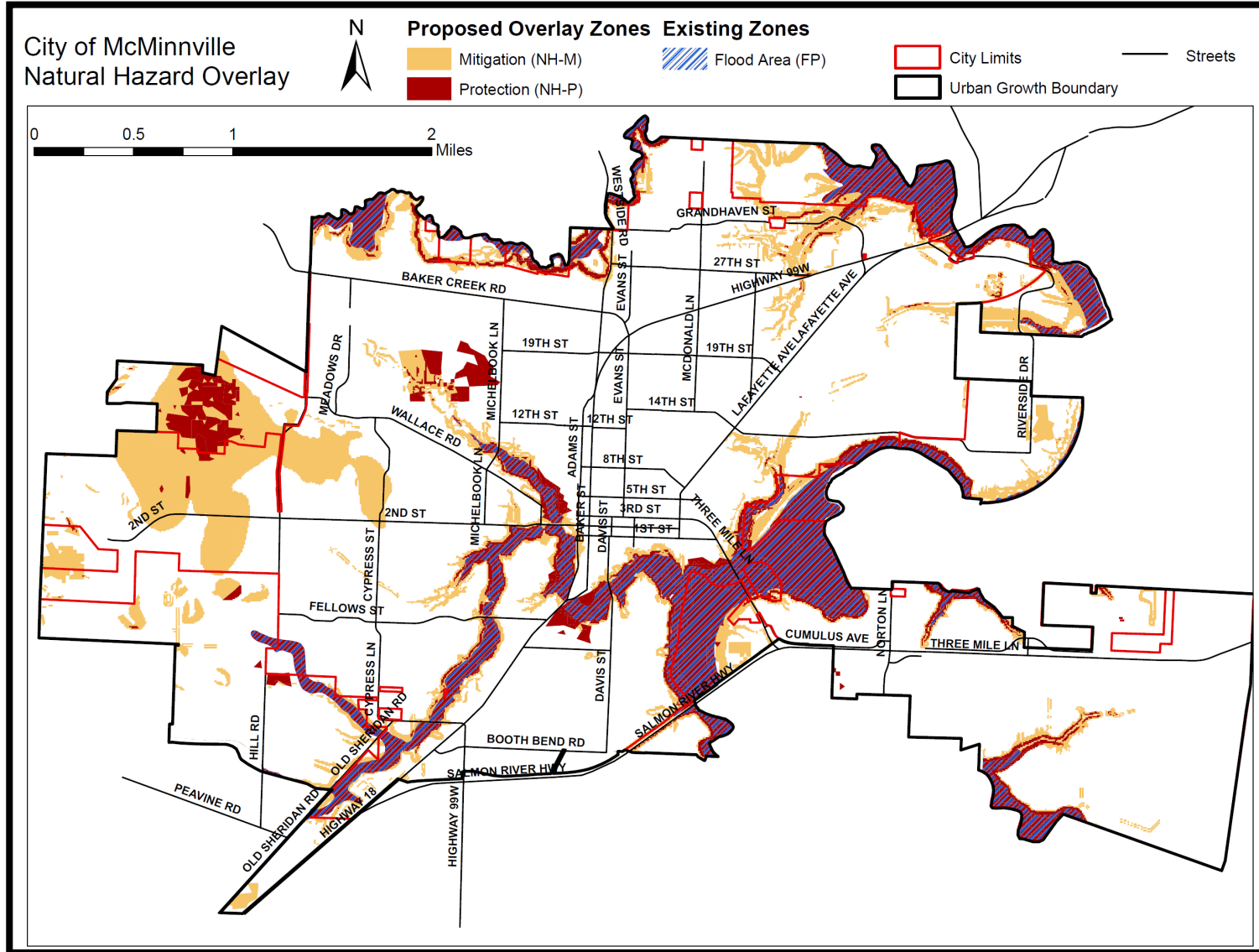




Growing McMinnville
MINDFULLY

NATURAL HAZARDS PLANNING



THE MEASURE 56 NOTICE

We have to by law send a notice to all property owners who own property in a proposed new zone to let you know what we are contemplating and that it may impact your property.

The language in the notice is required by statute.

We are committed to taking the time necessary to vet this program as appropriate and to answer property owner questions and concerns.

THE CITY OF MCMINNVILLE IS PROPOSING AMENDMENTS TO THE MCMINNVILLE COMPREHENSIVE PLAN AND ZONING ORDINANCE FOR A NATURAL HAZARDS INVENTORY AND MANAGEMENT PROGRAM.

THIS PROPOSED LAND REGULATION MAY AFFECT THE PERMISSIBLE USES OF YOUR PROPERTY.

On April 6, 2023, at 6:30 PM, the McMinnville Planning Commission will hold a public hearing regarding adoption of the following proposal.

Docket G 3-22 - Proposed amendments to the McMinnville Comprehensive Plan and Zoning Ordinance, adopting standards for Natural Hazard Mitigation Within the City of McMinnville .

Goal 7 of the Oregon I and Use system requires cities to conduct natural hazard planning to protect people and property from the potential harms of natural hazards. The City started this planning effort in 2019 in partnership with Yamhill County as part of the *Yamhill County Multi-Jurisdictional Hazard Mitigation Plan*.

The proposal would adopt new standards for the mitigation of known natural hazards in all zoning districts by adopting the following:

1. The 2021 Natural Hazards Inventory & Management Program Options and Recommendations Plan.
2. Comprehensive Plan text amendments (Chapter X1, Natural Features)
3. Zoning Ordinance text amendments (Chapter 17.49, Natural Hazard Overlay Subdistricts, and amendments to Chapter 17.48, Flood Plain Area Zones)
4. Zoning Map Natural Hazard Mitigation and Protection Overlays

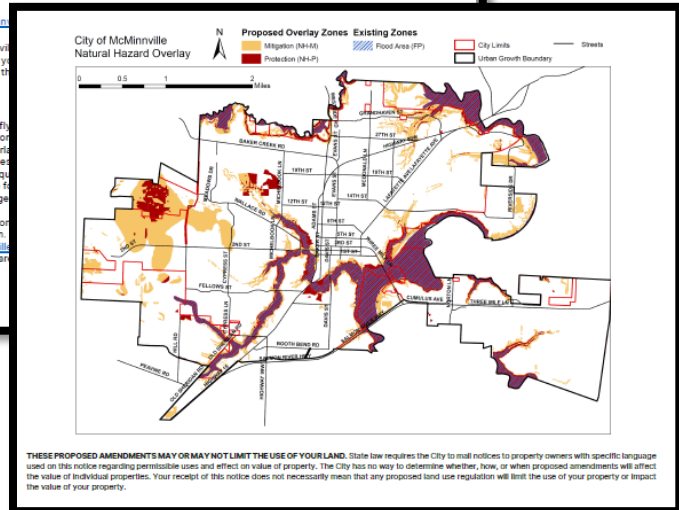
The meeting will be held in person at McMinnville Civic Hall, 200 NE Second Street and via ZOOM at the link below, or by using Meeting ID: 893 6863 4307 and Passcode: 989853. You can also join the ZOOM meeting by phone at +1 253 215 8782

<https://mcmi>

The City of McMinnville is proposing amendments to the Natural Hazard Overlay. A copy of the

On the back of this flyer, the Natural Hazard Overlay is not allowed in these zones. If you have questions, please contact our planning staff at planning@mcmi or call 503-253-2158.

Additional information: planning@mcmi, 503-253-2158

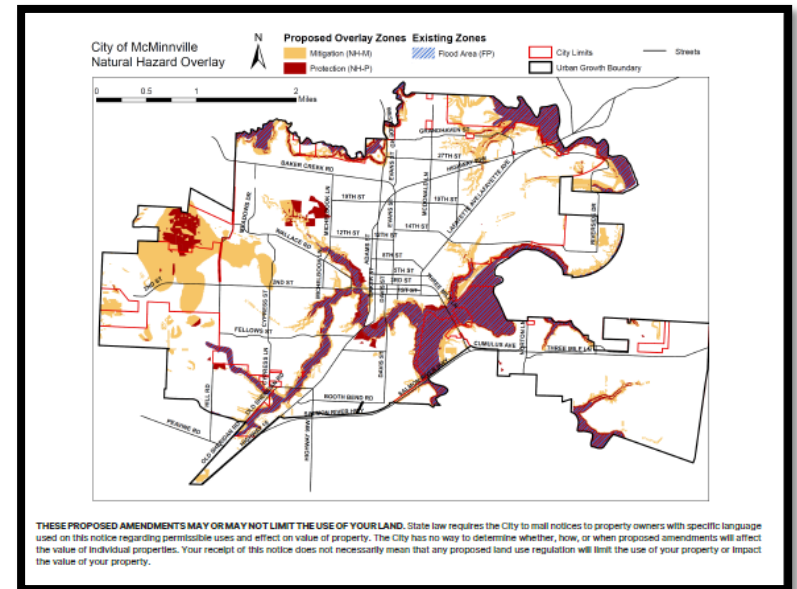


PROPOSED NEW ZONES

**Natural Hazards Mitigation Zone
(NH-M) (Orange Zone on Map)**

**Natural Hazards Protection Zone
(NH-P) (Red Zone on Map)**

**Project Website –
www.mcminvilleoregon.gov and
type “Natural Hazards” into
search engine.**



WILL THIS IMPACT YOUR PROPERTY VALUE

- Built Property in the Natural Hazards Mitigation Zone - No.**
 - **Grandfathered In**
 - **50% expansion without impact**

- New Construction in the Natural Hazards Mitigation Zone – Probably will need a geological study as part of permitting process.**

- Built Property in the Natural Hazards Protection Zone - No.**

- Land Division in the Natural Hazards Protection Zone – only can be done with a planned development so that built structures are not in the most hazardous areas.**

- One dwelling unit per lot.**

- No Large Format Commercial Development**

WHAT ARE WE TALKING ABOUT TODAY?

Proposed new Natural Hazards Inventory and Natural Hazards Mitigation Program.

Proposed New Comprehensive Plan Policies for Natural Hazards

Proposed New Code Chapter, 17.49, Natural Hazards Overlays (Natural Hazard Mitigation Zone (NH-M) and Natural Hazard Protection Zone (NH-P))

WHAT ARE WE TALKING ABOUT TODAY?

Proposed new Natural Hazards Inventory and Natural Hazards Mitigation Program.

Proposed New Comprehensive Plan Policies for Natural Hazards

Proposed New Code Chapter, 17.49, Natural Hazards Overlays (Natural Hazard Mitigation Zone (NH-M) and Natural Hazard Protection Zone (NH-P))

We will walk you through how we got here, what it means for your property, and where you can access more information.



What is Natural Hazard Planning?

WHAT IS NATURAL HAZARD PLANNING?

Trying to avoid natural disasters:

- **Disasters occur when natural hazard events impact people, property, and the environment.**
- **We can't predict exactly when natural hazards will occur, or the extent to which they will affect our community.**
- **However, with careful planning, we can identify and implement actions that will reduce loss when the next disaster strikes.**
- **Natural hazard mitigation is any sustained action taken to reduce or remove the long-term risk to life, property, and the environment from natural hazards.**

WHAT ARE WE TALKING ABOUT TODAY?

Identifying natural hazards in McMinnville and how to protect people and property from these natural hazards becoming natural disasters with mitigation planning.

We will do it based on recognized data from state and federal agencies and discuss the best way to move forward with development in these areas.

WHAT ARE WE TALKING ABOUT TODAY?

Identifying natural hazards in McMinnville and how to protect people and property from these natural hazards becoming natural disasters with mitigation planning.

We will do it based on recognized data from state and federal agencies and discuss the best way to move forward with development in these areas.

Flooding – FEMA Maps, last certified in 2010. Everything that is identified within the floodplain on FEMA maps is in a Flood Area zone that does not allow development. In that way we are trying to avoid putting people and property in areas that are known to regularly flood a certain amount of time.

City of McMinnville Zoning

Legend

City Zoning

- R-1
- R-2
- R-3
- R-4
- O-R
- C-1
- C-2
- C-3
- M-L
- M-1
- M-2
- A-H
- F-P

County Zoning

- LD19000
- VLD19-1
- AF-20
- SF-40

City Limits

- Jurisdiction
- City
 - County
 - UGB



0 1,000 2,000 4,000 Feet

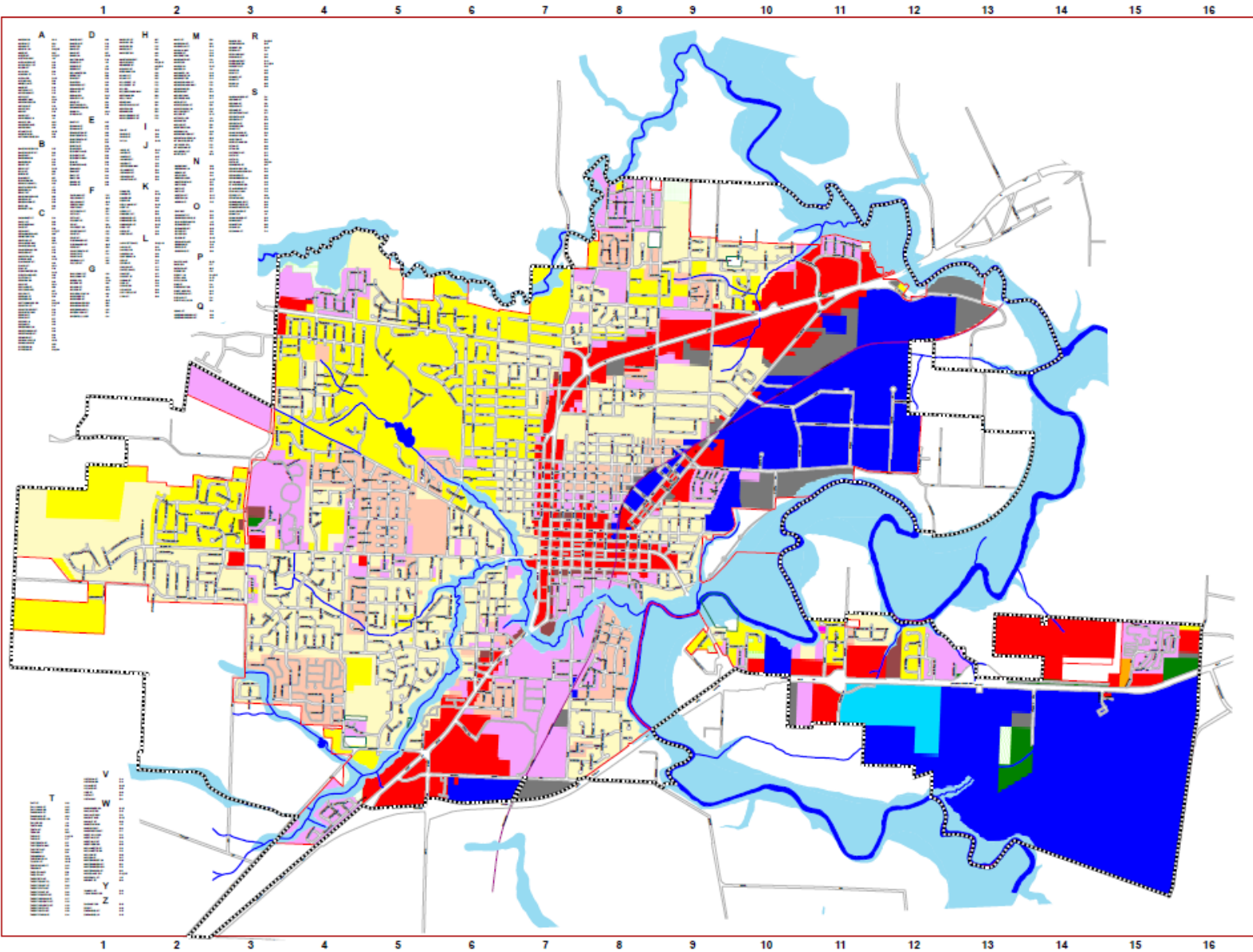
Last amended September 15th, 2022

Note:

This map is for pre-planning purposes only. For more detailed information, please call the McMinnville Planning Department at (503) 434-7311.

Planned Development boundaries not identified.

Planning Department
 City of McMinnville
 231 NE Fifth St
 McMinnville, OR 97128
 (503) 434-7311

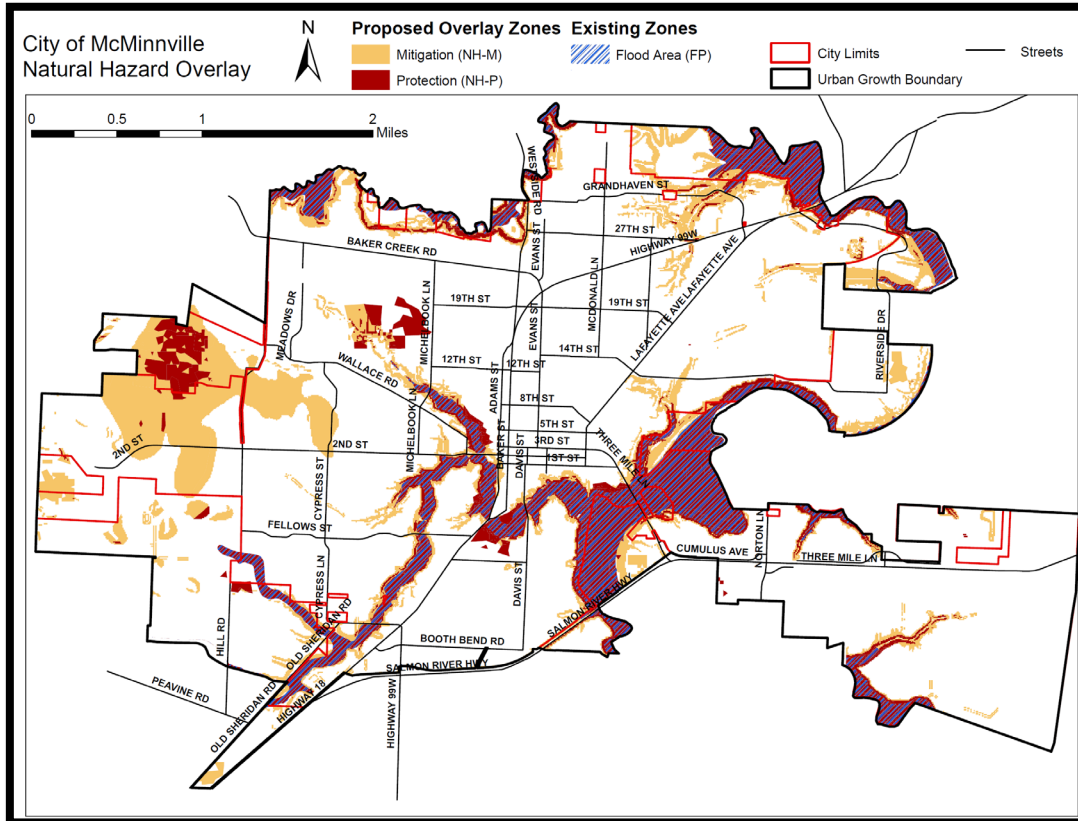




Why Now?

WHY NOW?

New data has emerged about landslides, soil conditions relative to earthquake consequences (liquefaction and shaking) and wildfire. Oregon Land Use Goal #7 requires cities to review the data and develop a Natural Hazards Mitigation Program..



WHY NOW?

- 1) 2018 - Yamhill County started updating their Natural Hazard Mitigation Plan**
- 2) 2019 – As part of the Yamhill County process, the City received updated natural hazards mapping from the state.**
- 3) With the updated data, the City started evaluating whether or not there were new issues within the city limits and the UGB that the City should be aware of and potentially plan to mitigate.**
- 4) August 2020 – took the information to City Council for direction and were told to put a mitigation program together.**

WHY NOW?

Natural Hazard Planning

- 1) **Oregon Land Use Goal #7 requires cities to conduct natural hazard planning.**
- 2) **We are charged with protecting people and property from potential negative impacts associated with natural hazards.**

Goal 7 – Natural Hazards

“Balancing growth with hazard mitigation is key to planning resilient communities. Therefore, understanding where development occurs and the vulnerabilities of the region’s building stock is integral to developing mitigation efforts that move people and property out of harm’s way. Eliminating or limiting development in hazard prone areas can reduce exposure to hazards, and potential losses and damage.”

The intent of Goal is to protect people and property from natural hazards.

Goal 7 – Natural Hazards

Areas subject to Natural Hazards

“Protecting people and property from natural hazards requires knowledge, planning, coordination, and education.

Good planning does not put buildings or people in harm’s way.

Goal 7 – Natural Hazards

Natural Hazard Planning

- 1) **Local governments shall adopt comprehensive plans (inventories, policies and implementing measures) to reduce risk to people and property from natural hazards.**

- 2) **Natural hazards for purposes of this goal are:**
 - **Floods**
 - **Landslides**
 - **Earthquakes and Related Hazards**
 - **Wildfire**
 - **Tsunamis**
 - **Coastal Erosion**

WHAT ARE NATURAL HAZARDS

Natural Hazard Planning

- 1) **Local governments shall adopt comprehensive plans (inventories, policies and implementing measures) to reduce risk to people and property from natural hazards.**

- 2) **Natural hazards for purposes of this goal are:**
 - **Floods**
 - **Landslides**
 - **Earthquakes and Related Hazards**
 - **Wildfire**
 - ~~**Tsunami**~~
 - ~~**Coastal Erosion**~~

Goal 7 – Natural Hazards

Response to New Hazard Information:

- 1) Evaluate and assess risk to people and property
- 2) Allow for citizen review and comments.
- 3) Adopt or amend comprehensive plan policies and implementing measures that:
 - Avoid development in hazard areas where the risk to people and property cannot be mitigated
 - Prohibit the siting of essential facilities, major structures, hazardous facilities and special occupancy structures

History of Hazard Planning in McMinnville

History of Hazard Planning - 1981

Comprehensive Plan, Volume I (1981)

- 1) Steep slopes over 15% identified as a hazard due to land slide potentials.

