Examples are as follows:
  - For a Fire District: Portions of the jurisdiction have experienced a 13 percent growth over the last five years. Land use designations allow for an increase in light commercial and residential land uses within the service area. This increase in density of land uses will represent an increase in population and thus a projected increase in call volume. Our District is experiencing an average annual increase in call volume of 13 percent.
  - For Dike/Drainage/Flood Control District: Portions of the jurisdiction have experienced a 13 percent growth over the last five years. Land use designations allow for an increase in light commercial and residential land uses within the service area. This increase in density of land use will result in an increase in impermeable surface within our service area and thus increase the demand on control facilities.
  - For a Water District: Portions of the jurisdiction have experienced a 13 percent growth over the last five years. Land use designations allow for an increase in light commercial and residential land uses within the service area. This increase in density of land use will represent an increase in the number of housing units within the service area and thus represent an expansion of the district’s delivery network.

## Boundary Map

Maps that illustrate the service area boundary for all special-purpose district partners will be provided at the workshop. Please confirm that the boundaries reflected on the maps are current and accurate for your jurisdiction. In the box for this section, include a reference to the map that includes your jurisdiction’s boundaries.

## JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

In Table X-1, list in chronological order (most recent first) any natural hazard event that has caused damage to your jurisdiction since 1975. Include the date of the event and the estimated dollar amount of damage it caused. Please refer to the summary of natural hazard events within risk assessment of the overall hazard mitigation plan. Potential sources of damage information include:

- Preliminary damage estimates your jurisdiction filed with the county or state
- Insurance claims data

- Newspaper archives
- Other plans/documents that deal with emergency management (safety element of a comprehensive plan, emergency response plan, etc.)
- Citizen input.

## HAZARD RISK RANKING

The risk ranking performed for the overall planning area is presented in the risk assessment section of the overall hazard mitigation plan. However, each jurisdiction has differing degrees of risk exposure and vulnerability and therefore needs to rank risk for its own area, using the same methodology as used for the overall planning area. The risk-ranking exercise assesses two variables for each hazard: its probability of occurrence; and its potential impact on people, property and operations. A detailed discussion of the concepts associated with risk ranking is provided in the overall hazard mitigation plan. The instructions below outline steps for assessing risk in your jurisdiction to develop results that are to be included in the template.

### Determine Probability of Occurrence for Each Hazard

A probability factor is assigned based on how often a hazard is likely to occur. In Table 1, list the probability of occurrence for each hazard as it pertains to your jurisdiction, along with its probability factor, as follows:

- High—Hazard event is likely to occur within 25 years (Probability Factor = 3)
- Medium—Hazard event is likely to occur within 100 years (Probability Factor = 2)
- Low—Hazard event is not likely to occur within 100 years (Probability Factor = 1)
- None—If there is no exposure to a hazard, there is no probability of occurrence (Probability Factor = 0)

TABLE 1. HAZARD PROBABILITY OF OCCURRENCE		
Hazard Type	Probability	Probability Factor

The probability of occurrence of a hazard event is generally based on past hazard events in an area. For example, if your jurisdiction has experienced two damaging floods in the last 25 years, the probability of occurrence is high for flooding and scores a 3 under this category. If your jurisdiction has experienced no damage from landslides in the last 100 years, your probability of occurrence for landslide is low, and scores a 1 under this category.

## Determine Potential Impacts of Each Hazard

The impact of each hazard was divided into three categories: impacts on people, impacts on property, and impacts on your jurisdiction's operations. These categories were also assigned weighted values. Impact on people was assigned a weighting factor of 3, impact on property was assigned a weighting factor of 2 and impact on operations was assigned a weighting factor of 1. Steps to assess each type of impact are described below.