0 = slight restrictions

+ = Moderate

X = severe

FIGURE II-4
SOIL LIMITATIONS ON URBAN DEVELOPMENT

SOILS	WuB	WuC	WuD	Am	Da	YaB	YaC	YaD	YbB	YbD	WeC	WeD	WkE	WkS	WkD	CaB	CeC	CaD	CeD	BuD	DeD	We	Ch	Ck	
SLOPE (in percent)	0-7	7-12	12-20			2-7	7-12	12-20	2-7	7-12	12-20	2-7	7-12	12-20	2-7	7-12	12-20	0-7	7-12	12-20	5-12	12-20			
URBAN USES & RESTRICTIVE FEATURES:																									
Shallow Excavations	S	S	S	S	S	M	M	M	M	M	M	M	M	M	M	S	S	S	S	S	S	S	S	S	M
Wetness	X	X	X	X	X	0	0	0	0	0	0	0	0	0	0	X	X	X	X	X	X	X	X	X	0
Flooding	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+
Slope	0	0	X	0	0	0	0	X	0	0	0	0	0	0	X	0	0	0	0	X	0	X	0	0	0
Depth to Bedrock	0	0	0	0	0	+	+	+	X	+	+	+	+	+	+	0	0	0	0	0	0	0	0	0	0
Dwellings without Basements	M	M	S	S	M	M	M	S	M	M	M	M	S	M	M	M	S	M	S	M	S	M	S	M	S
Wetness	+	+	0	X	X	0	0	0	0	0	0	0	0	0	0	+	0	0	0	+	0	+	0	X	0
Flooding	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X
Slope	0	+	X	0	0	0	0	X	0	0	0	0	X	0	0	+	X	0	+	X	0	0	0	0	0
Depth to Bedrock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shrink-Swell	+	+	0	0	X	0	0	0	0	0	0	0	0	0	0	+	+	0	X	0	0	0	0	0	+
Load Supporting Capacity	0	0	0	X	X	+	+	+	0	+	+	+	+	+	+	+	+	+	+	0	X	+	0	X	0
Dwellings with Basements	S	S	S	S	M	M	M	S	M	M	M	M	S	M	M	S	S	S	S	S	S	S	M	S	S
Wetness	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	X	X	X	X	X	X	X	X	X	0
Flooding	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X
Slope	0	0	X	0	0	0	0	X	0	0	0	0	0	0	X	0	0	0	0	X	0	0	0	0	0
Depth to Bedrock	0	0	0	0	0	+	+	+	0	+	+	+	+	+	+	0	0	0	0	0	0	0	0	0	0
Shrink-Swell	0	0	0	0	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	0	0	0	+
Load Strength	0	0	0	X	X	0	0	0	0	0	0	0	+	+	+	0	0	0	0	X	0	0	0	X	0
Small Commercial Buildings	M	S	S	S	M	S	S	M	S	M	S	M	S	M	S	M	S	S	M	S	M	S	M	S	M
Wetness	+	0	0	X	X	0	0	0	0	0	0	0	0	0	0	+	0	0	0	+	0	+	X	X	0
Flooding	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X
Slope	+	X	X	0	0	0	X	X	X	0	X	+	X	X	+	X	X	+	X	X	0	0	X	0	0
Depth to Bedrock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shrink-Swell	+	0	0	0	X	0	0	0	0	0	0	0	0	0	0	+	+	0	0	0	X	0	0	0	+
Load Supporting Capacity	0	0	0	X	X	+	0	0	0	+	+	+	+	+	+	+	+	+	+	0	X	+	0	X	0
Local Roads and Streets	S	S	S	M	S	M	M	M	S	M	M	M	M	S	M	M	M	S	S	M	S	S	S	S	S
Load Supporting Capacity	X	X	X	0	0	+	+	+	0	+	+	+	+	+	+	+	+	+	+	0	X	0	0	0	X
Soil Texture	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shrink-Swell	0	0	0	+	X	0	0	0	0	0	0	0	+	+	+	+	+	+	+	0	X	+	0	0	0
Wetness	0	0	0	+	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	0	X	0
Flooding	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X
Slope	0	0	X	0	0	0	0	X	0	0	0	0	X	0	0	0	+	X	0	+	X	0	0	0	0
Depth to Bedrock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

LEGEND
Ratings:
SI = Slight limitations
M = Moderate limitations
S = Severe limitations
Restrictive Features:
0 = Slight
+ = Moderate
X = Severe

SOURCE: Soil Interpretations for Oregon, U.S.D.A. Soil Conservation Service.

McMinnville's Current Hazard Policies

Comprehensive Plan

2.00: The City of McMinnville shall continue to enforce appropriate development controls on lands with identified building constraints, including, but not limited to, excessive slope, limiting soil characteristics, and natural hazards.

Zoning

Chapter 17.53.101 Streets

- **Sprinklers required in residential and commercial structures when road grade > 12%**

History of Hazard Planning

Comprehensive Plan, Volume I (1981)

- 1) Only flood plains adjacent to the city's major waterways are hazardous enough to completely preclude urban development in a given area.
 - Development of a flood plain zone.
 - Boundaries will comply with FEMA

McMinnville's Current Hazard Policies

Comprehensive Plan

9.00 The City of McMinnville shall continue to designate appropriate lands within its corporate limits as "floodplain" to prevent flood induced property damages and to retain and protect natural drainage ways from encroachment by inappropriate uses.

Zoning Ordinance

Chapter 17.48 F-P Flood Area Zone:

New Data – 2018

Landslides, Liquefaction, Shaking, Flooding

Oregon Department of Geology and Mineral Industries

Statewide Geohazards Viewer

<https://gis.dogami.oregon.gov/maps/hazvu/>

Slope

Created from DOGAMI LiDAR and Digital Elevation Model (10 Meters)

Wildfire

U.S. Forest Service

Pacific Northwest Quantitative Wildfire Risk Assessment Data (2018)

https://tools.oregonexplorer.info/OE_HtmlViewer/index.html?viewer=wildfire

Yamhill County Update – 2018/19

Yamhill County Natural Hazard Mitigation Plan (2018/2019)

The following excerpts from **Table MA-1 McMinnville Action Items** identify the Planning Department as having a lead or major supporting role in implementing the following measures.

Multi-Hazard #2	Incorporate mitigation planning provisions into community planning processes such as comprehensive, capital improvement, land use, transportation plans, zoning ordinances, community development practices, etc.
Multi-Hazard #7	Develop and maintain GIS mapped hazard areas within the UGB.
Multi-Hazard #10	Establish a process to coordinate with state and Federal agencies to maintain up-to-date hazard data, maps and assessments.
Multi-Hazard #11	Limit (e.g. reduced density, etc.) or prohibit development in high hazard areas.
Multi-Hazard #12	Encourage mitigation practices in developments at risk to natural hazards.

Yamhill County Update – 2018/19

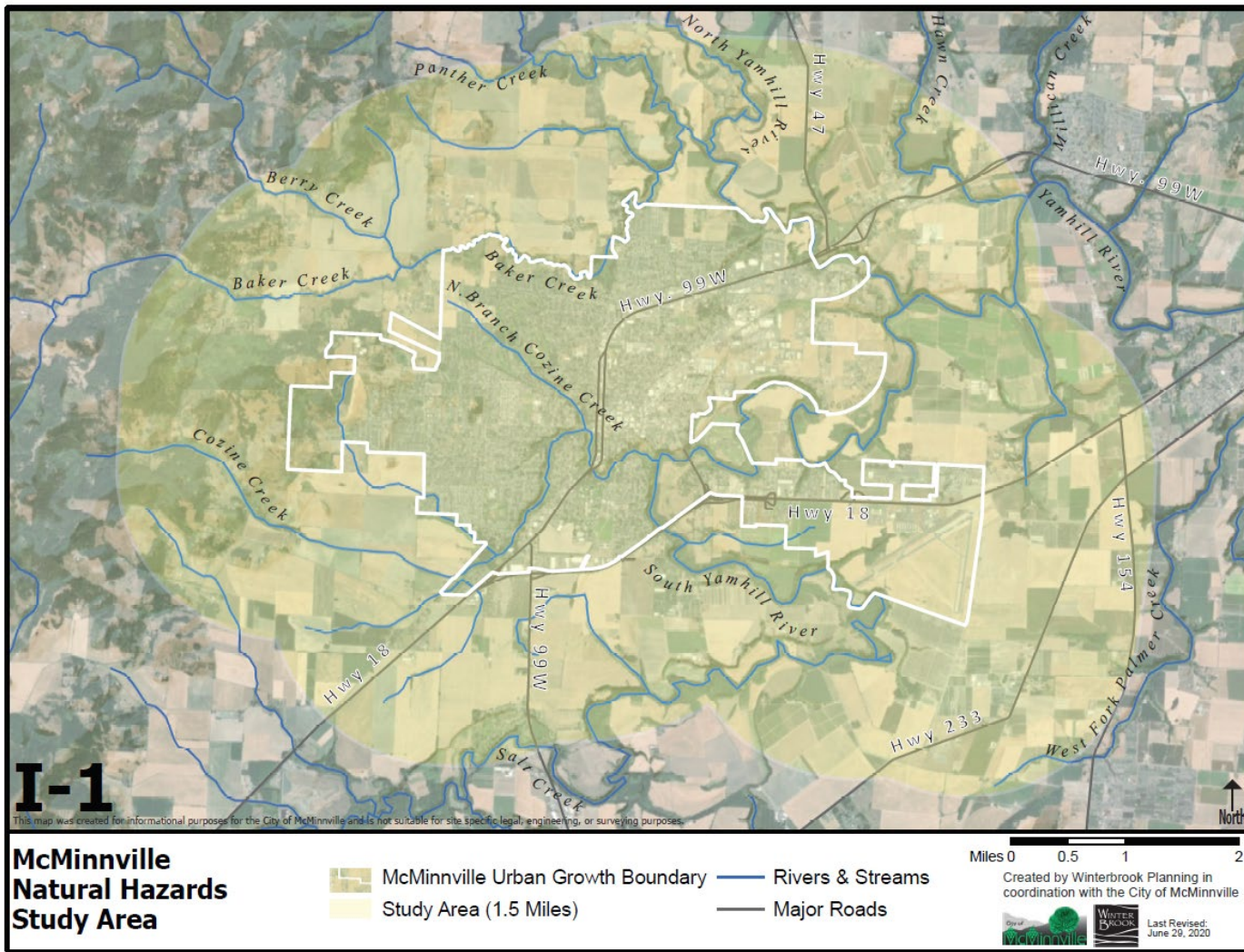
Table VI.1 McMinnville NHMP Recommended Natural Hazard Mitigation Measures

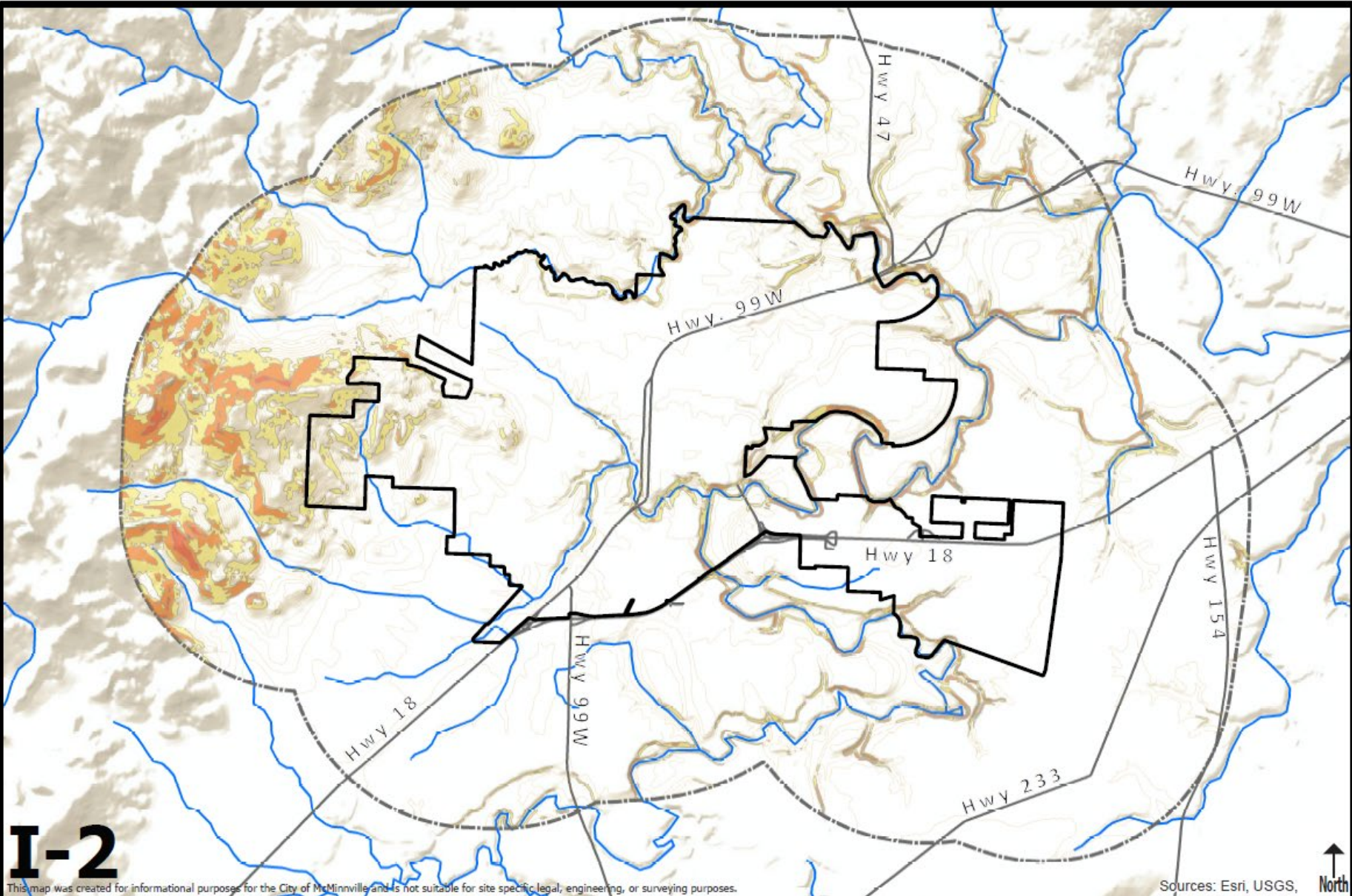
Policy Number	Policy Text	Evaluation
Multi-Hazard #2	Incorporate mitigation planning provisions into community planning processes such as comprehensive, capital improvement, land use, transportation plans, zoning ordinances, community development practices, etc.	Section VII includes recommendations for amending the McMinnville Comprehensive Plan to include natural hazard inventory and management policies proposed to be implemented in the McMinnville Zoning Ordinance.
Multi-Hazard #7	Develop and maintain GIS mapped hazard areas within the UGB.	Sections II-V include a series of geological, flooding and wildfire hazards maps within the McMinnville UGB and within potential UGB expansion areas.
Multi-Hazard #10	Establish a process to coordinate with state and Federal agencies to maintain up-to-date hazard data, maps and assessments.	Section VII includes a policy to coordinate with state and federal agencies through periodic updates of the McMinnville NHMP and the Yamhill County CWPP.

Yamhill County Update – 2018/19

Policy Number	Policy Text	Evaluation
Multi-Hazard #11	Limit (e.g., reduced density, etc.) or prohibit development in high hazard areas.	Section VI considers options to limit development in medium and high hazard areas – and to prohibit development in some high hazard areas. Section VII includes recommendations for a consolidated Natural Hazards Overlay District that limits or prohibits development depending on the hazard level and cumulative hazard impacts. As proposed, the NHOD would be applied to land within the McMinnville Study Area to guide future urban growth. Application of the NHOD outside the McMinnville City Limits would require an amendment to the Urban Growth Management Agreement (UGMA) between the City and Yamhill County.
Multi-Hazard #12	Encourage mitigation practices in developments at risk to natural hazards.	Section VI considers mitigation options and Section VII recommends specific mitigation measures.

June, 2020: UGB Work – Hazard Mapping





I-2

This map was created for informational purposes for the City of McMinnville and is not suitable for site specific legal, engineering, or surveying purposes.



Sources: Esri, USGS, North

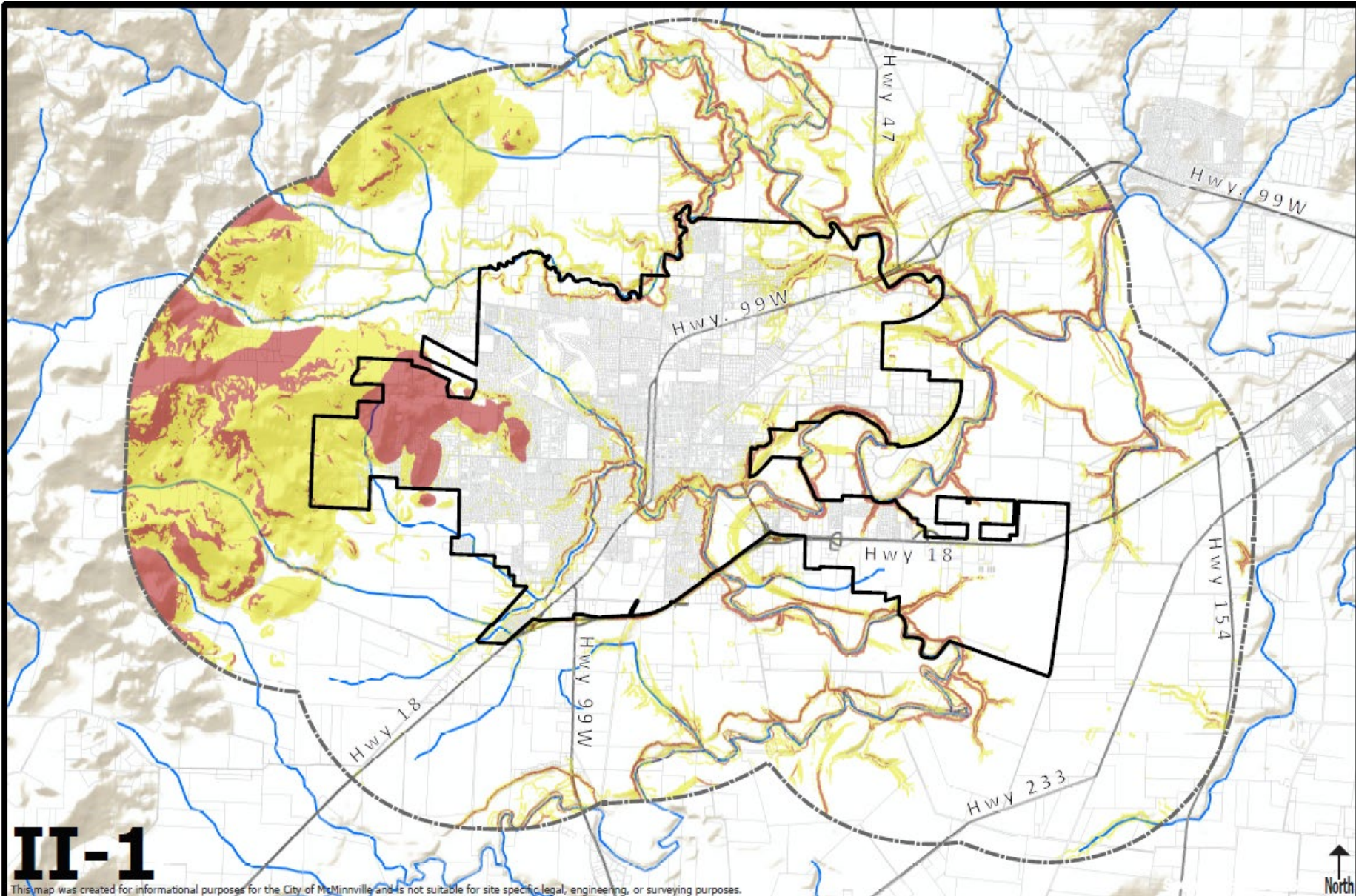
McMinnville Slopes

Slope Percent	Contours (10 Meters)	Major Roads
15% to 24.9%	McMinnville Urban Growth Boundary	Rivers & Streams
25% to 39.9%	Study Area (1.5 Miles)	
> 40%		

Miles 0 0.5 1 2

Created by Winterbrook Planning in coordination with the City of McMinnville



 Last Revised: June 29, 2020



II-1

This map was created for informational purposes for the City of McMinnville and is not suitable for site specific legal, engineering, or surveying purposes.

**McMinnville
Geologic Hazards:
Landslides**

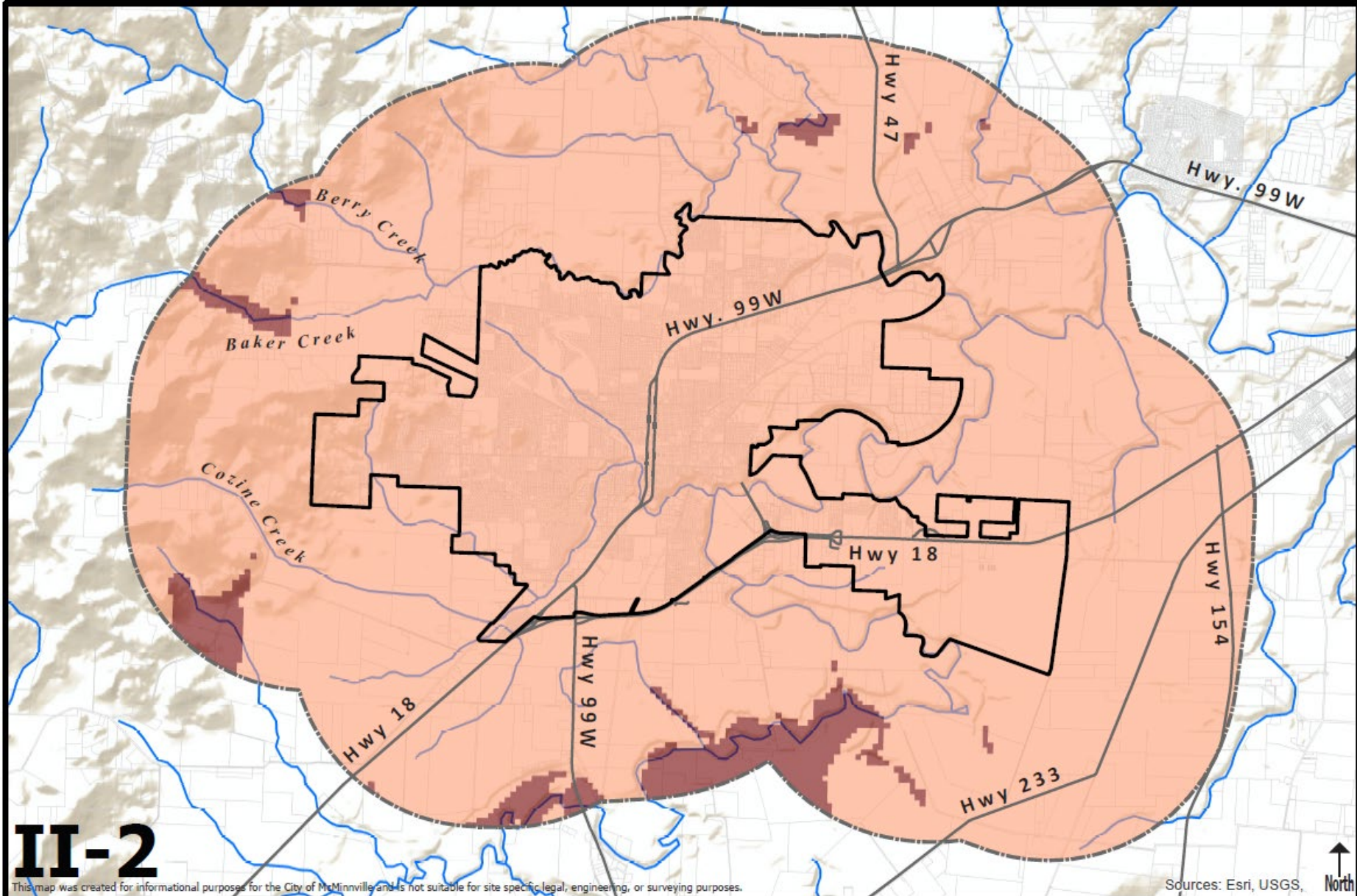
- Landslide Risk
- Moderate Risk
- High Risk
- McMinnville Urban Growth Boundary
- Study Area (1.5 Miles)
- Tax Lots
- Major Roads
- Rivers & Streams

Miles 0 0.5 1 2

Created by Winterbrook Planning in coordination with the City of McMinnville



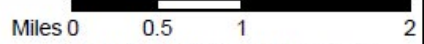
Last Revised: June 29, 2020



II-2

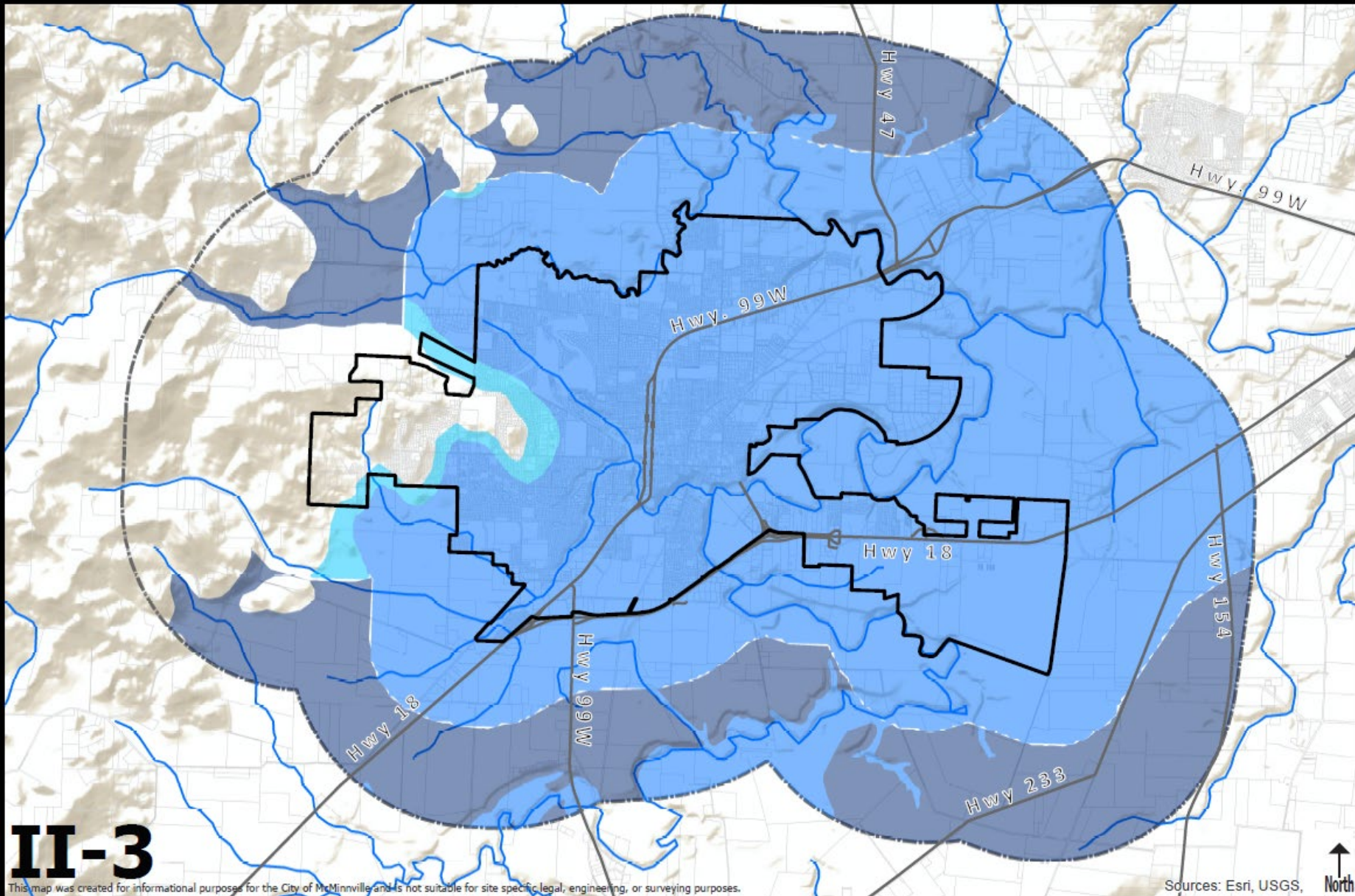
McMinnville Geologic Hazards: Cascadia Subduction Earthquake Shaking

- | | | |
|-------------------------|-----------------------------------|------------------|
| Expected Shaking | McMinnville Urban Growth Boundary | Major Roads |
| Very Strong Shaking | Study Area (1.5 Miles) | Rivers & Streams |
| Severe Shaking | Tax Lots | |



Created by Winterbrook Planning in coordination with the City of McMinnville

City of McMinnville
WINTERBROOK
Last Revised: June 26, 2020



II-3

This map was created for informational purposes for the City of McMinnville and is not suitable for site specific legal, engineering, or surveying purposes.

Sources: Esri, USGS, North

McMinnville

Geologic Hazards:

Earthquake Liquefaction

Susceptibility

Liquefaction Risk

- Low Risk
- Moderate Risk
- High Risk

McMinnville Urban Growth Boundary

- Study Area (1.5 Miles)
- Tax Lots

Major Roads

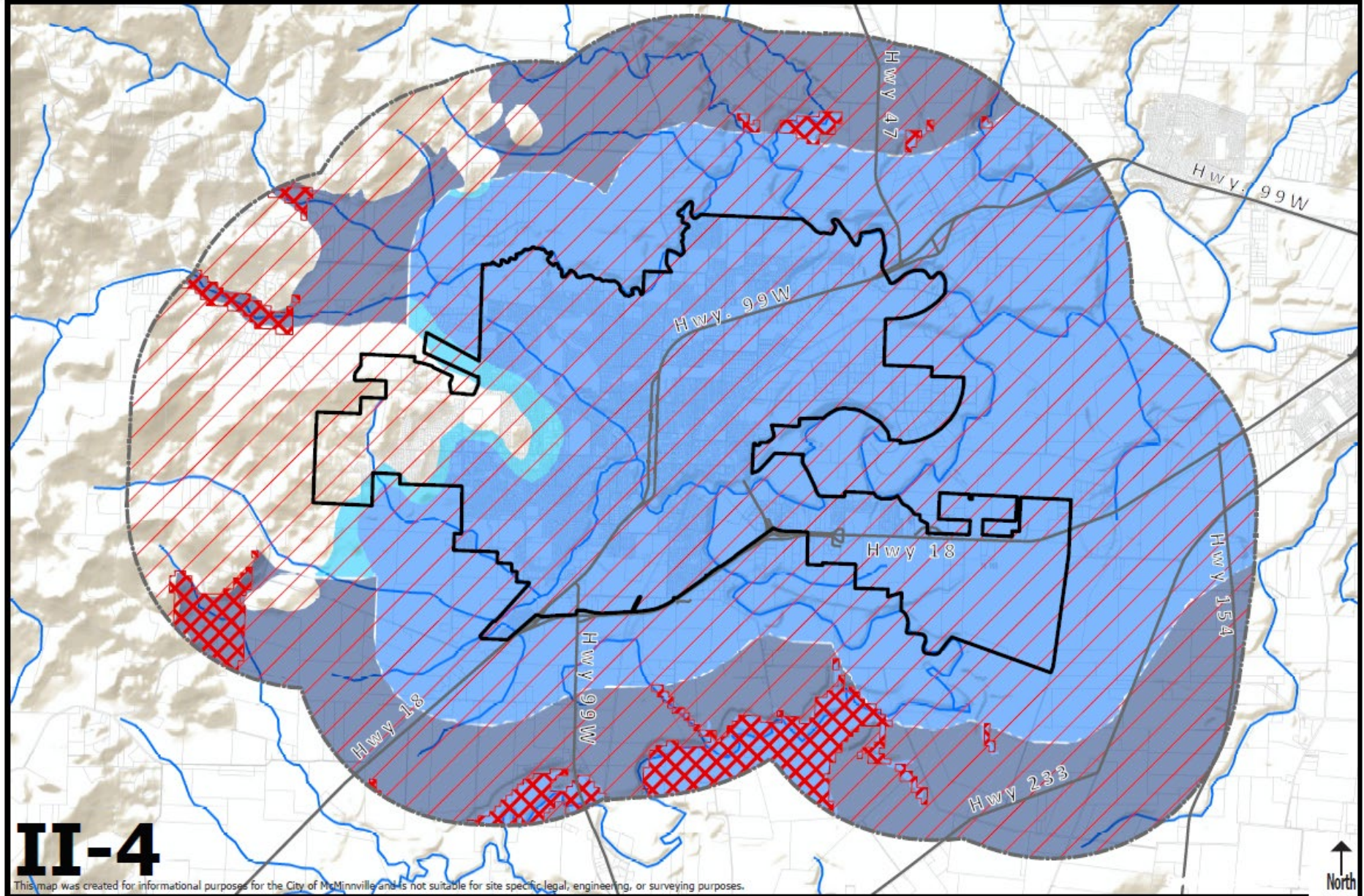
- Major Roads
- Rivers & Streams

Miles 0 0.5 1 2

Created by Winterbrook Planning in coordination with the City of McMinnville



Last Revised: June 28, 2020



II-4

This map was created for informational purposes for the City of McMinnville and is not suitable for site specific legal, engineering, or surveying purposes.

McMinnville Geologic Hazards: Subduction Shaking & Liquefaction Risks

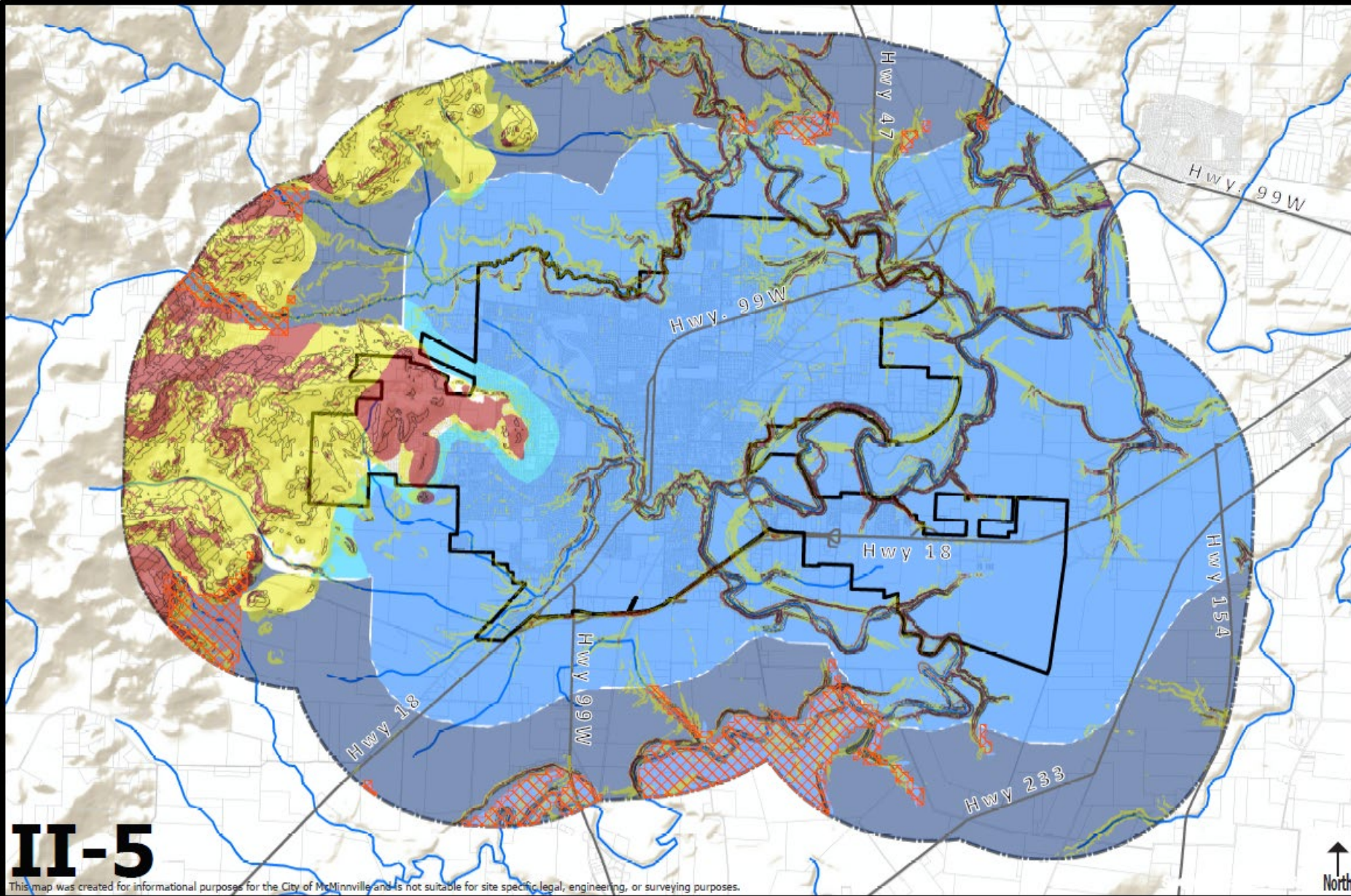
- | | | |
|--------------------------|-----------------------------------|------------------|
| Liquefaction Risk | Very Strong Shaking | Tax Lots |
| Low Risk | Severe Shaking | Major Roads |
| Moderate Risk | McMinnville Urban Growth Boundary | Rivers & Streams |
| High Risk | Study Area (1.5 Miles) | |

Miles 0 0.5 1 2

Created by Winterbrook Planning in coordination with the City of McMinnville




Last Revised: June 26, 2020



II-5

This map was created for informational purposes for the City of McMinnville and is not suitable for site specific legal, engineering, or surveying purposes.

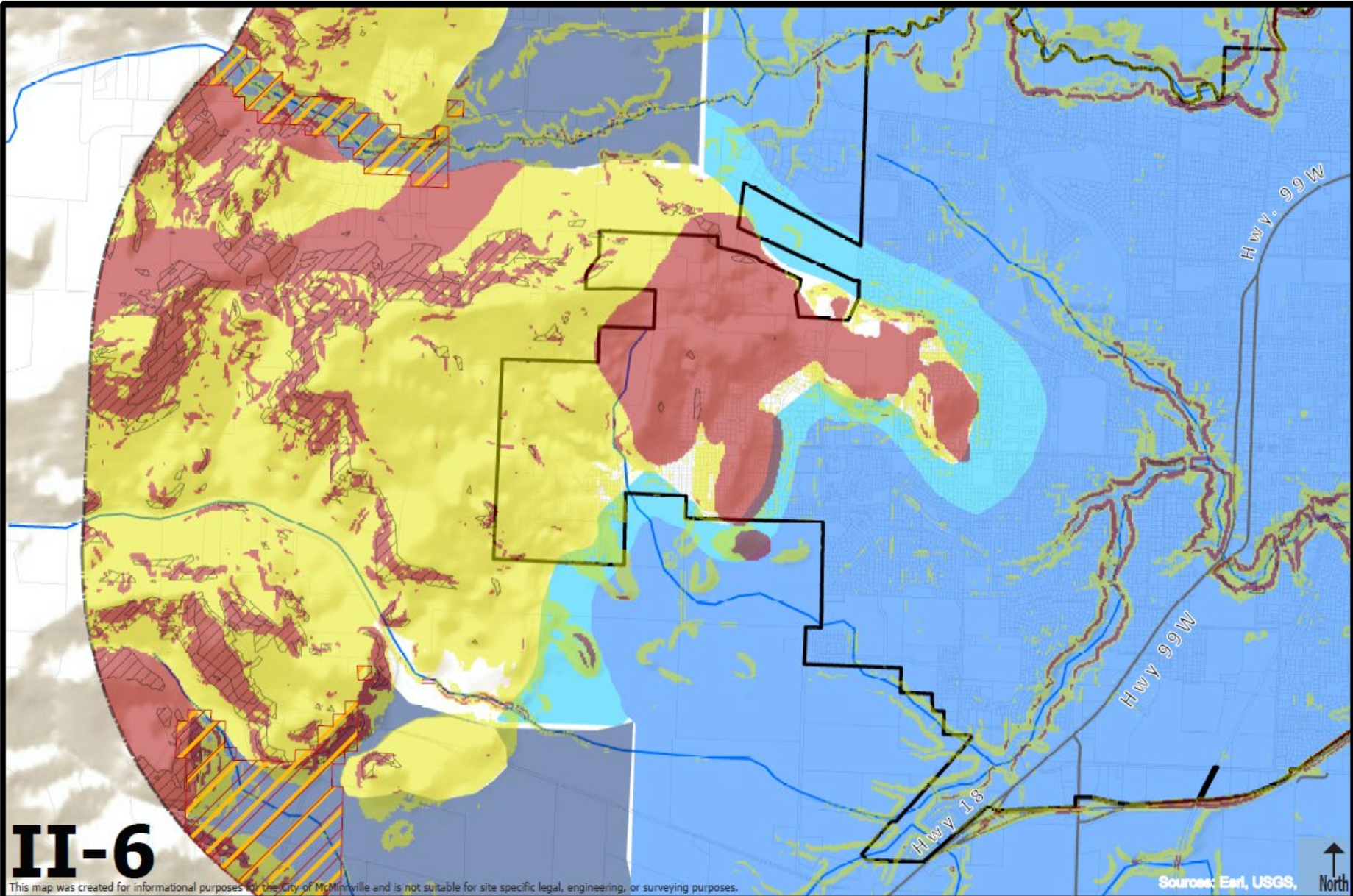
McMinnville Geologic Hazards: Landslide, Liquefaction, Subduction Shaking & Steep Slopes

- | | | | |
|-----------------------|--------------------------|-----------------------------------|------------------|
| Landslide Risk | Liquefaction Risk | Severe Shaking | Tax Lots |
| Moderate Risk | Low Risk | Steep Slopes (>15%) | Major Roads |
| High Risk | Moderate Risk | McMinnville Urban Growth Boundary | Rivers & Streams |
| | High Risk | Study Area (1.5 Miles) | |



Created by Winterbrook Planning in coordination with the City of McMinnville





II-6

This map was created for informational purposes for the City of McMinnville and is not suitable for site specific legal, engineering, or surveying purposes.

Source: Earl, USGS, North

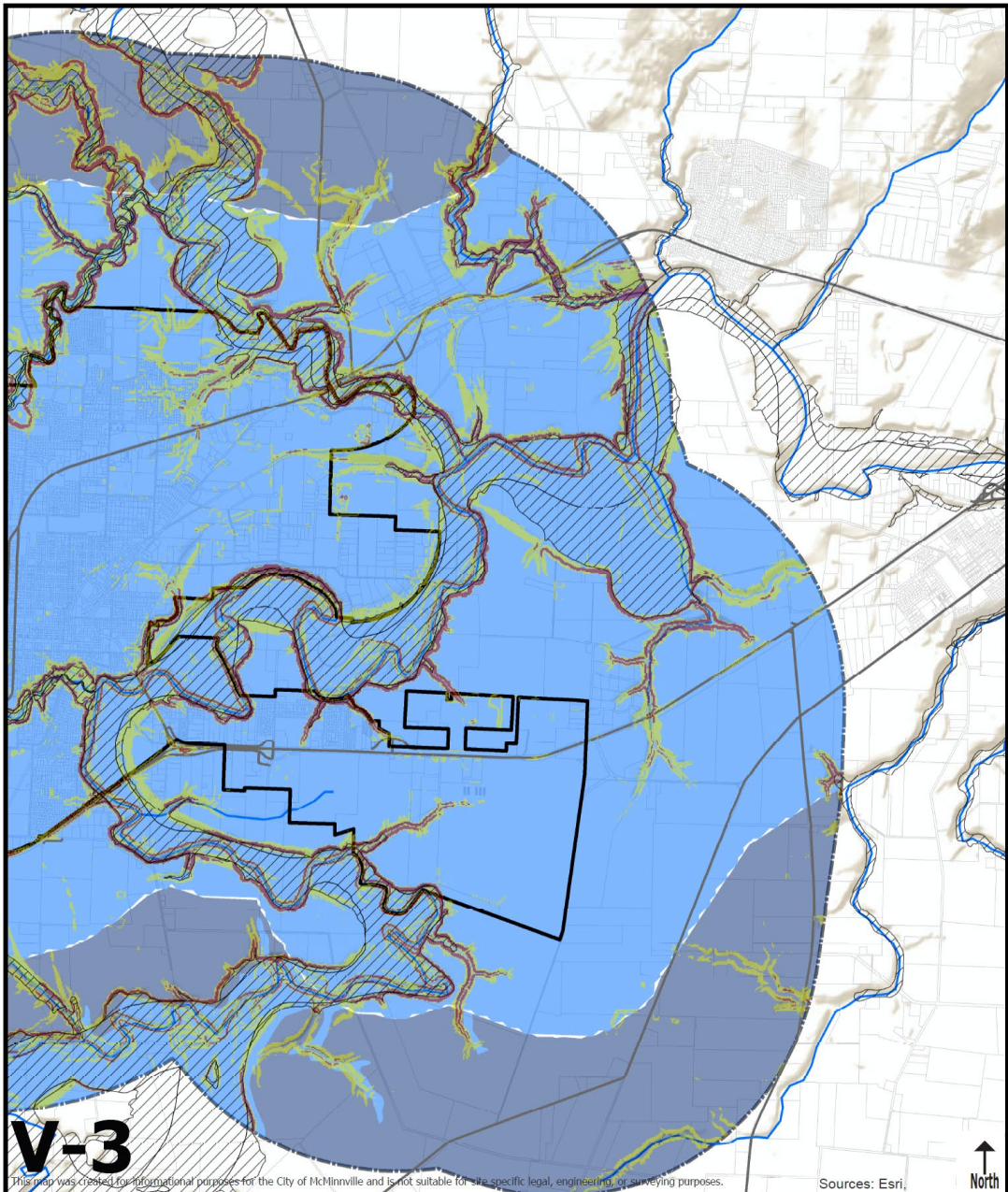
McMinnville WEST HILLS Geologic Hazards: Landslide, Liquefaction, Subduction Shaking & Steep Slopes

- | | | | |
|-----------------------|--------------------------|-----------------------------------|------------------|
| Landslide Risk | Liquefaction Risk | Severe Shaking | Tax Lots |
| Moderate Risk | Low Risk | Steep Slopes (>25%) | Major Roads |
| High Risk | Moderate Risk | McMinnville Urban Growth Boundary | Rivers & Streams |
| | High Risk | Study Area (1.5 Miles) | |

Miles 0 0.2 0.4 0.8

Created by Winterbrook Planning in coordination with the City of McMinnville

City of McMinnville WINTERBROOK
Last Revised: June 26, 2020



V-3

This map was created for informational purposes for the City of McMinnville and is not suitable for site-specific legal, engineering, or surveying purposes.