### Impacts on People

To assess impacts on people, values are assigned based on the percentage of the total *population exposed* to the hazard event. The degree of impact on individuals will vary and is not measurable, so the calculation assumes for simplicity and consistency that all people exposed to a hazard because they live in a hazard zone will be equally impacted when a hazard event occurs. In Table 2, list the potential impact of each hazard on people in your jurisdiction, along with its impact factor, as follows:

- High Impact—50% or more of the population is exposed to a hazard (Impact Factor = 3)
- Medium Impact—25% to 49% of the population is exposed to a hazard (Impact Factor = 2)
- Low Impact—25% or less of the population is exposed to the hazard (Impact Factor = 1)
- No impact—None of the population is exposed to a hazard (Impact Factor = 0)

TABLE 2. HAZARD IMPACT ON PEOPLE			
Hazard Type	Impact	Impact Factor	Weighted Impact Factor (Unweighted Factor x 3)

### Impacts on Property

To assess impacts on property, values are assigned based on the percentage of the total *value of buildings, equipment and infrastructure that is exposed* to the hazard event. In Table 3, enter the cost estimates for potential damage to the jurisdiction's exposed buildings, equipment and infrastructure, taken from the "Summary of Loss" matrix provided with these instructions.

TABLE 3. COST ESTIMATES FOR POTENTIAL DAMAGE TO STRUCTURES	
Hazard type	Estimate of Potential Dollar Losses to Jurisdiction- Owned Facilities Exposed to the Hazard

In Table 4, list the potential impact of each hazard on property in your jurisdiction, along with its impact factor. Determine impact based on damage estimates from Table 3, as follows:

- High Impact—50% or more of the total assessed property value of facilities, equipment and infrastructure is exposed to a hazard (Impact Factor = 3)
- Medium Impact—25% to 49% of the total assessed property value of facilities, equipment and infrastructure is exposed to a hazard (Impact Factor = 2)
- Low Impact—24% or less of the total assessed property value of facilities, equipment and infrastructure is exposed to the hazard (Impact Factor = 1)
- No impact—None of the total assessed property value of facilities, equipment and infrastructure is exposed to a hazard (Impact Factor = 0)

TABLE 4. HAZARD IMPACT ON PROPERTY			
Hazard Type	Impact	Impact Factor	Weighted Impact Factor (Unweighted Factor x 2)

### Impacts on the Jurisdiction's Operations

Impact on operations is assessed based on estimates of *how long it will take your jurisdiction to become 100-percent operable* after a hazard event. The estimated functional downtime for critical facilities has been estimated for most hazards within the planning area. In Table 5, list the potential impact of each hazard on the operations of your jurisdiction, along with its impact factor, as follows:

- High = functional downtime of 365 days or more (Impact Factor = 3)
- Medium = Functional downtime of 180 to 364 days (Impact Factor = 2)
- Low = Functional downtime of 180 days or less (Impact Factor = 1)
- No Impact = No functional downtime is estimated from the hazard (Impact Factor = 0)

TABLE 5. HAZARD IMPACT ON OPERATIONS			
Hazard Type	Impact	Impact Factor	Weighted Impact Factor (Unweighted Factor x 1)

You will need to consult the risk assessment for this task. The critical facilities exposed to each hazard have been identified, and the impacts on operability have been estimated for most of the hazards within the planning area. If the functional downtime component has not been provided for a hazard in the risk assessment, consider the impact on operability of that hazard to be low.

### Determine Risk Rating for Each Hazard

A risk rating for each hazard is determined by multiplying the assigned probability factor by the sum of the weighted impact factors for people, property and operations:

- Risk Rating = Probability Factor x Weighted Impact Factor {people + property + operations}

Using the results developed in Tables 1, 2, 4 and 5, complete Table 6 to calculate a risk rating for each hazard of concern.



<b>TABLE 6. HAZARD RISK RATING</b>			
<b>Hazard Type</b>	<b>Probability Factor (P)</b>	<b>Sum of Weighted Impact Factors on People, Property &amp; Operations (I)</b>	<b>Risk Rating (P x I)</b>

## Complete Risk Ranking in Template

Once Table 6 has been completed above, complete Table X-2 in your template. The hazard with the highest risk rating in Table 6 should be listed at the top of Table X-2 and given a rank of 1; the hazard with the second highest rating should be listed second with a rank of 2; and so on. Two hazards with equal risk ratings should be given the same rank.

It is important to note that this exercise should not override your subjective assessment of relative risk based on your knowledge of the history of natural hazard events in your jurisdiction. If this risk ranking exercise generates results other than what you know based on substantiated data and documentation, you may alter the ranking based on this knowledge. If this is the case, please note this fact in the comments at the end of the template. Remember, one of the purposes of this exercise is to support the selection and prioritization of initiatives in your plan. If you identify an initiative with a high priority that mitigates the risk of a hazard you have ranked low, that project will not be competitive in the grant arena.

## APPLICABLE REGULATIONS AND PLAN

List any federal, state, local or district laws, ordinances, codes and policies that govern your jurisdiction that include elements addressing hazard mitigation. Describe how these laws may support or conflict with the mitigation strategies of this plan. List any other plans, studies or other documents that address hazard mitigation issues for your jurisdiction. Note whether the documents could have a positive or a negative impact on the mitigation strategies of this plan. “None applicable” is a possible answer for this section.

## CLASSIFICATION IN HAZARD MITIGATION PROGRAMS

Complete Table X-3 to indicate your jurisdiction’s participation in various national programs related to natural hazard mitigation. For each program enter “Yes” or “No” in the second column to indicate whether your jurisdiction participates. If yes, then enter the classification that your jurisdiction has earned under the program in the third column and the date on which that classification was issued in the fourth column; enter “N/A” in these columns if your jurisdiction is not participating.

## HAZARD MITIGATION ACTION PLAN

### Action Plan Matrix

Identify the initiatives your jurisdiction would like to pursue with this plan. Refer to the mitigation catalog for mitigation options you might want to consider. Be sure to consider the following factors in your selection of initiatives:

- Select initiatives that are consistent with the overall goals, objectives and guiding principles of the hazard mitigation plan.
- Identify projects where benefits exceed costs.
- Include any project that your jurisdiction has committed to pursuing regardless of grant eligibility.
- Know what is and is not grant-eligible under the HMGP and PDM (see fact sheet provided). Listing HMGP or PDM as a potential funding source for an ineligible project will be a red flag when this plan goes through review. If you have projects that are not HMGP or PDM grant eligible, but do mitigate part or all of the hazard and may be eligible for other grant programs sponsored by other agencies, include them in this section.
- Although you should identify at least one initiative for your highest ranked risk, a hazard-specific project is not required for every hazard. If you have not identified an earthquake related project, and an earthquake occurs that causes damage in your jurisdiction, you are not discounted from HMGP project grant eligibility.

Complete Table X-4 for all the initiatives you have identified:

- Enter the initiative number and description.
- Indicate whether the initiative mitigates hazards for new or existing assets.
- Identify the specific hazards the initiative will mitigate.
- Identify by number the mitigation plan objectives that the initiative addresses. These have been provided in the Steering Committee meeting minutes that were forwarded to you in the past.
- Indicate who will be the lead in administering the project. This will most likely be your governing body.
- Identify funding sources for the project. If it is a grant, include the funding sources for the cost share.
- Indicate the time line as “short term” (1 to 5 years) or “long term” (5 years or greater).

Technical assistance will be available to your jurisdiction in completing this section during the technical assistance visit.

#### ***Wording Your Initiative Descriptions:***

Descriptions of your initiatives need not provide great detail. That will come when you apply for a project grant. Provide enough information to identify the project's scope and impact. The following are typical descriptions for an action plan initiative:

- **Initiative 1**—Address Repetitive Loss properties. Through targeted mitigation, acquire, relocate or retrofit the five repetitive loss structures in the County as funding opportunities become available.
- **Initiative 2**—Perform a non-structural, seismic retrofit of City Hall.
- **Initiative 3**—Acquire floodplain property in the Smith subdivision.
- **Initiative 4**—Enhance the County flood warning capability by joining the NOAA “Storm Ready” program.