Sources: Esri,



McMinnville
EAST VALLEY
Landslide, Liquefaction &
Flood Hazards

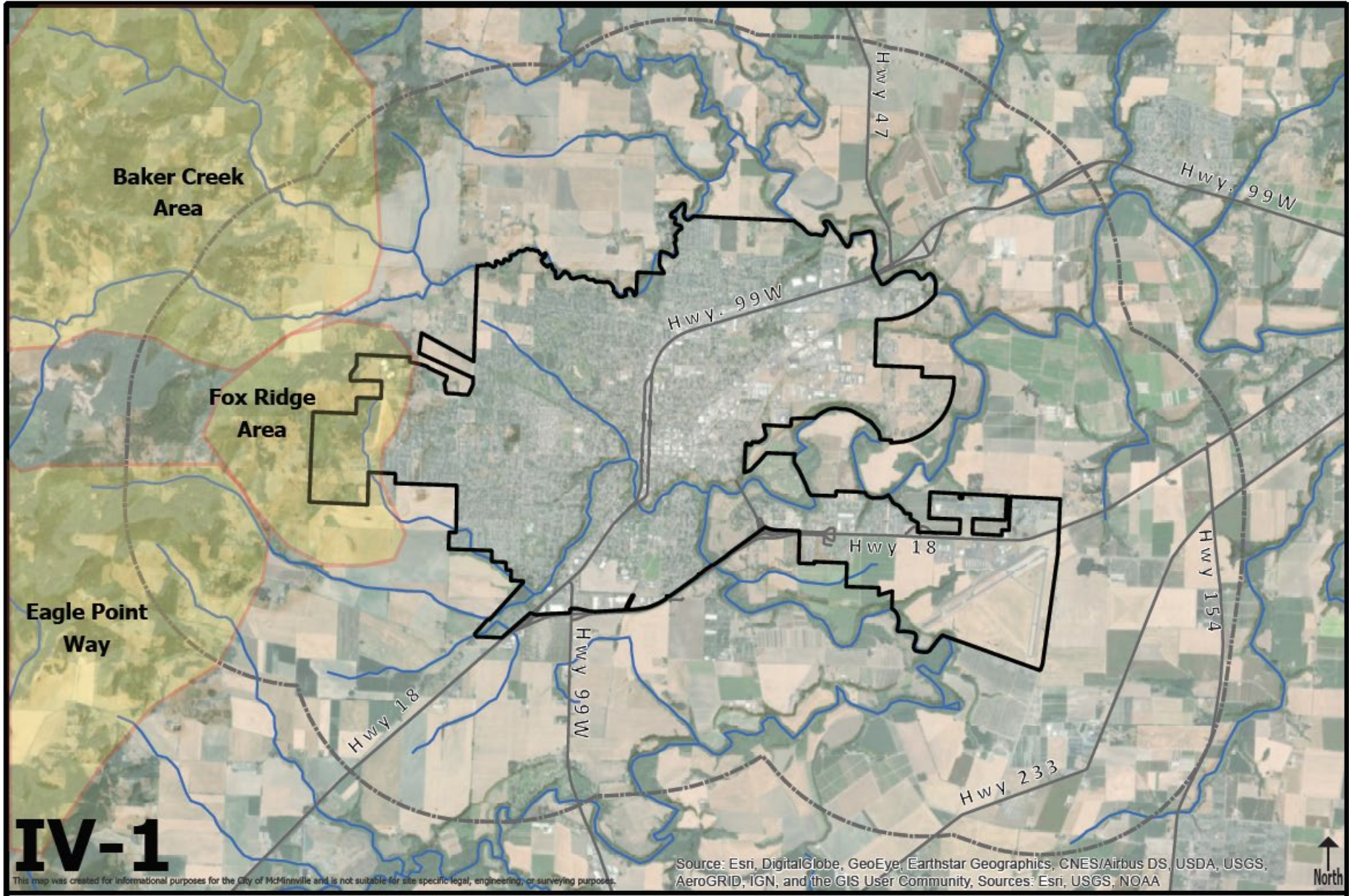
- | | | |
|---------------|------------------------|-----------------------------------|
| Moderate Risk | Low Risk | Flood Hazards |
| High Risk | High Risk | McMinnville Urban Growth Boundary |
| Moderate Risk | Study Area (1.5 Miles) | Tax Lots |
| | Major Roads | Rivers & Streams |

Miles 0 0.25 0.5 1

Created by Winterbrook Planning in coordination with the City of McMinnville

Last Revised: June 20, 2020





This map was created for informational purposes for the City of McMinnville and is not suitable for site specific legal, engineering, or surveying purposes.

McMinnville Wildfire Risk Reduction Areas

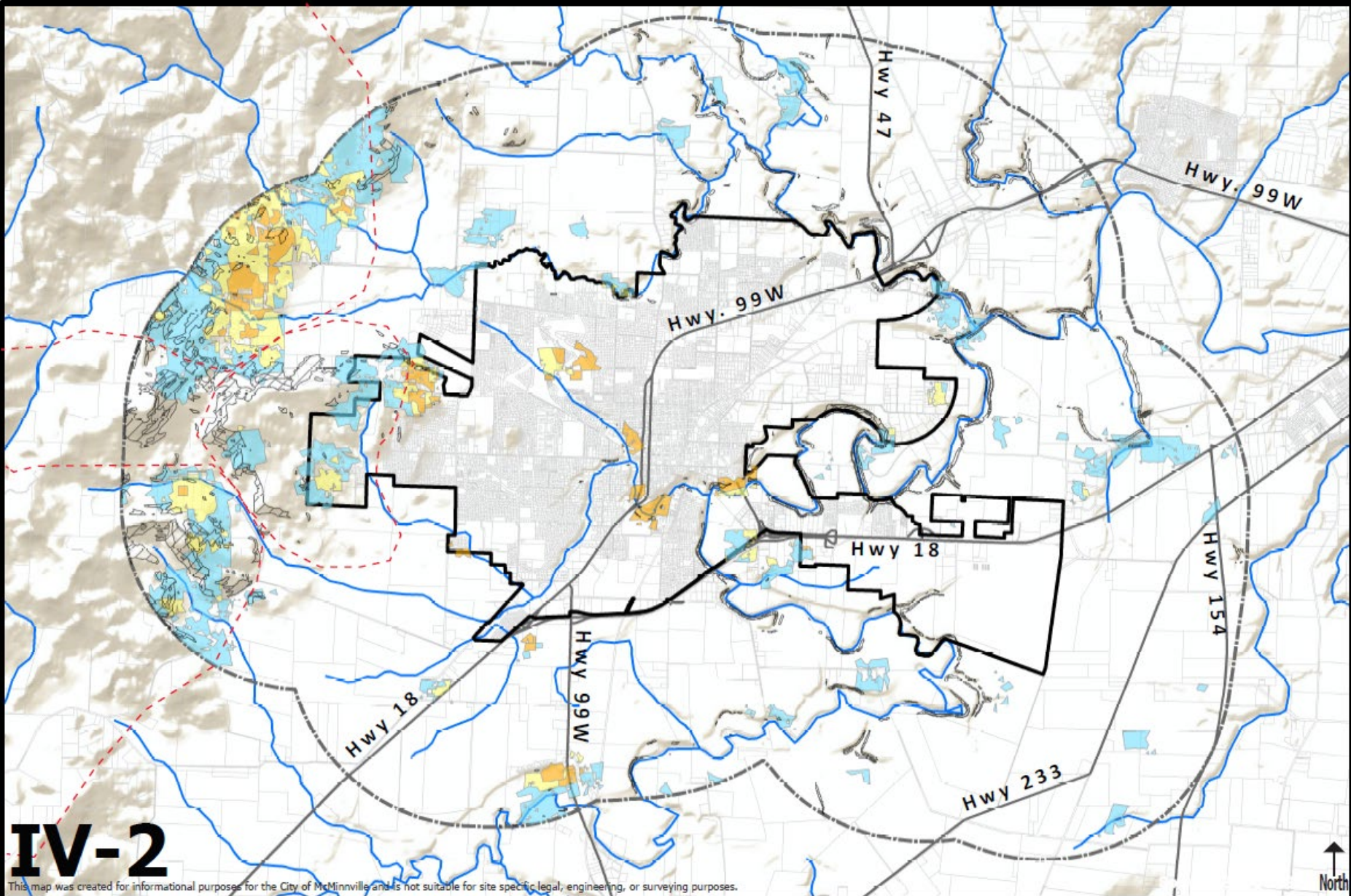
- McMinnville Urban Growth Boundary
- Study Area (1.5 Miles)
- Tax Lots
- Major Roads
- Rivers & Streams

Miles 0 0.5 1 2

Created by Winterbrook Planning in coordination with the City of McMinnville




Last Revised: June 28, 2020



IV-2

This map was created for informational purposes for the City of McMinnville and is not suitable for site specific legal, engineering, or surveying purposes.

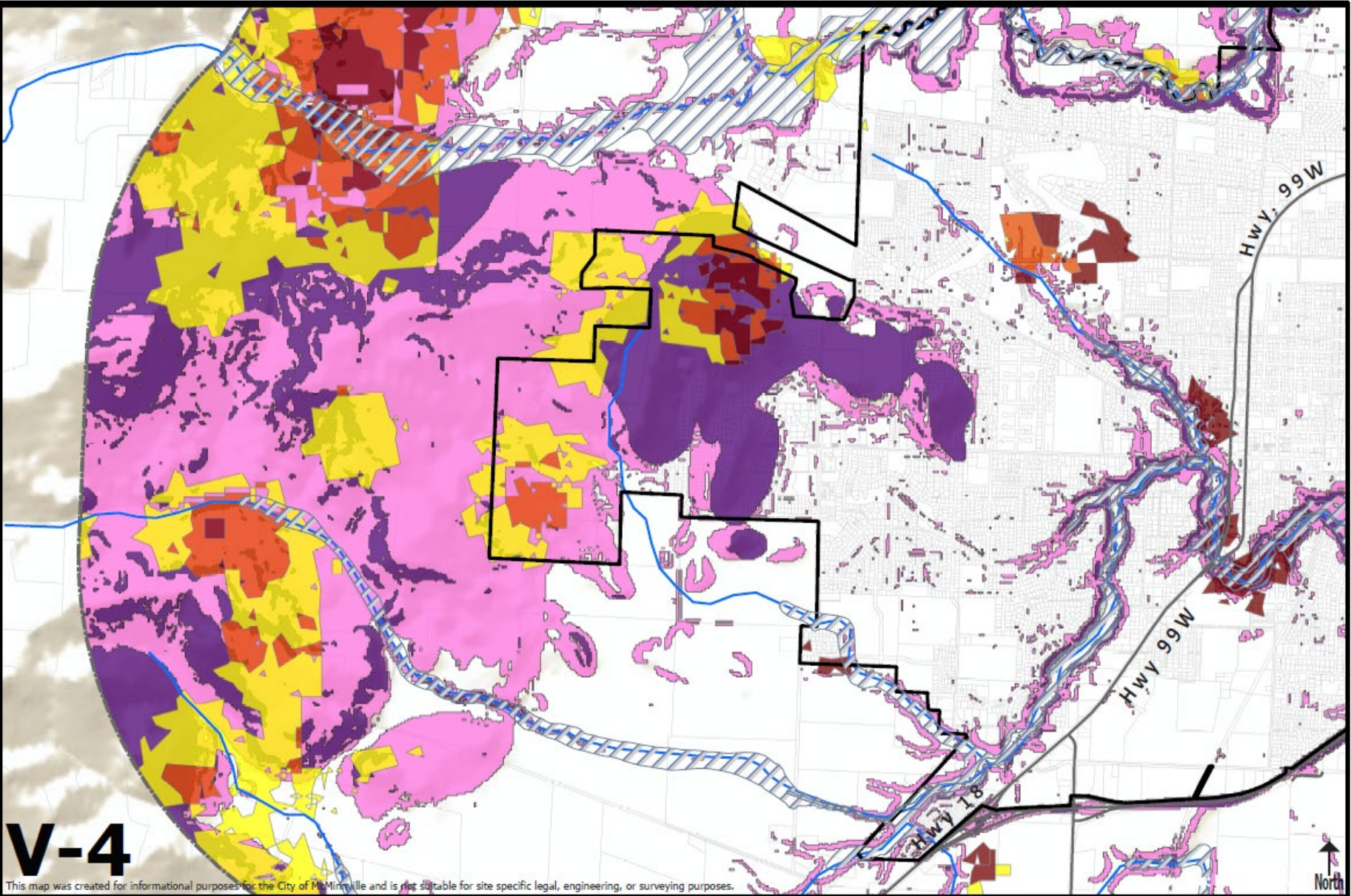
McMinnville Potential Wildfire Impact to People and Property

- | | | |
|----------------------|-----------------------------------|-------------------------------|
| Wildfire Risk | Steep Slopes (>25%) | Major Roads |
| Low | McMinnville Urban Growth Boundary | Rivers & Streams |
| Moderate | Study Area (1.5 Miles) | Wildfire Risk Reduction Areas |
| High | Tax Lots | |

Miles 0 0.5 1 2

Created by Winterbrook Planning in coordination with the City of McMinnville

City of McMinnville WINTERBROOK PLANNING
Last Revised: June 26, 2020



V-4

This map was created for informational purposes for the City of McMinnville and is not suitable for site specific legal, engineering, or surveying purposes.

**McMinnville WEST HILLS
Wildfire Impacts to People
& Property, Landslide Risk,
& Flood Hazards**

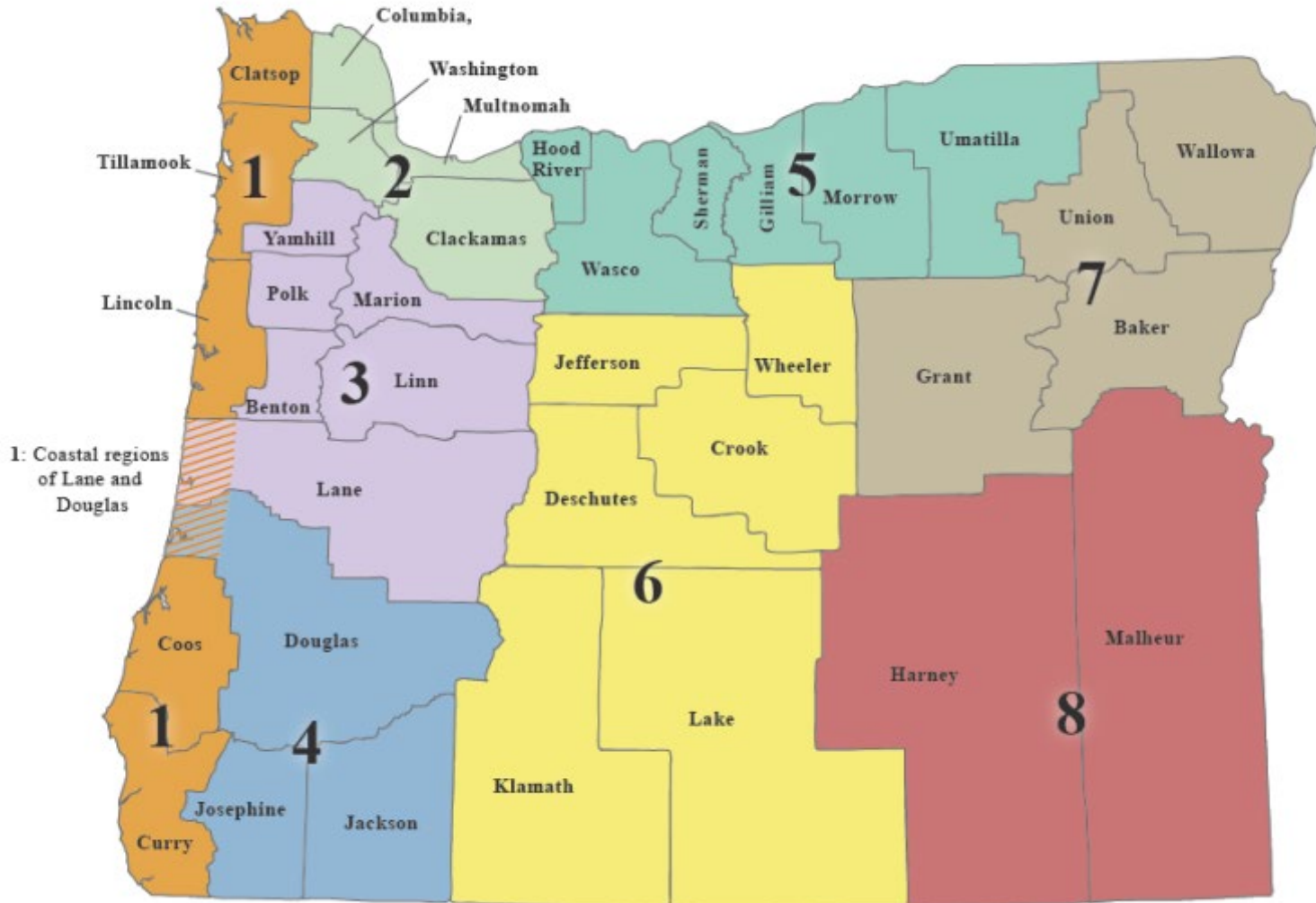
- | | | | |
|----------------------|-----------------------|-----------------------------------|------------------|
| Wildfire Risk | Landslide Risk | Flood Hazard | Tax Lots |
| Low | Moderate Risk | McMinnville Urban Growth Boundary | Major Roads |
| Moderate | High Risk | Study Area (1.5 Miles) | Rivers & Streams |
| High | | | |

Miles 0 0.2 0.4 0.8

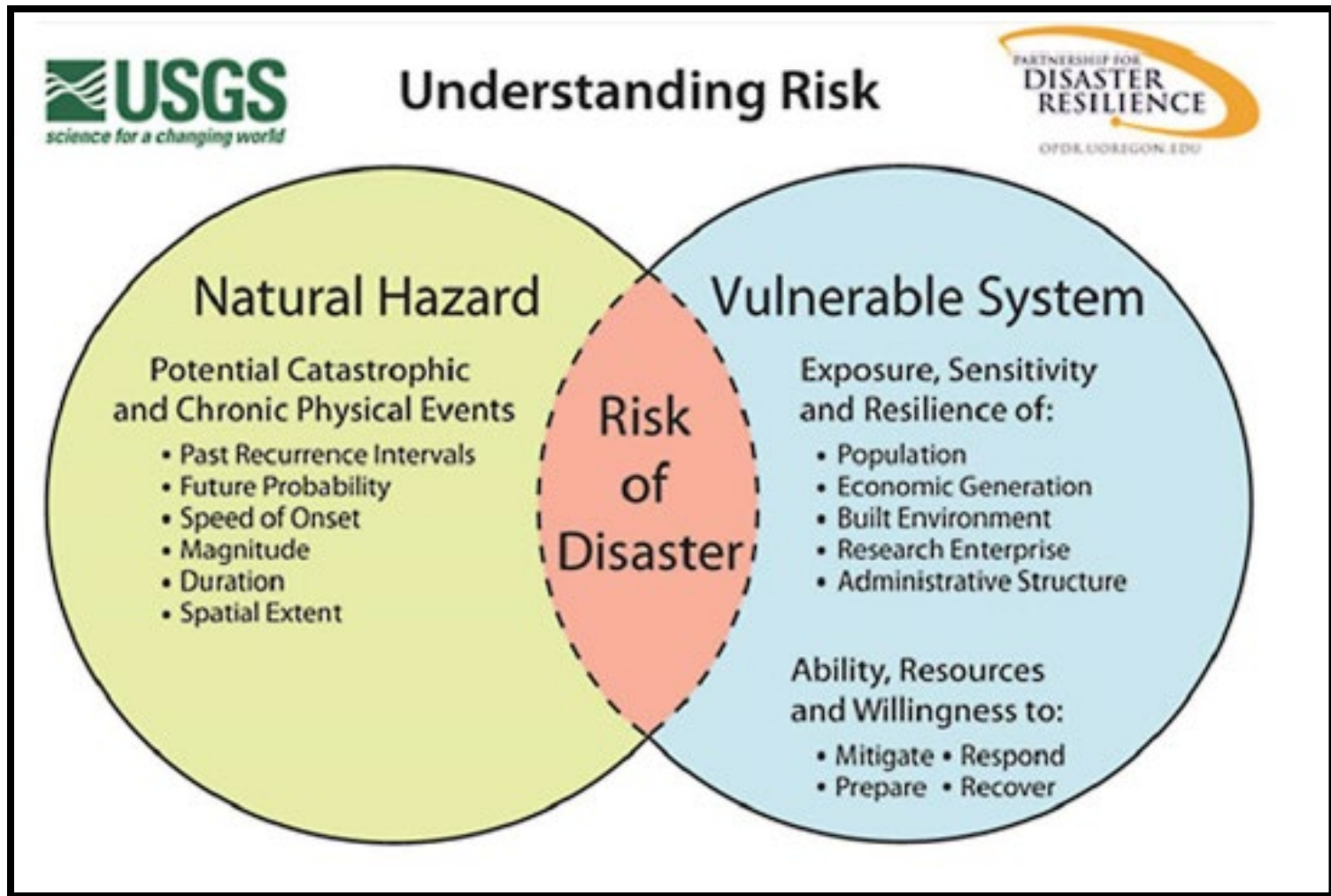
Created by Winterbrook Planning in coordination with the City of McMinnville