### Prioritization of Mitigation Initiatives

Complete the information in Table X-5 as follows:

- Initiative #—Indicate the initiative number from Table X-4.
- # of Objectives Met—Enter the number of objectives the initiative will meet.
- Benefits—Enter “High,” “Medium” or “Low” as follows:
  - High: Project will have an immediate impact on the reduction of risk exposure to life and property.
  - Medium: Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.
  - Low: Long-term benefits of the project are difficult to quantify in the short term.
- Costs—Enter “High,” “Medium” or “Low” as follows:
  - High: Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.
  - Medium: Could budget for under existing work-plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
  - Low: Possible to fund under existing budget. Project is part of, or can be part of an existing ongoing program.

If you know the estimated cost of a project because it is part of an existing, ongoing program, indicate the amount.

- Do Benefits Exceed the Cost?—Enter “Yes” or “No.” This is a qualitative assessment. Enter “Yes” if the benefit rating (high, medium or low) is the same as or higher than the cost rating (high benefit/high cost; high benefit/medium cost; medium benefit/low cost; etc.). Enter “No” if the benefit rating is lower than the cost rating (medium benefit/high cost, low benefit/medium cost; etc.)
- Is the Project Grant-Eligible?—Enter “Yes” or “No.” Refer to the fact sheet on HMGP and PDM.
- Can Project Be Funded Under Existing Program Budgets?—Enter “Yes” or “No.” In other words, is this initiative currently budgeted for, or would it require a new budget authorization or funding from another source such as grants?
- Priority—Enter “High,” “Medium” or “Low” as follows:
  - High: Project meets multiple plan objectives, benefits exceed cost, funding is secured under existing programs, or is grant eligible, and project can be completed in 1 to 5 years (i.e., short term project) once funded.
  - Medium: Project meets at least 1 plan objective, benefits exceed costs, requires special funding authorization under existing programs, grant eligibility is questionable, and project can be completed in 1 to 5 years once funded.
  - Low: Project will mitigate the risk of a hazard, benefits exceed costs, funding has not been secured, project is not grant eligible, and time line for completion is long term (5 to 10 years).

This prioritization is a simple review to determine that the initiatives you have identified meet one of the primary objectives of the Disaster Mitigation Act. It is not the detailed benefit/cost analysis required for

HMGP/PDM project grants. The prioritization will identify any projects whose probable benefits will not exceed the probable costs.

## **Analysis of Mitigation Actions**

Complete Table X-6 summarizing the mitigation actions by hazard of concern and the following six mitigation types:

- **Prevention**—Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
- **Property Protection**—Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
- **Public Education and Awareness**—Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
- **Natural Resource Protection**—Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- **Emergency Services**—Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
- **Structural Projects**—Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.

This exercise demonstrates that the jurisdiction has selected a comprehensive range of actions.

## **FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY**

In this section, identify any future studies, analyses, reports, or surveys your jurisdiction needs to better understand its vulnerability to identified or currently unidentified risks. These could be needs based on federal or state agency mandates such as EPA's Bio-terrorism assessment requirement for water districts.

## **ADDITIONAL COMMENTS**

Use this section to add any additional information pertinent to hazard mitigation and your jurisdiction not covered in this template.



# CHAPTER X.

## [INSERT JURISDICTION NAME] ANNEX

### X.1 HAZARD MITIGATION PLAN POINT OF CONTACT

#### Primary Point of Contact

[Name, Title]  
[Street Address]  
[City, State ZIP]  
Telephone: [Phone #]  
e-mail Address: [email address]

#### Alternate Point of Contact

[Name, Title]  
[Street Address]  
[City, State ZIP]  
Telephone: [Phone #]  
e-mail Address: [email address]

### X.2 JURISDICTION PROFILE

[Insert Narrative Profile Information, per Instructions]

The following is a summary of key information about the jurisdiction:

- **Population Served**—[Insert Population] as of [Insert Date of Population Count]
- **Land Area Served**—[Insert Area]
- **Value of Area Served**—The estimated value of the area served by the jurisdiction is [Insert Total Value]
- **Land Area Owned**—[Insert Area]
- **List of Critical Infrastructure/Equipment Owned by the Jurisdiction:**
  - [Insert Description of Item] [Insert Value of Item]
  - [Insert Description of Item] [Insert Value of Item]
  - [Insert Description of Item] [Insert Value of Item]
  - [Insert Description of Item] [Insert Value of Item]
- **Total Value of Critical Infrastructure/Equipment**—The total value of critical infrastructure and equipment owned by the jurisdiction is [Insert Total Value]
- **List of Critical Facilities Owned by the Jurisdiction:**
  - [Insert Description of Item] [Insert Value of Item]
  - [Insert Description of Item] [Insert Value of Item]
  - [Insert Description of Item] [Insert Value of Item]
  - [Insert Description of Item] [Insert Value of Item]
- **Total Value of Critical Facilities**—The total value of critical facilities owned by the jurisdiction is [Insert Total Value]
- **Current and Anticipated Service Trends**—[Insert Summary Description of Service Trends]

The jurisdiction's boundaries are shown on Figure [Insert # of Figure Showing Jurisdiction Boundaries]

### **X.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY**

Table X-1 lists all past occurrences of natural hazards within the jurisdiction.

### **X.4 HAZARD RISK RANKING**

Table X-2 presents the ranking of the hazards of concern.

### **X.5 APPLICABLE REGULATIONS AND PLANS**

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:

- [Insert Name of Code, Ordinance, Policy or Plan]
- [Insert Name of Code, Ordinance, Policy or Plan]
- [Insert Name of Code, Ordinance, Policy or Plan]
- [Insert Name of Code, Ordinance, Policy or Plan]
- [Insert Name of Code, Ordinance, Policy or Plan]
- [Insert Name of Code, Ordinance, Policy or Plan]

### **X.6 CLASSIFICATION IN HAZARD MITIGATION PROGRAMS**

The jurisdiction's classifications under various hazard mitigation programs are presented in Table X-3.

### **X.7 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED INITIATIVES**

Table X-4 lists the initiatives that make up the jurisdiction's hazard mitigation plan. Table X-5 identifies the priority for each initiative. Table X-6 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

### **X.8 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY**

[Insert text, if any]

### **X.9 ADDITIONAL COMMENTS**

[Insert text, if any]



TABLE X-1. NATURAL HAZARD EVENTS	
-------------------------------------	--

[illegible]

TABLE X-2. HAZARD RISK RANKING	
-----------------------------------	--

Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1		
2		
3		
4		
5		
6		
7		
8		
9		

TABLE X-3. COMMUNITY CLASSIFICATIONS			
	Participating?	Classification	Date Classified
Public Protection			
Storm Ready			
Firewise			

TABLE X-4. HAZARD MITIGATION ACTION PLAN MATRIX						
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Initiative #—Description						
Initiative #—Description						
Initiative #—Description						
Initiative #—Description						
Initiative #—Description						
Initiative #—Description						
Initiative #—Description						

TABLE X-5. MITIGATION STRATEGY PRIORITY SCHEDULE	
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[illegible]

a. See Section \_\_\_\_\_ for definitions of high, medium and low priorities.

**TABLE X-6.**  
**ANALYSIS OF MITIGATION INITIATIVES**

[illegible]

Notes:

1. **Prevention:** Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
2. **Property Protection:** Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
3. **Public Education and Awareness:** Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
4. **Natural Resource Protection:** Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
5. **Emergency Services:** Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
6. **Structural Projects:** Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.