Last Revised: June 29, 2020

Summer 2020: Oregon NHMP



Summer 2020: Oregon NHMP

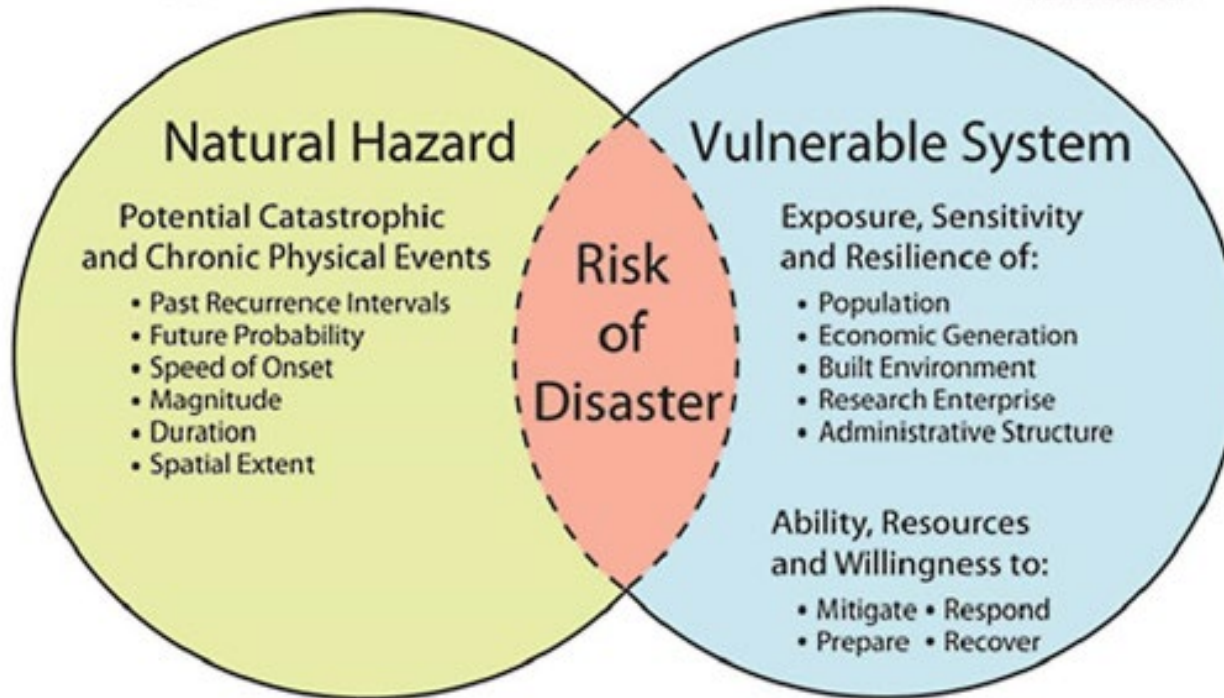


ADDING SOCIAL VULNERABILITY ASSESSMENT



- 1. Identify Hazards**
- 2. Identify “Who” and “What “ Is Vulnerable**
- 3. Assess Risk**

ADDING SOCIAL VULNERABILITY ASSESSMENT



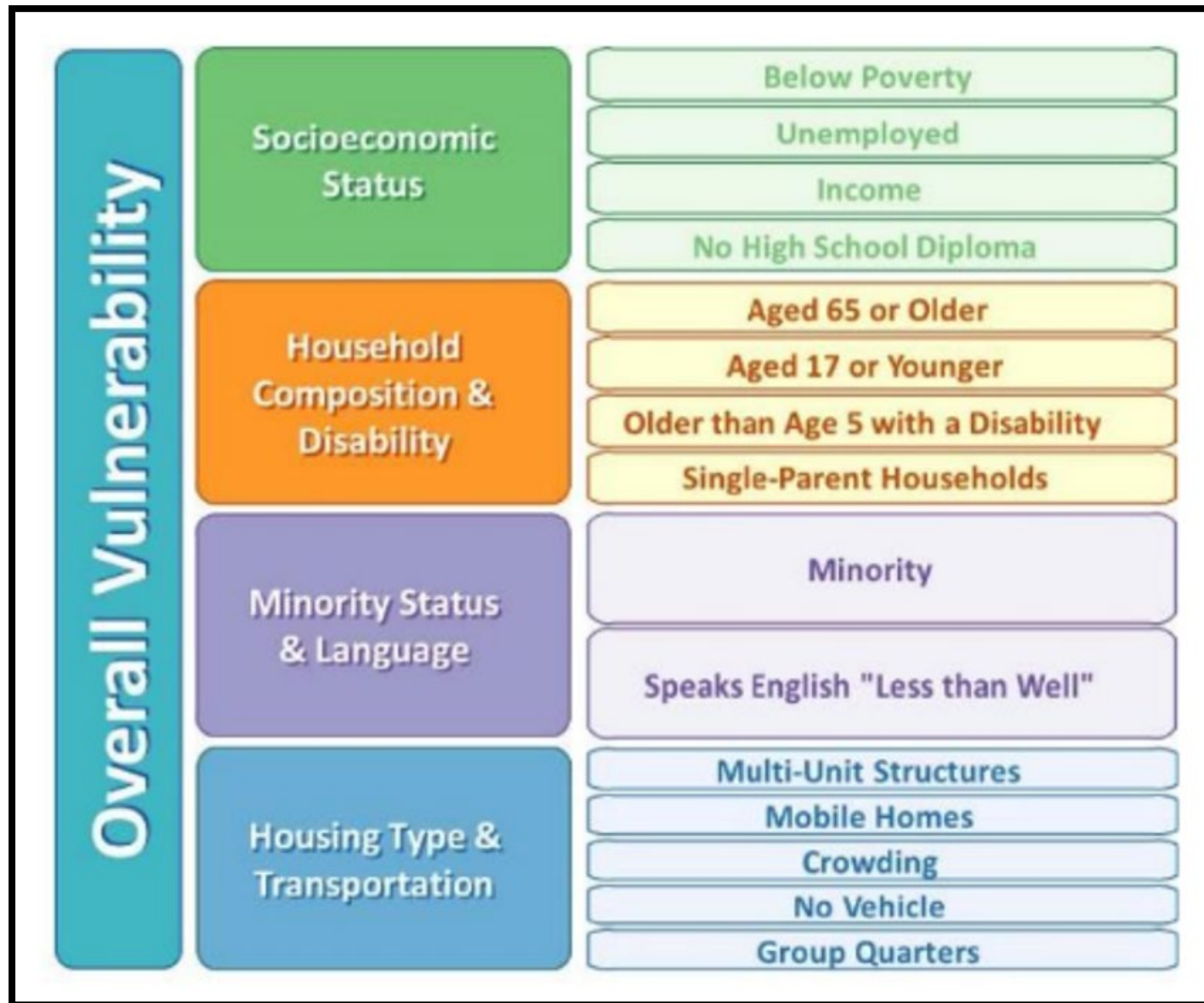
1. Identify Hazards
2. Identify “Who” and “What “ Is Vulnerable
3. Assess Risk

**SOCIAL
VULNERABILITY
ASSESSMENT**

Summer 2020: Oregon NHMP

Social Vulnerability:

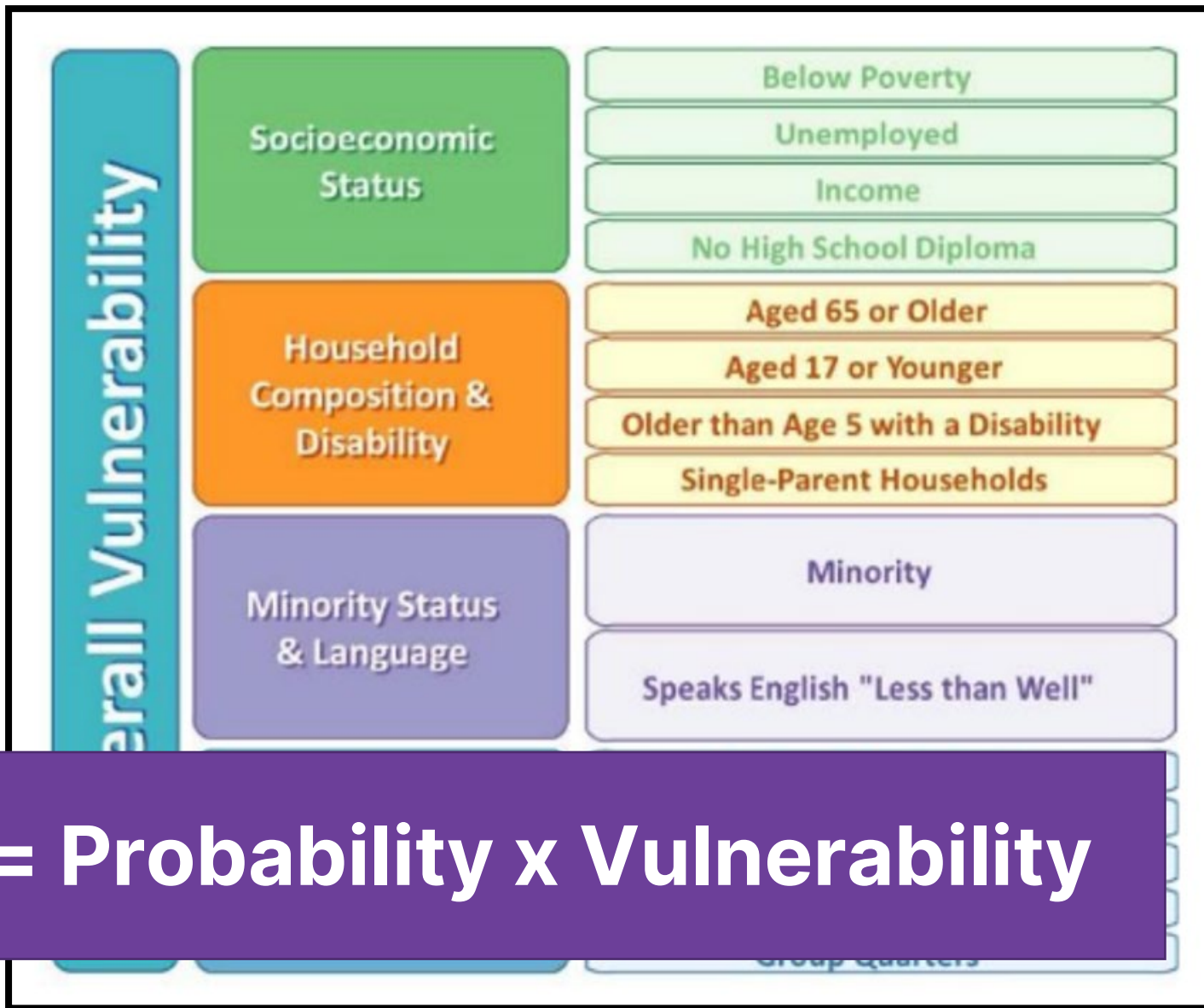
Underserved populations are more susceptible to life-changing event associated with natural hazards.



Summer 2020: Oregon NHMP

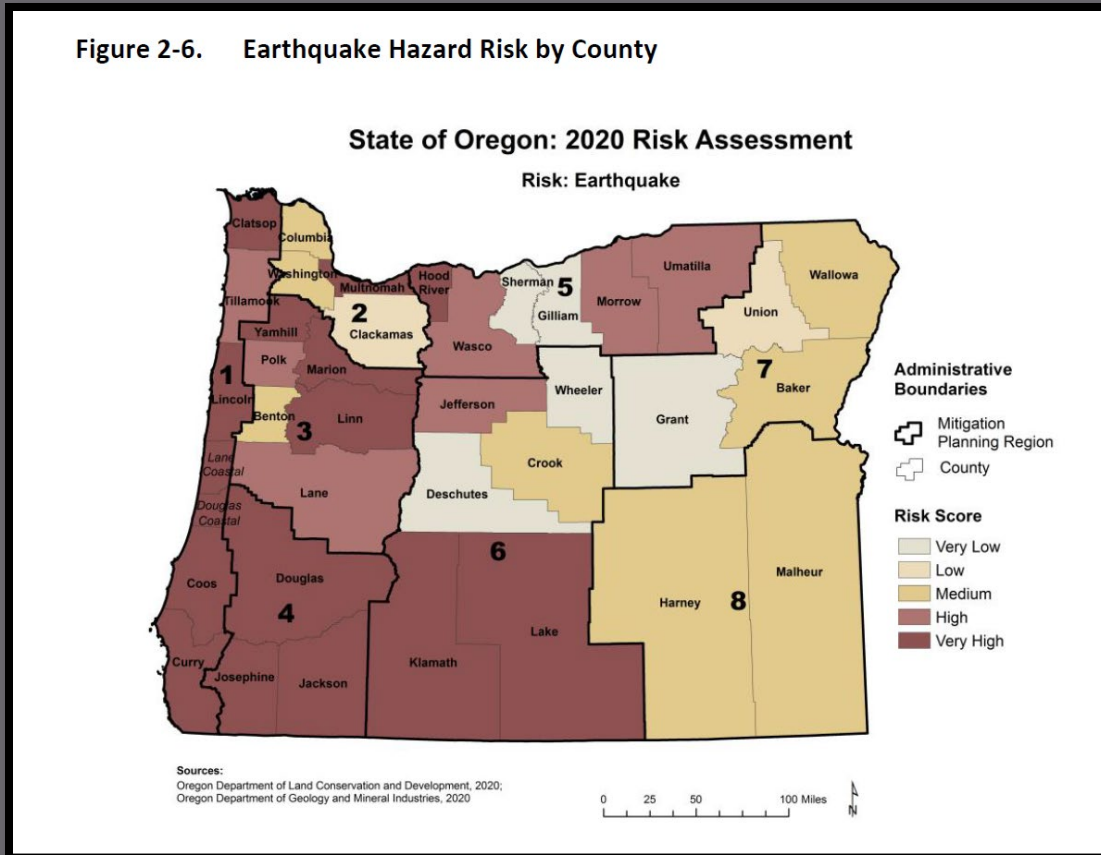
Social Vulnerability:

Underserved populations are more susceptible to life-changing event associated with natural hazards.



DRAFT 2020 OREGON NHMP – EARTHQUAKES

Figure 2-6. Earthquake Hazard Risk by County

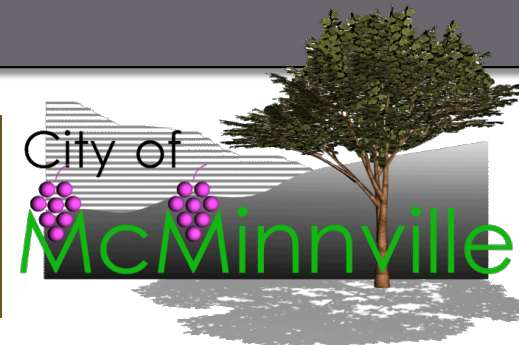


Probability = 4.0

Social
Vulnerability = 4.0

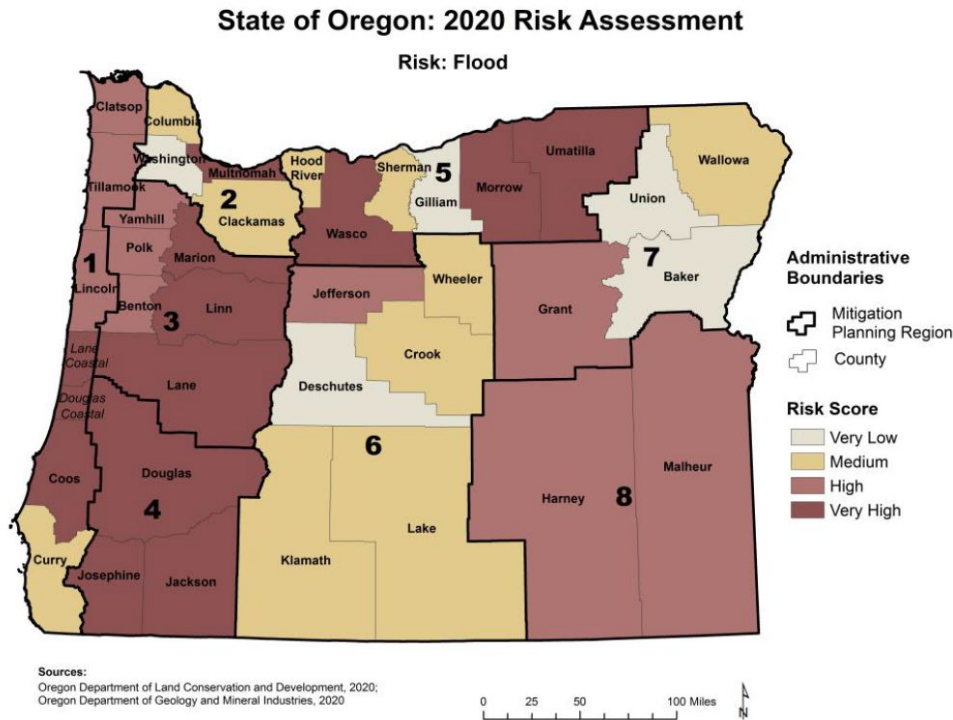
Risk = VH

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020



DRAFT 2020 OREGON NHMP – FLOODS

Figure 2-8. Flood Hazards Risk by County



Probability = 4.0

Social Vulnerability = 4.0

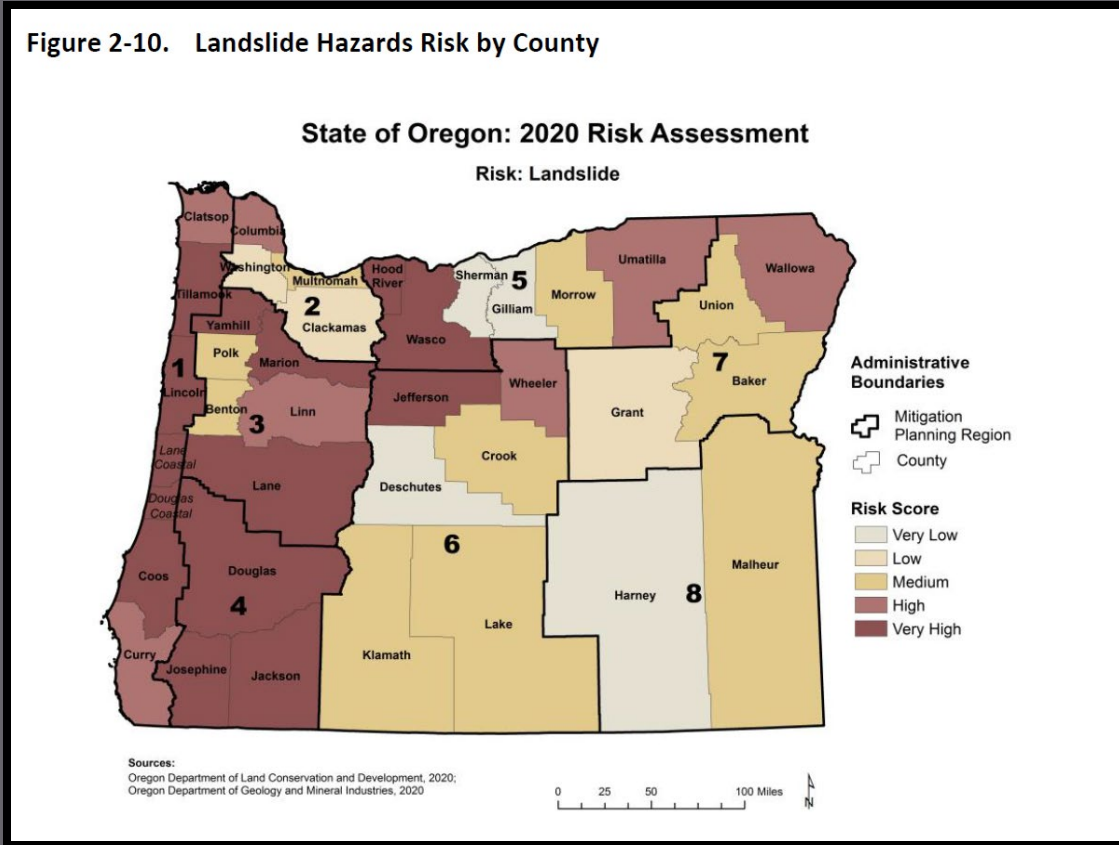
Risk = H

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020



DRAFT 2020 OREGON NHMP – LANDSLIDES

Figure 2-10. Landslide Hazards Risk by County



Probability = 5.0

Social
Vulnerability = 4.0

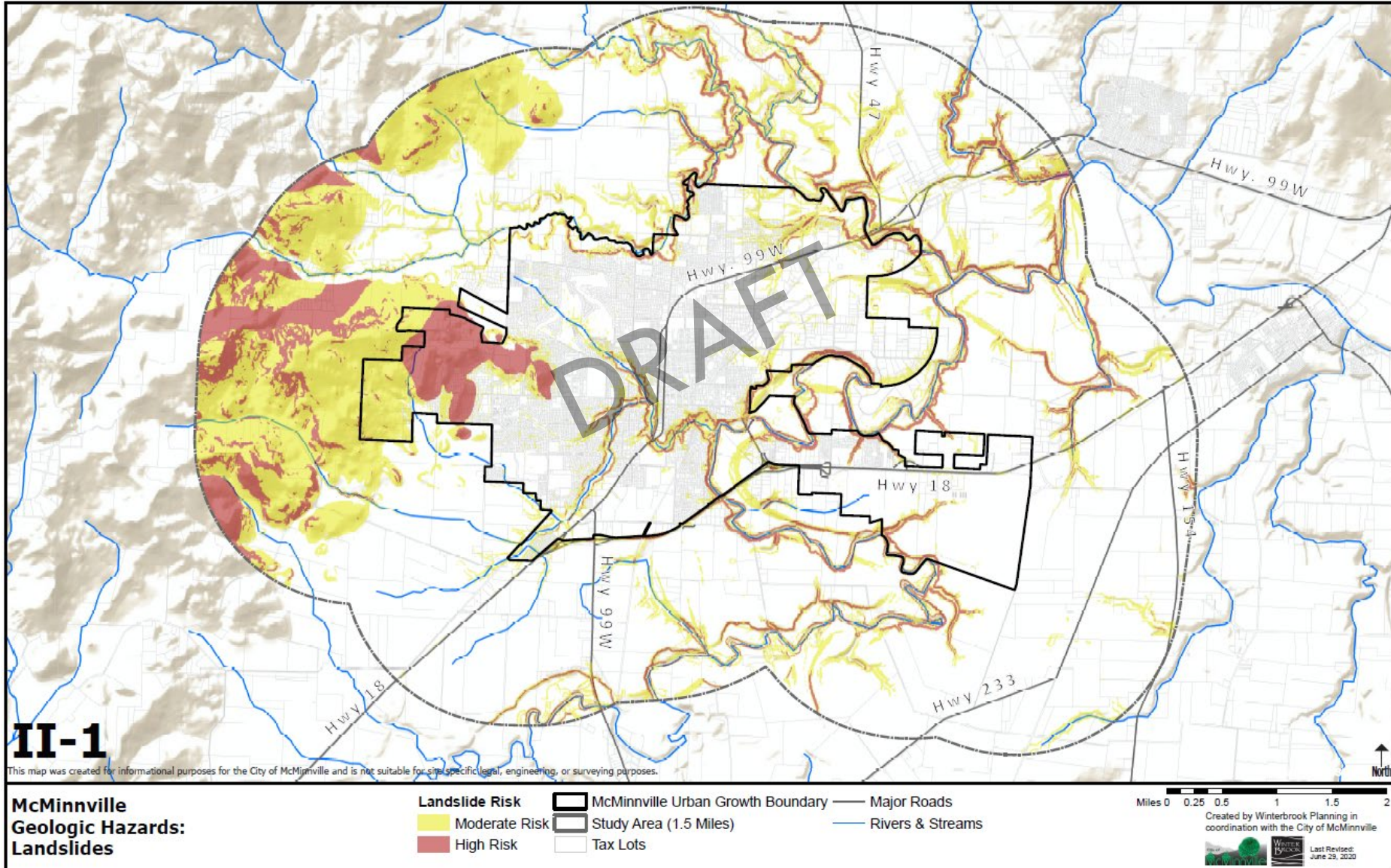
Risk = VH

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020



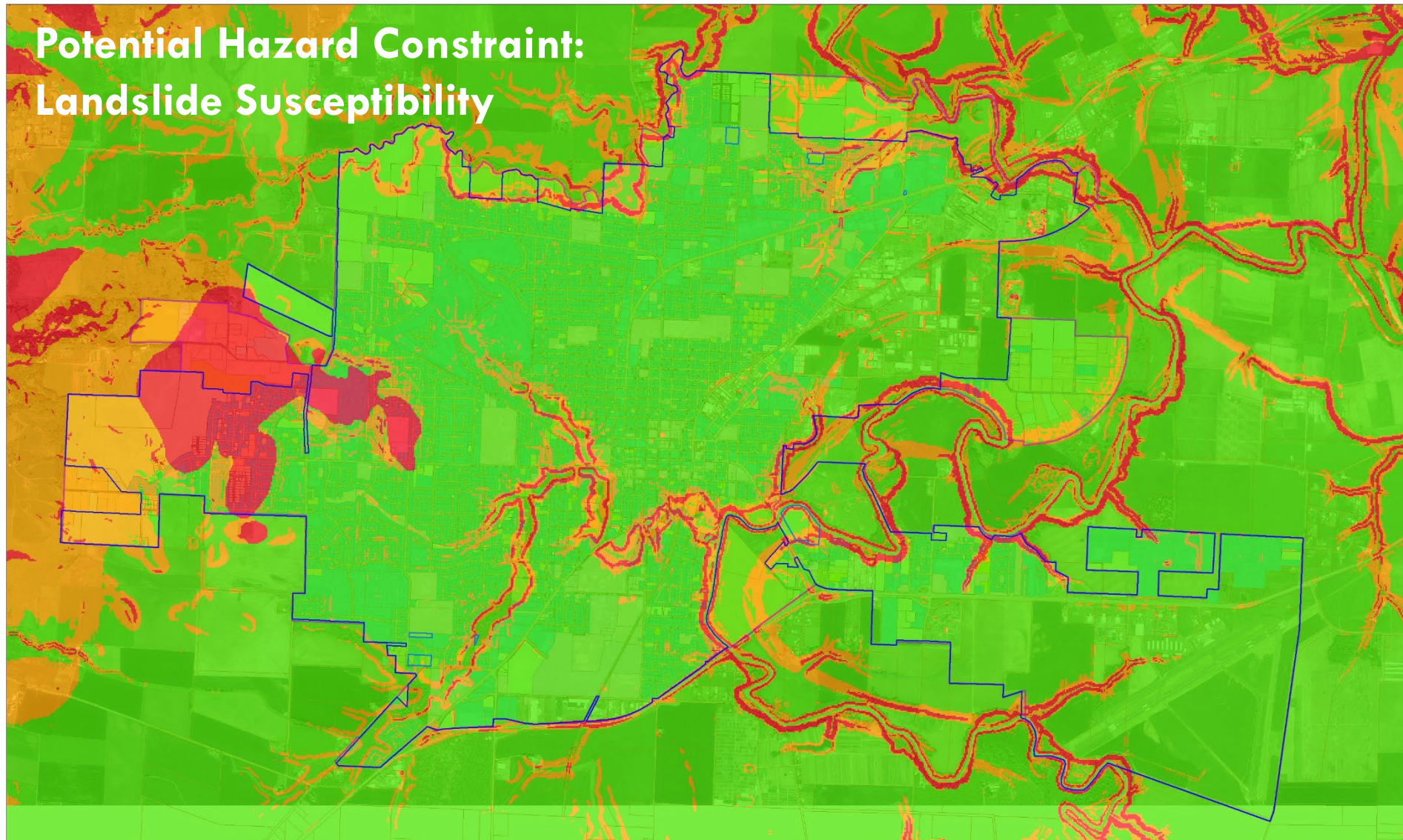
EMERGING CONCERNS FOR MCMINNVILLE – GEOLOGIC AND WILDFIRE

GEOLOGIC - LANDSLIDES



Map is a draft, and could change with future refinements

Potential Hazard Constraint: Landslide Susceptibility



Low Susceptibility: “Landsliding unlikely”. Less than 7% (green)

Moderate Susceptibility: “Landsliding possible” 7-17% (orange)

High Susceptibility: “Landsliding likely” >17% (red)

Very High Susceptibility: “Existing landslides” (not present in planning area)

Map is a draft, and could change with future refinements

HAZARDS TO PEOPLE AND PROPERTY - LANDSLIDES

Three main factors influence an area's susceptibility to landslides:

Geometry of the slope
Geologic material
Water

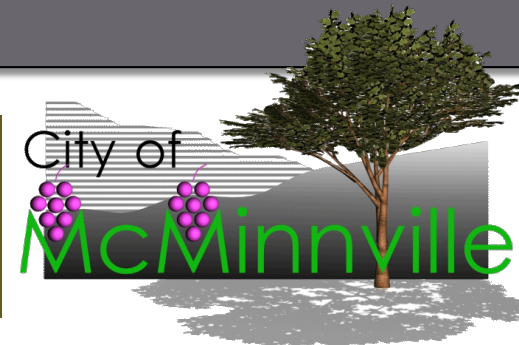
**YAMHILL COUNTY =
EXTREMELY LIKELY
PROBABILITY**

Figure 2-73. How Data Sets are Combined to Create Final Landslide Susceptibility Zones

		Landslide Density			Landslides
		Combine: ① Generalized Geologic Map + ② Landslide Inventory	Low (less than 3%)	Moderate (between 3% and 17%)	High (Greater than 17%)
<i>Graphic display of how dataset are combined to create the final landslide susceptibility zones.</i>					
Slope Prone to Landsliding Combine: ② Landslide Inventory + ③ Slope Map	Low (less than 1 STD)	Low	Moderate	High	Very High
	Moderate (between the mean and 1 STD)	Moderate	Moderate	High	Very High
	High (Equal to or greater than mean)	High	High	High	Very High

Source: Burns et al. (2016)

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020



HAZARDS TO PEOPLE AND PROPERTY - LANDSLIDES

Landslides = They are projected to occur more frequently due to climate change weather issues, soil changes with drought and large rain events.

- ❖ **Damage property and infrastructure**
- ❖ **McMinnville has High Risk Landslide Soils both within the UGB and the Study Area per recent DOGAMI maps.**



LANDSLIDES – CITY COUNCIL DIRECTION

Issue: City is now aware of high risk landslide soils in the West Hills, including some areas that are already developed and some areas that are within the existing UGB.

Question: How should the City proceed – buildable or not buildable?

Policy Direction: Proceed with caution. Low density development with mitigation measures. Adopt Hazard policies in the future.



HAZARDS TO PEOPLE AND PROPERTY - EARTHQUAKES

Shallow crustal events Cascadia Subduction Zone

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020



HAZARDS TO PEOPLE AND PROPERTY - EARTHQUAKES

Four types of earthquakes affect Yamhill County:

Shallow crustal events
Cascadia Subduction Zone

**Soil Hazards = Liquefaction and
Shaking**

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020



HAZARDS TO PEOPLE AND PROPERTY - EARTHQUAKES

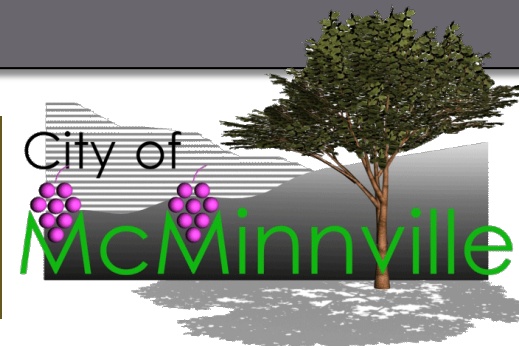
Four types of earthquakes affect Yamhill County:

Shallow crustal events
Cascadia Subduction Zone

Soil Hazards = Liquefaction and Shaking

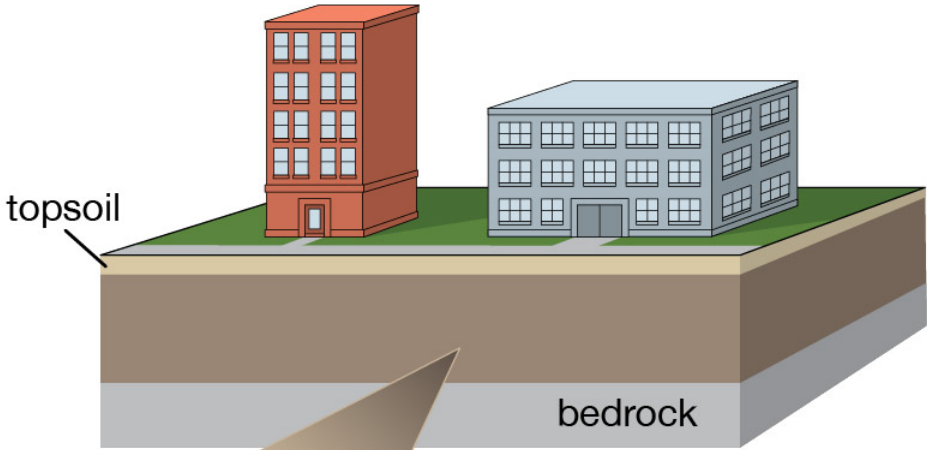
Soil liquefaction = ground failure when solid soil behaves temporarily like a viscous liquid. Occurs in water saturated unconsolidated soils. Sandy, silty and gravelly soils.

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020

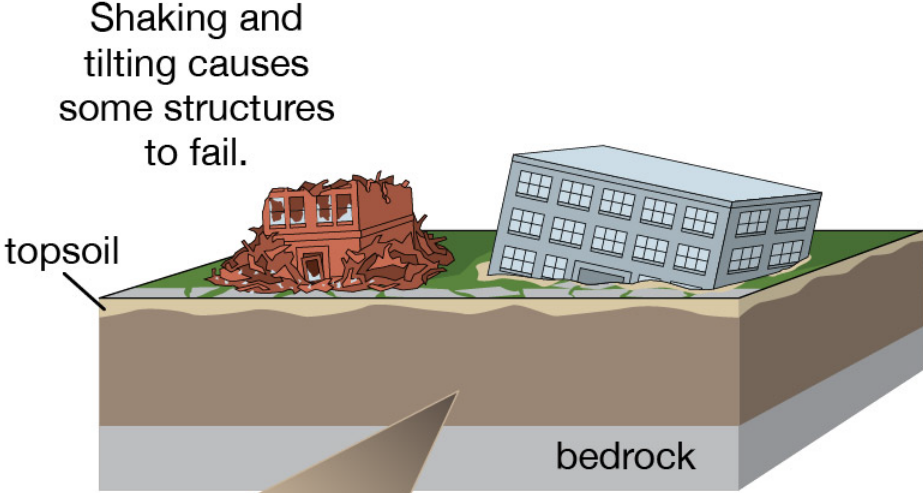


Soil liquefaction

stable soil



liquefied soil



Building stands erect on stable soil.

Loosely packed grains of soil are held together by friction. Pore spaces are filled with water.

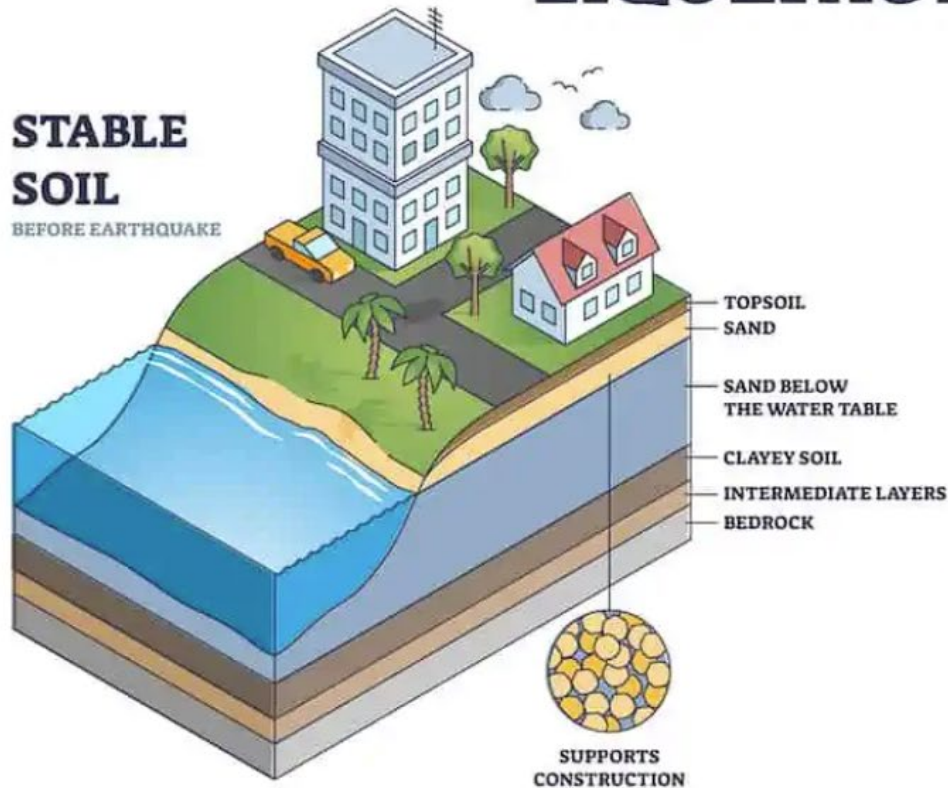
Building tilts and sinks as soil stability declines.

Shaking destabilizes the soil by increasing the space between grains. With its structure lost, the soil flows like a liquid.

LIQUEFACTION

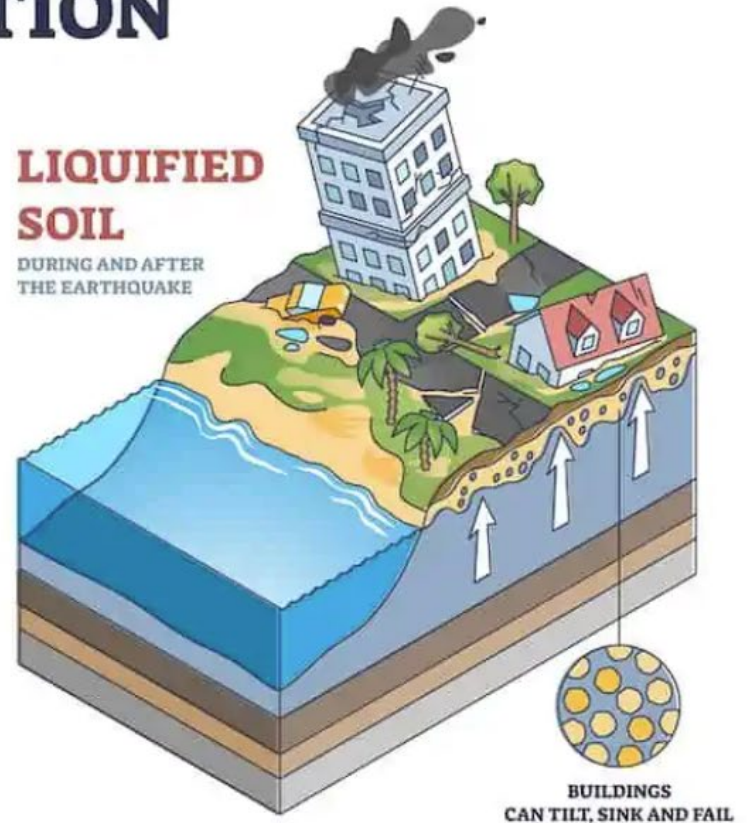
STABLE SOIL

BEFORE EARTHQUAKE



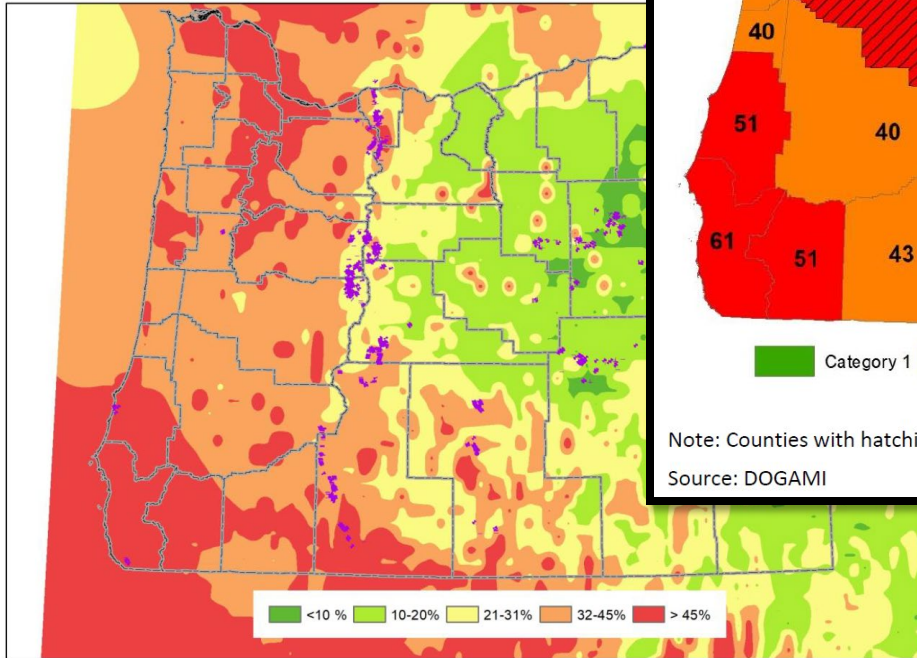
LIQUIFIED SOIL

DURING AND AFTER THE EARTHQUAKE



McMinnville Has a 45% chance of an earthquake (intensity of VI of greater) in 100 years.

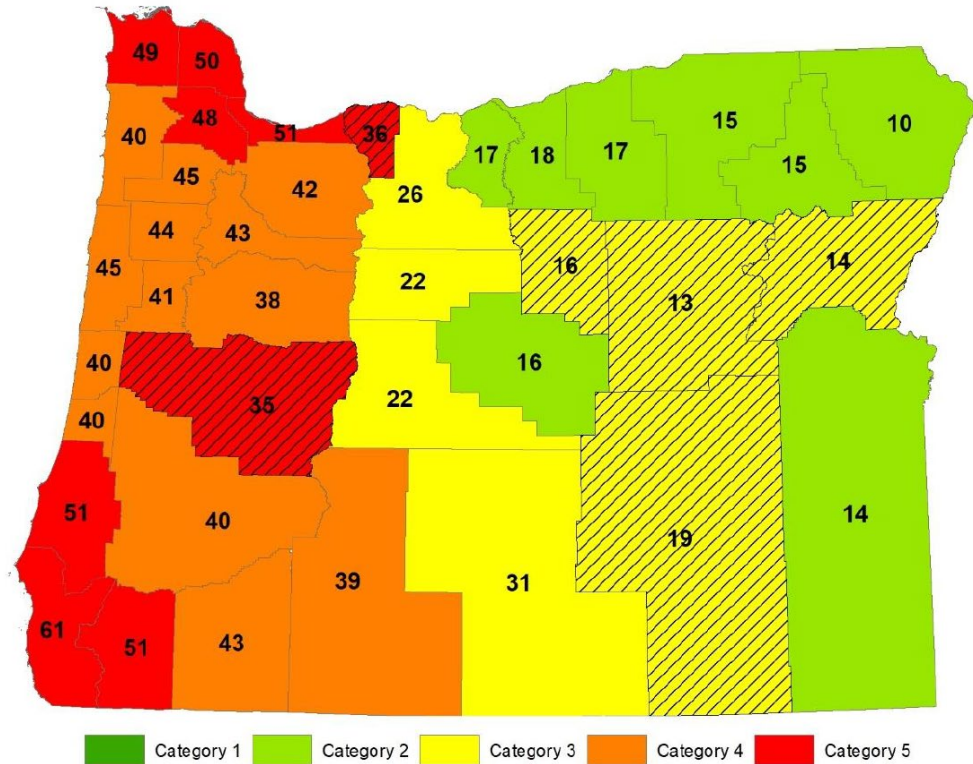
Figure 2-58. Probability of experiencing shaking of Modified Mercalli during the next 100 years



Note: Purple lines are faults that have been recently discovered with lidar data that are not included in the USGS hazard map models.

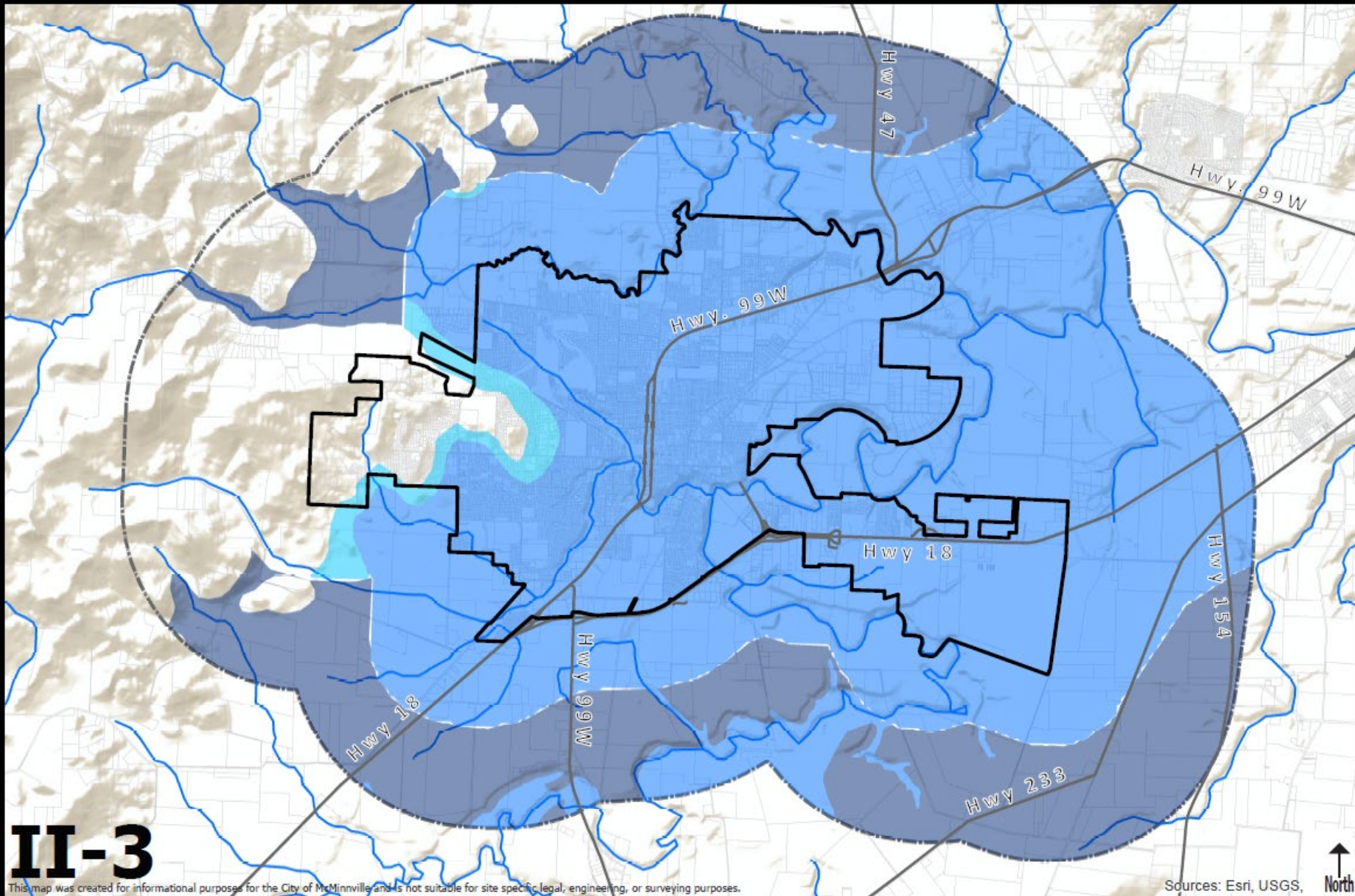
Source: USGS

Figure 2-59. 2020 Oregon Earthquake Probability Ranking Based on Mean County Value of the Probability of Damaging Shaking and Presence of Newly Discovered Faults (Figures 2-30 and 2-31)



Note: Counties with hatching had their probability category increased one step due to newly discovered faults.

Source: DOGAMI



II-3

This map was created for informational purposes for the City of McMinnville and is not suitable for site specific legal, engineering, or surveying purposes.

Sources: Esri, USGS, North

McMinnville

Geologic Hazards:

Earthquake Liquefaction

Susceptibility

Liquefaction Risk

- Low Risk
- Moderate Risk
- High Risk

McMinnville Urban Growth Boundary

- Study Area (1.5 Miles)
- Tax Lots

Major Roads

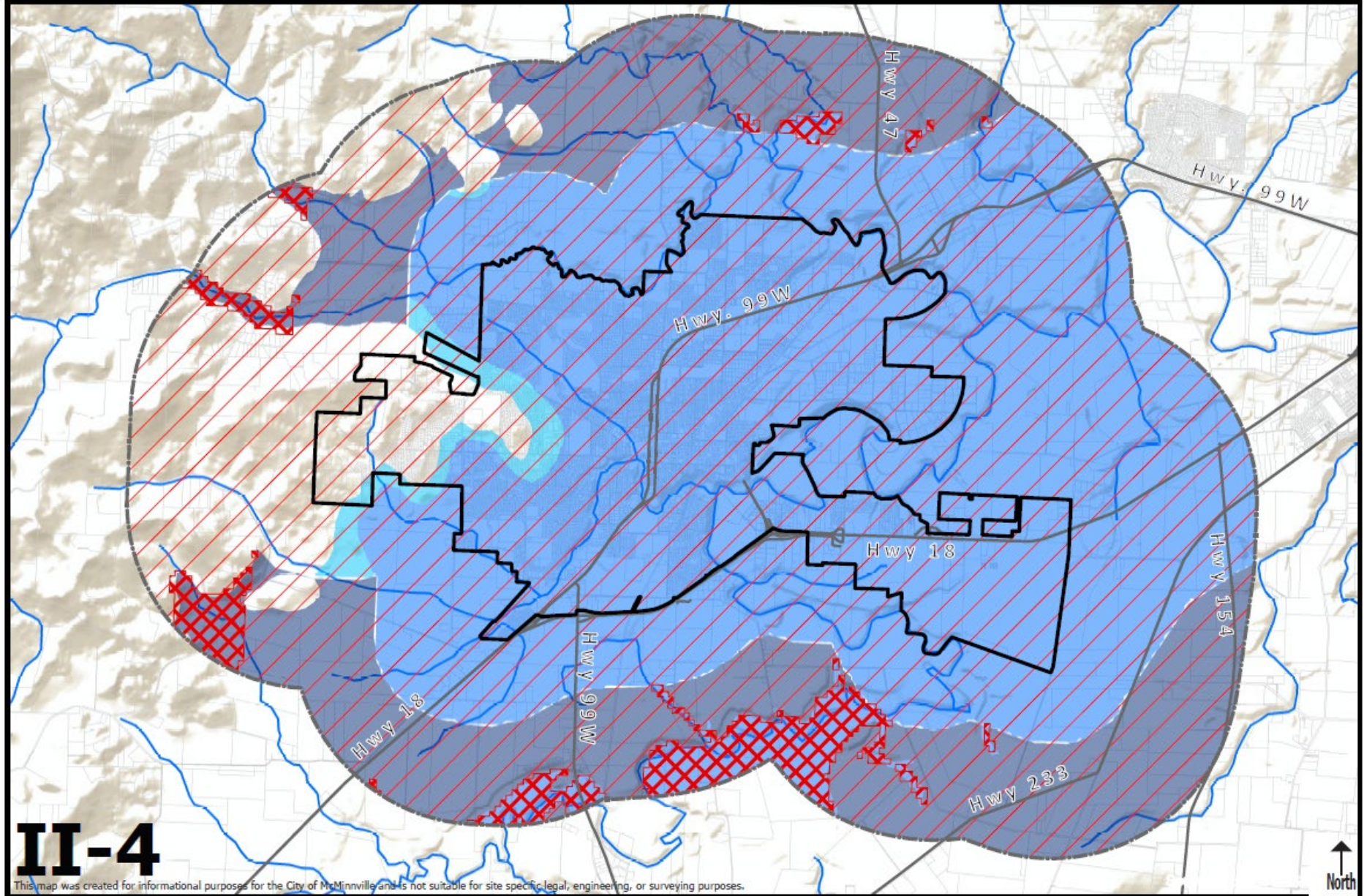
- Major Roads
- Rivers & Streams

Miles 0 0.5 1 2

Created by Winterbrook Planning in coordination with the City of McMinnville



Last Revised: June 28, 2020



II-4

This map was created for informational purposes for the City of McMinnville and is not suitable for site specific legal, engineering, or surveying purposes.

McMinnville

Geologic Hazards: Subduction Shaking & Liquefaction Risks

- | | | |
|--------------------------|-----------------------------------|------------------|
| Liquefaction Risk | Very Strong Shaking | Tax Lots |
| Low Risk | Severe Shaking | Major Roads |
| Moderate Risk | McMinnville Urban Growth Boundary | Rivers & Streams |
| High Risk | Study Area (1.5 Miles) | |



Created by Winterbrook Planning in coordination with the City of McMinnville




Last Revised: June 26, 2020



POLICY DIRECTION

Proceed with caution. Low density development with mitigation measures. Adopt Hazard policies in the future.

Look for park land opportunities, or rural/urban transition and buffer zones.



HAZARDS TO PEOPLE AND PROPERTY - EARTHQUAKES

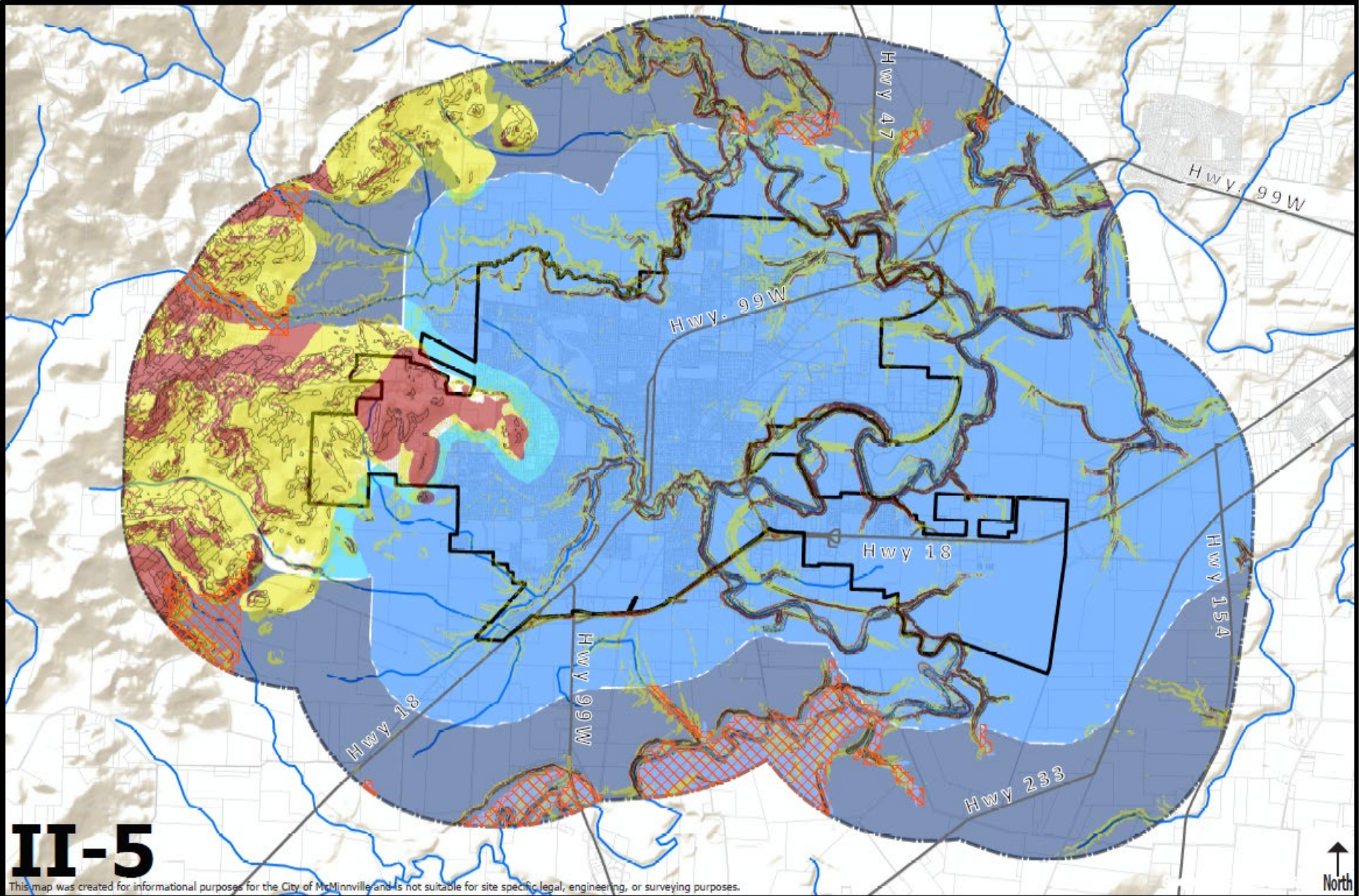
Four types of earthquakes affect Yamhill County:

Shallow crustal events
Cascadia Subduction Zone

McMinnville is especially vulnerable to the Cascadia event due to the liquefaction soils it is built on and that surround the city, which will lead to landslides damaging property.

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020

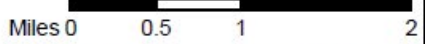




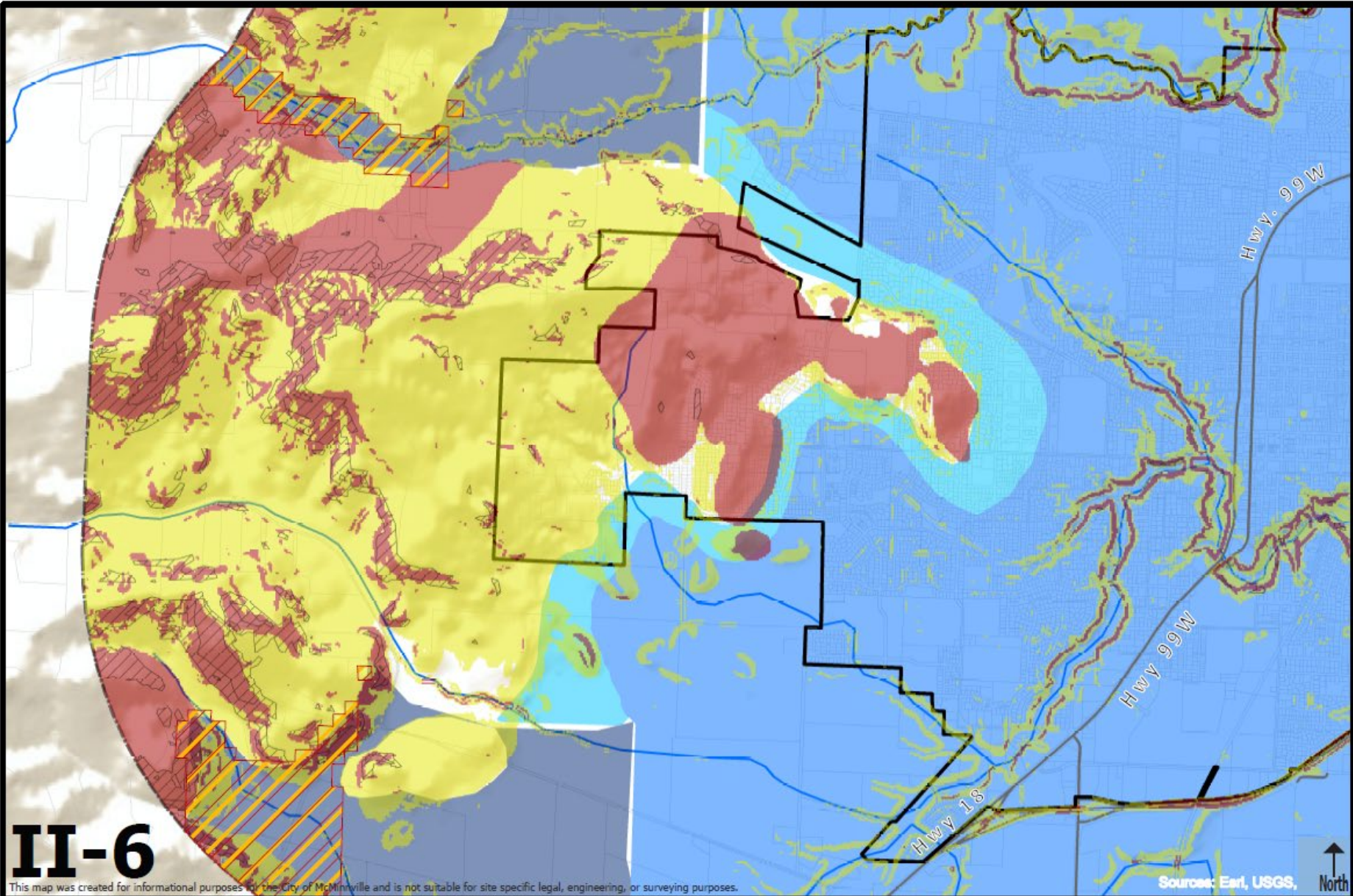
II-5

McMinnville Geologic Hazards: Landslide, Liquefaction, Subduction Shaking & Step Slopes

- | | | | |
|-----------------------|--------------------------|-----------------------------------|------------------|
| Landslide Risk | Liquefaction Risk | Severe Shaking | Tax Lots |
| Moderate Risk | Low Risk | Steep Slopes (>15%) | Major Roads |
| High Risk | Moderate Risk | McMinnville Urban Growth Boundary | Rivers & Streams |
| High Risk | High Risk | Study Area (1.5 Miles) | |



Created by Winterbrook Planning in coordination with the City of McMinnville



II-6

This map was created for informational purposes for the City of McMinnville and is not suitable for site specific legal, engineering, or surveying purposes.

Source: Earl, USGS, North

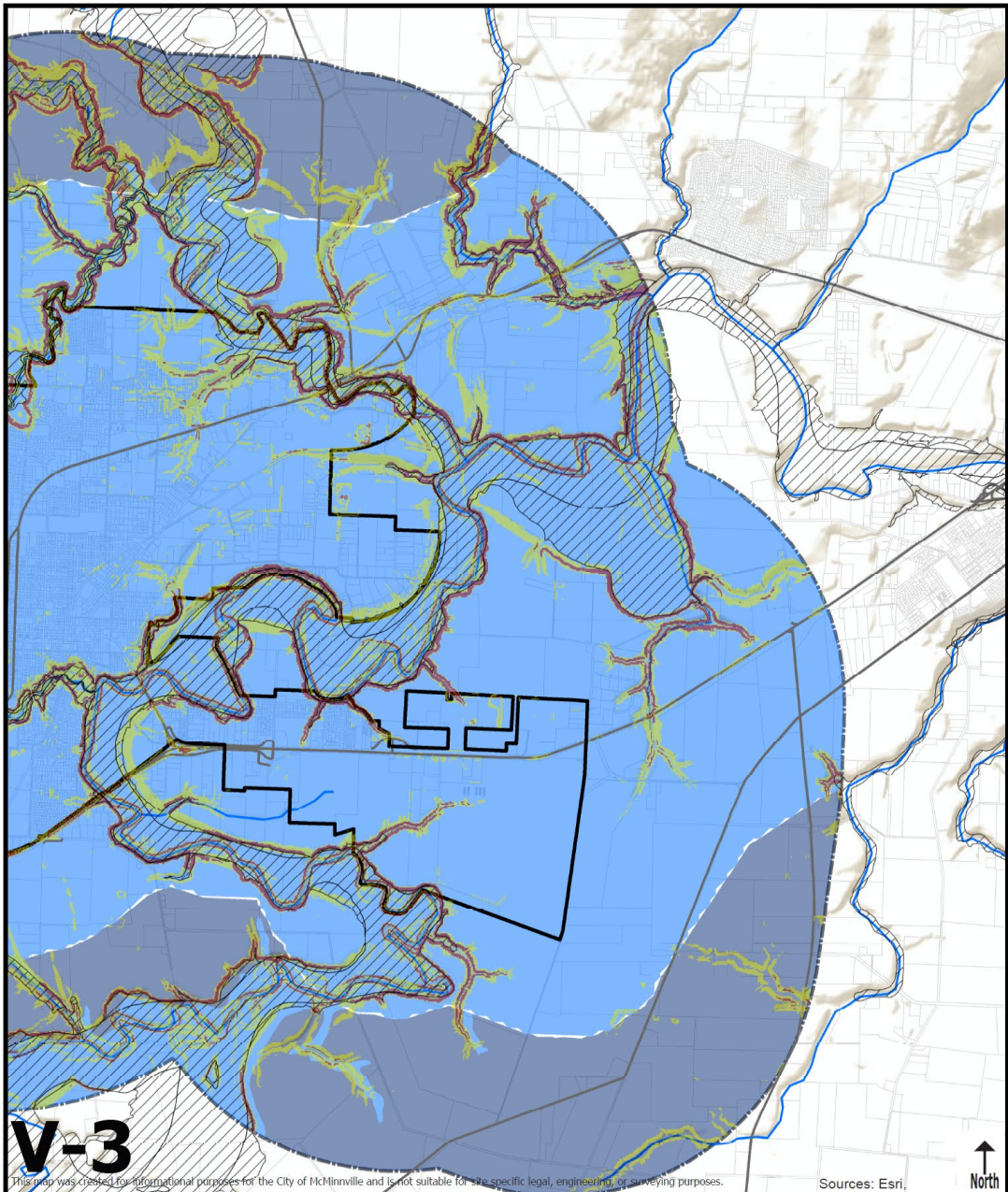
McMinnville WEST HILLS Geologic Hazards: Landslide, Liquefaction, Subduction Shaking & Steep Slopes

- | | | | |
|-----------------------|--------------------------|-----------------------------------|------------------|
| Landslide Risk | Liquefaction Risk | Severe Shaking | Tax Lots |
| Moderate Risk | Low Risk | Steep Slopes (>25%) | Major Roads |
| High Risk | Moderate Risk | McMinnville Urban Growth Boundary | Rivers & Streams |
| | High Risk | Study Area (1.5 Miles) | |

Miles 0 0.2 0.4 0.8

Created by Winterbrook Planning in coordination with the City of McMinnville

City of McMinnville WINTERBROOK
Last Revised: June 26, 2020



V-3

McMinnville
EAST VALLEY
Landslide, Liquefaction &
Flood Hazards

- | | | |
|---------------|------------------|-----------------------------------|
| Moderate Risk | Low Risk | Flood Hazards |
| High Risk | Moderate Risk | McMinnville Urban Growth Boundary |
| High Risk | Moderate Risk | Study Area (1.5 Miles) |
| | Tax Lots | Major Roads |
| | Rivers & Streams | |

Miles 0 0.25 0.5 1

Created by Winterbrook Planning in coordination with the City of McMinnville

City of McMinnville WINTERBROOK Last Revised: June 20, 2020



THE RESULTING RECOMMENDED PROGRAM AND PLAN

2021: Update Natural Hazards Inventory and Risk Assessment

- **Inventory mappable natural hazards**
- **Consider management options for hazard areas**
- **Recommend policy amendments to Comp Plan**
- **Recommend text amendments to Zoning Ordinance**
- **Recommend map amendments**

Mappable Hazards

- **Geological Hazards**
 - **Landslide**
 - **Steep Slope**
 - **Earthquake Liquefaction**
 - **Earthquake Shaking**
- **Flood Hazards**
- **Wildfire Hazards**
- **Composite Hazards (areas with one or more overlapping hazard)**

NATURAL HAZARDS ASSESSMENT

- Scored on a scale from 0 to 5
- Probability is based on inventories developed by state agencies
- Vulnerability is based on State Natural Hazard Management Plan

Natural Hazard Type	Probability of the Hazard in McMinnville		Social + Physical Vulnerability
Landslide	Moderate	2	2.67
	High	5	
Cascadia Subduction Zone Earthquake			(Earthquake) 3.33
Liquefaction	Moderate	2	
	High	5	
Shaking	Very Strong	2	
	Severe	5	
Slope	>25%	5	-
Wildfire	Moderate	2	2.50
	High/Severe	5	
Flood	Floodplain	5	2.67
	Floodway	5	

NATURAL HAZARDS ASSESSMENT

FID *	Landslide	Liquefacti	SubShaking	Slope	WildFire	Flood	Total_Prob	Vul_Lands	Vul_Earth	Vul_WF	Vul_Flood	Total_V	New_Risk
39	5	2	2	0	0	5	16	2.67	3.33	0	2.67	8.67	2.467
40	5	2	2	5	0	5	21	2.67	3.33	0	2.67	8.67	2.967
43	5	2	2	0	5	5	21	2.67	3.33	2.5	2.67	11.17	3.217
44	5	2	2	5	5	5	26	2.67	3.33	2.5	2.67	11.17	3.717
45	5	2	2	0	2	5	18	2.67	3.33	2.5	2.67	11.17	2.917
46	5	2	2	5	2	5	23	2.67	3.33	2.5	2.67	11.17	3.417
49	5	2	2	0	0	5	16	2.67	3.33	0	2.67	8.67	2.467
50	5	2	2	5	0	5	21	2.67	3.33	0	2.67	8.67	2.967
58	0	2	2	0	0	5	11	0	3.33	0	2.67	6	1.7
59	0	2	2	5	0	5	16	0	3.33	0	2.67	6	2.2
62	0	2	2	0	5	5	16	0	3.33	2.5	2.67	8.5	2.45

Applied scoring to GIS shapefiles

NATURAL HAZARDS MITIGATION PROGRAM

1) New Natural Hazards Overlay Zones (New Chapter, 17.49):

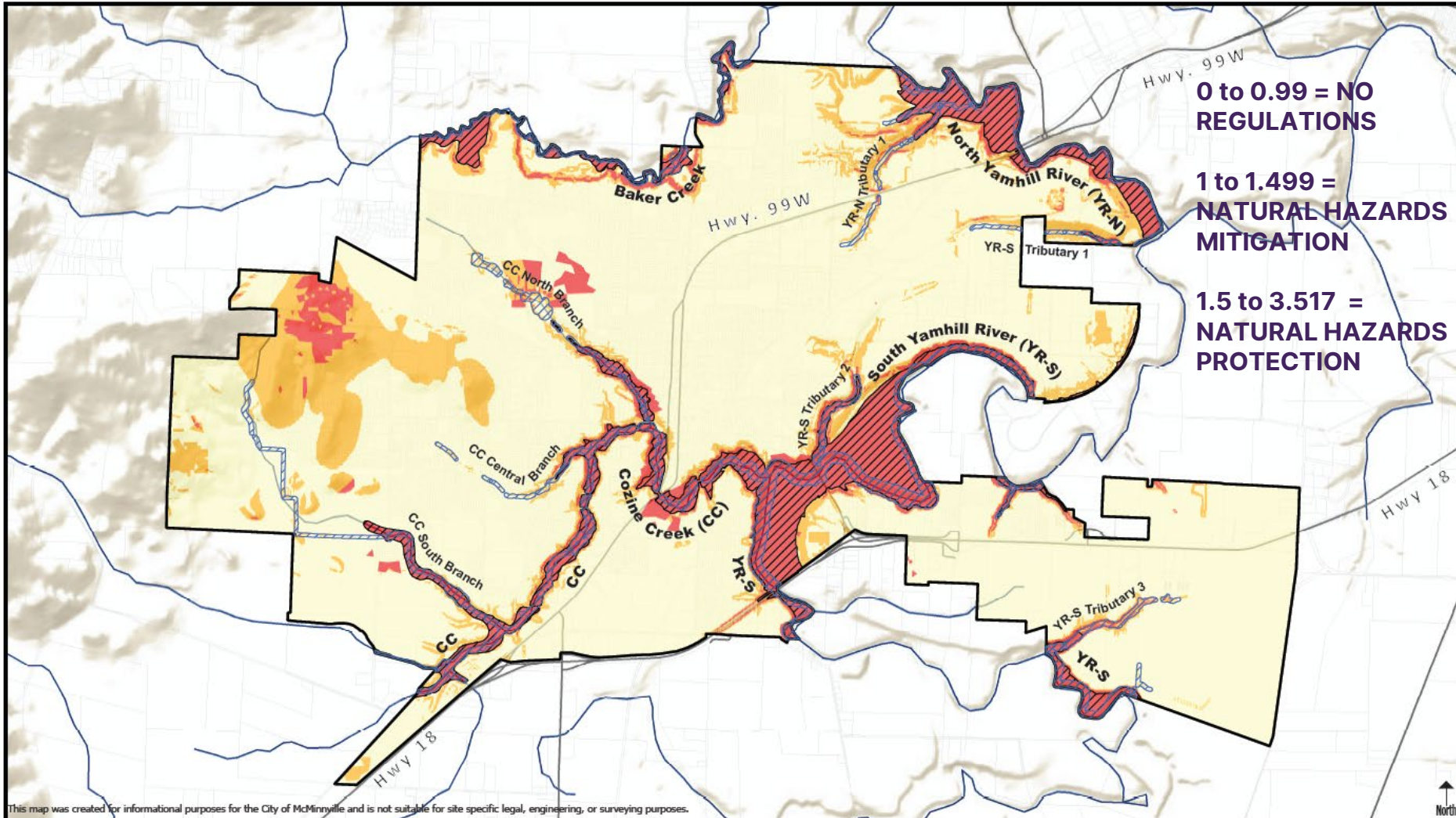
NH-M = Mitigation Subdistrict

- Based on a medium cumulative hazard ranking
- Development allowed consistent with site-specific hazard mitigation studies and building and fire codes.

NH-P = Protection Subdistrict

- Based on a high cumulative hazard ranking
- Restricts development – opportunity for transfer of density rights

NATURAL HAZARDS OVERLAY



This map was created for informational purposes for the City of McMinnville and is not suitable for site specific legal, engineering, or surveying purposes.

McMinnville Proposed Overlays: Natural Hazards & Riparian Corridors

- | | | |
|-------------------|--|------------------|
| Subdistrict | Riparian Corridor - Protection (RC-P) | Major Roads |
| Protection (NH-P) | Flood Plain Zone (F-P) | Rivers & Streams |
| Mitigation (NH-M) | McMinnville 2021 Urban Growth Boundary | Tax Lots |
| No Subdistrict | | |

Miles 0 0.25 0.5 1

Created by Winterbrook Planning in coordination with the City of McMinnville

Last Revised: June 29, 2021

CONFORMANCE / EXEMPTIONS

Existing built environment is considered conforming.

Additions up to 50% of the habitable floor area of existing building are exempt

Planning Director determines need to comply with standards based on the property submittal and information provided

NATURAL HAZARDS MITIGATION ZONE – New Construction

Cumulative earthquake, landslide and wildfire hazard risks that can be mitigated on site with further study and mitigation tools.

Regular development allowed, but need to provide one of the following studies depending upon the property location and hazard type

- **Geological Site Assessments**
- **Geotechnical Studies**
- **Wildfire Impact Studies**

NATURAL HAZARDS PROTECTION ZONE – New Construction

Creation of new lots prohibited except with a planned development.

One dwelling unit per lot.

Large format commercial development prohibited.

Existing commercial and industrial habitable structures can be expanded by 50%

NATURAL HAZARDS PROTECTION ZONE – New Construction

Steep Slopes (greater than 15%)

- **Erosion Control Plan**
- **Geological Site Assessment**

Wildfire Hazard Area

- **Same mitigation standards as NH-M**

NATURAL HAZARDS MITIGATION PROGRAM

2) Comprehensive Plan, Volume II, Chapter XI: Natural Features

- **Multi-Hazard Policies**
- **Geological Hazard Policies**
- **Flood Hazard Policies**
- **Wildfire Hazard Policies**

New Policies 197.00 – 201.60

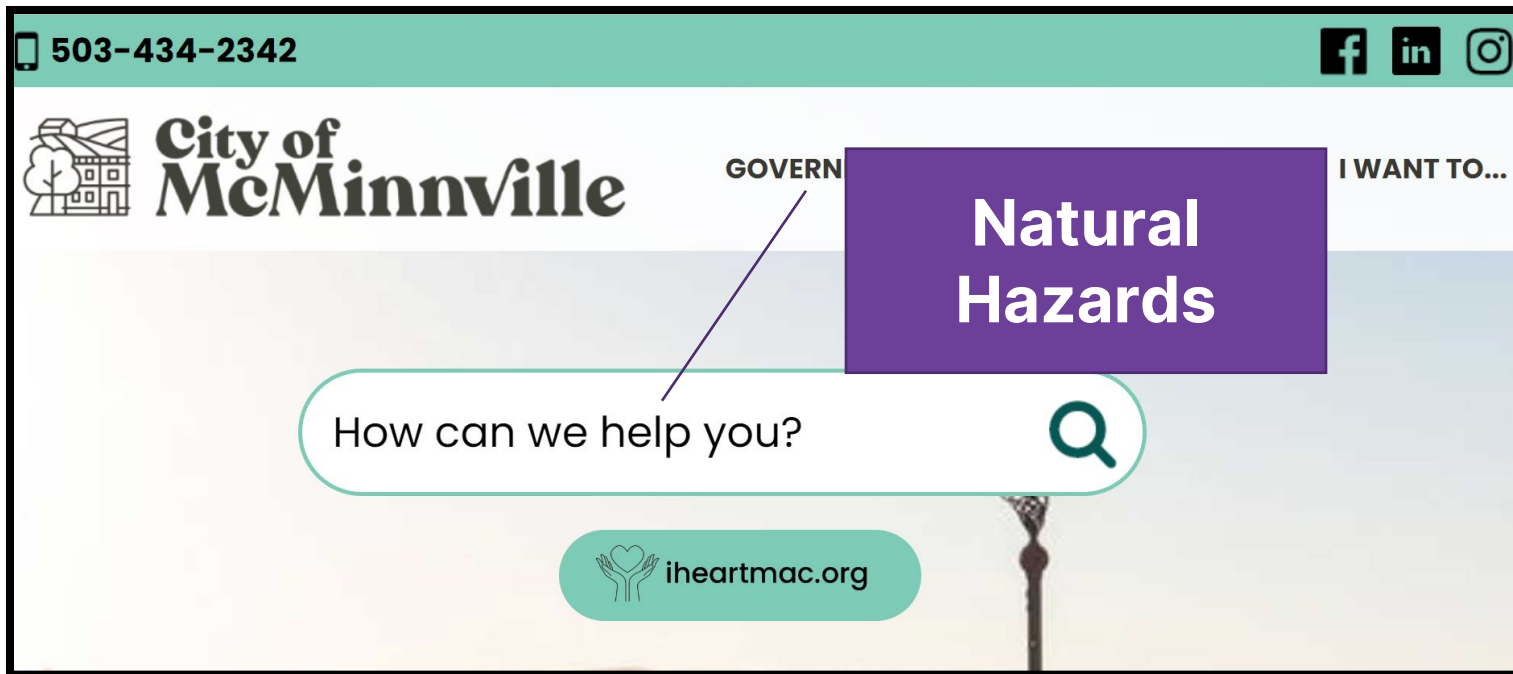
NEXT STEPS

March 27, Public Information Session

April 6, Planning Commission Public Hearing

WHERE CAN I FIND MORE INFORMATION?

www.mcminnvilleoregon.gov



WHERE CAN I FIND MORE INFORMATION?

www.mcminnvilleoregon.gov

The screenshot shows a search interface with the following elements:

- Your Search**: Includes tabs for 'Site' (selected) and 'Content'.
- Website Search Results**: The main heading for the search results.
- Search Input**: A text box containing 'natural hazards' and a 'Search' button.
- Advanced search**: A link below the search input.
- Filter Results**: A sidebar with two buttons: 'Search City Council Meetings' and 'Search All Meetings'.
- Search Results**: A red-bordered box highlights the first result:
 - Natural Hazards**: A blue link.
 - Description**: 'The City is currently engaged in **Natural Hazards** planning to identify potential **natural hazards** to people and property ...'
 - Date**: '03/20/2023 - 10:54am'
- Second Result**: A blue link for 'Countywide Survey- Natural Hazard Mitigation' with a partial description: '... within the county, are updating the Multi-Jurisdictional **Natural Hazard Mitigation plan (NHMP)**. As such, we are

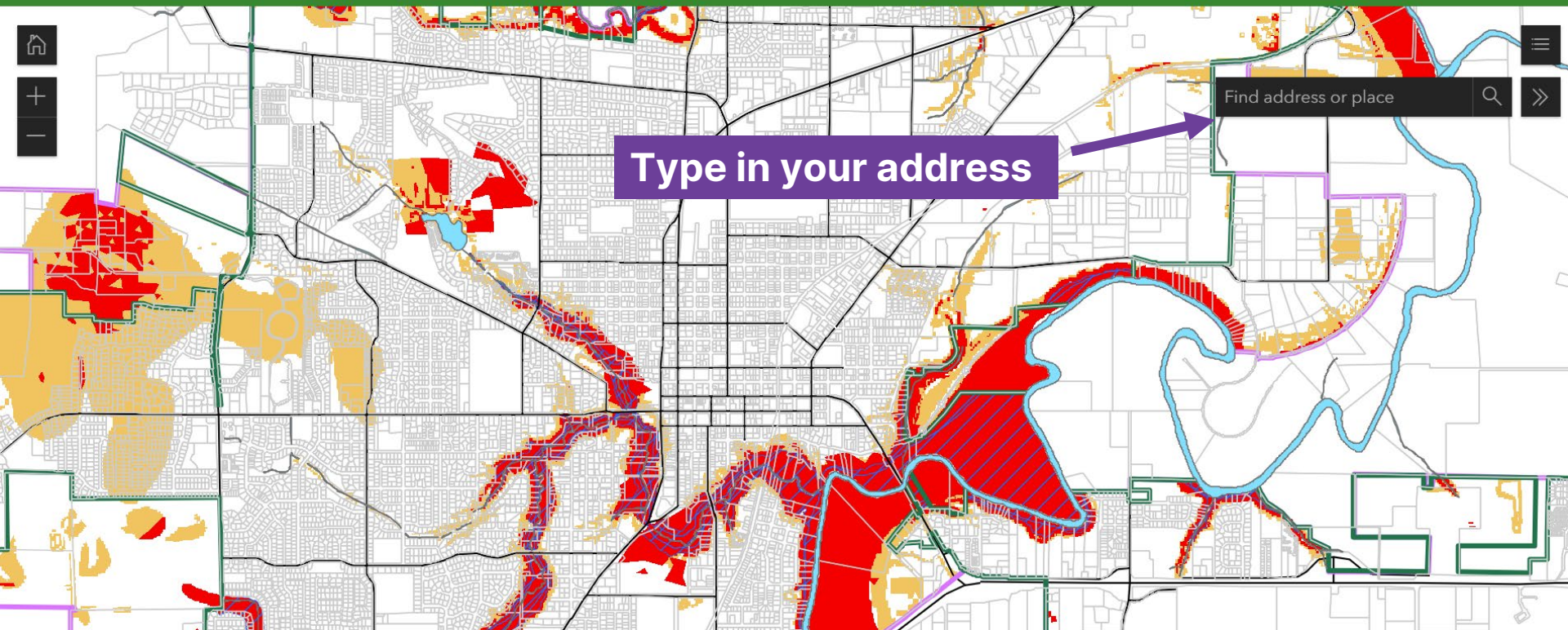
WHERE CAN I FIND MORE INFORMATION?

www.mcminnvilleoregon.gov

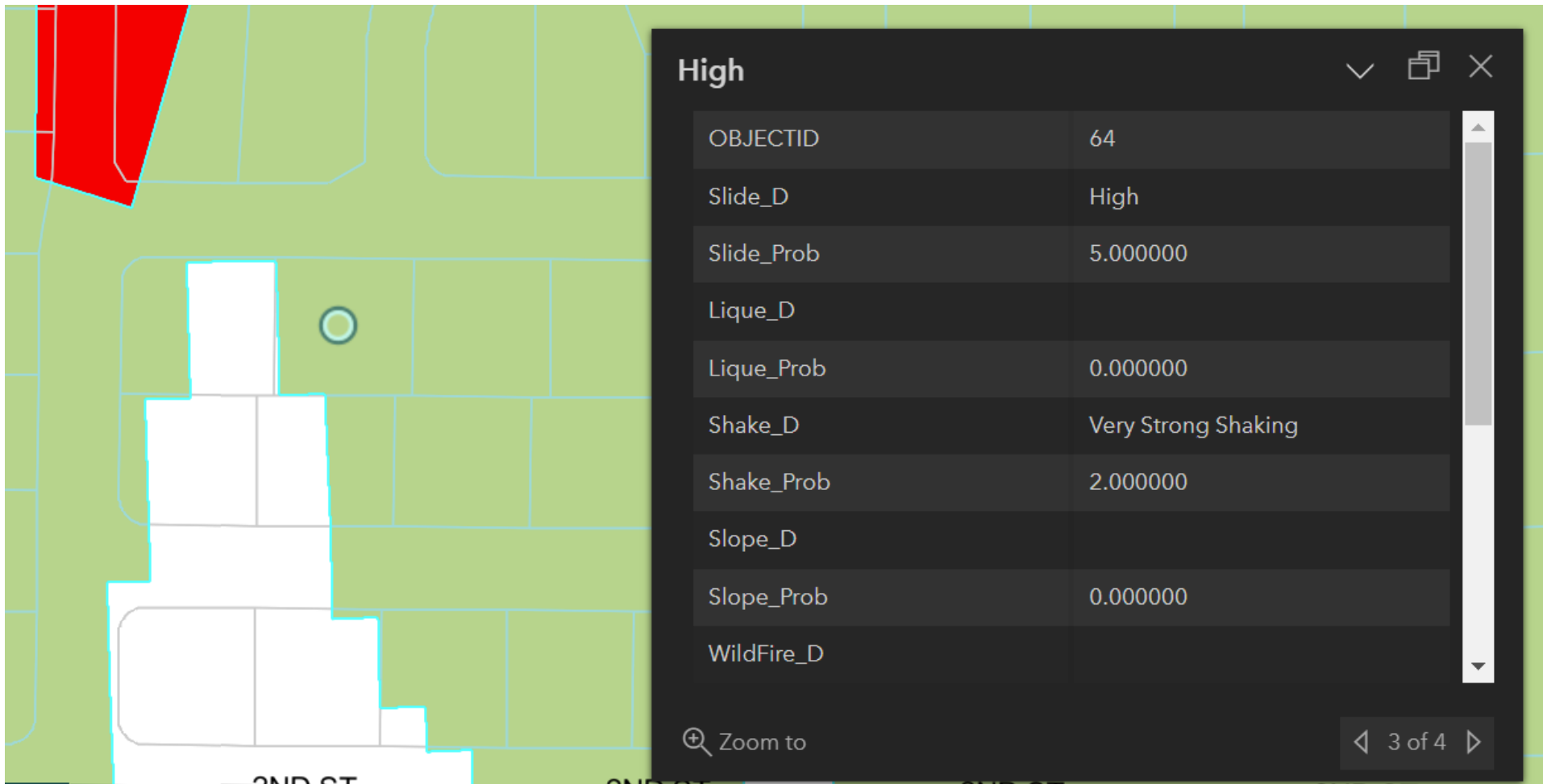
Find your property on our [interactive map](#). This map will show you if your property is impacted and by which zone it is impacted. Then review the proposed zones below to see what it means for your property. Call us if you have questions. We are here to help you understand the proposed program. (503-434-7311)

WHERE CAN I FIND MORE INFORMATION?

City of McMinnville Hazard Overlay



WHERE CAN I FIND MORE INFORMATION?



The image shows a screenshot of a GIS application. On the left, a map displays a green area with a red highlighted polygon in the upper left corner. A white building footprint is visible in the lower left. A small blue circle is located on the map. On the right, a dark grey popup window titled 'High' displays a table of hazard data. The table includes fields for OBJECTID, Slide_D, Slide_Prob, Lique_D, Lique_Prob, Shake_D, Shake_Prob, Slope_D, Slope_Prob, and WildFire_D. At the bottom of the popup, there is a 'Zoom to' button and a page indicator '3 of 4'.

High	
OBJECTID	64
Slide_D	High
Slide_Prob	5.000000
Lique_D	
Lique_Prob	0.000000
Shake_D	Very Strong Shaking
Shake_Prob	2.000000
Slope_D	
Slope_Prob	0.000000
WildFire_D	

Zoom to 3 of 4

WHERE CAN I FIND MORE INFORMATION?

**Heather Richards,
Community Development Director
503-474-5107**

Heather.Richards@mcminnvilleoregon.gov

**John Swanson,
Senior Planner
503-474-4153**

John.Swanson@mcminnvilleoregon.gov

NATURAL HAZARDS PLANNING



Questions?