



Growing McMinnville
MINDFULLY



MCMINNVILLE'S UGB REMAND RESPONSE: CITY COUNCIL UPDATE

We are responding to the LCDC remand to the City of McMinnville for the MGMUP 2003-2023, first submitted in 2003 and modified in 2005. LCDC remand based on Court of Appeals remand to LCDC.

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020



PUTTING IT ALL IN PERSPECTIVE



CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020



THE COURT'S DECISION

“The City erred in its application of ORS 197.298, and that a correct application of the law could compel a different result.”

- 1) Determine Land Needed**
- 2) Refine Study Area**
- 3) Identify Buildable Land in the Study Area**
- 4) Apply ORS 197.298 Land Selection for Locational Analysis**
- 5) Evaluate Land per Goal 14 Location Factors**



TONIGHT'S WORKSESSION

1. NEED DECISIONS

- Exception Lands Capacity
- Affordable Housing

2. BUILDABLE LAND DECISIONS

- Serviceability
- Grandhaven Conservation Easement
- Hazards

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020



DETERMINATION OF NEED

1. Using HNA and BLI in the public record for the remand.
2. 20-year planning horizon (2003-2023)
3. Population Forecast in 2023 = 44,055
4. Persons per household = 2.54
5. Number of new housing units = 6014

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DETERMINATION OF NEED

Table 2: Forecast of needed new dwelling units and need by type, MGMUP 2003-2023

Housing type	Number of DU	Needed DU by Type	Density (DU/ Net Res Acre)	Density (DU/Gross Res Acre)
Single-family	3,607	60.0%	5.4	4.3
Detached (R-1)	601	10.0%	4.5	3.3
Detached (Other)	1,804	30.0%	5.5	4.1
Manufactured in subdivisions	601	10.0%	5.5	5.0
Manufactured in parks	601	10.0%	6.5	5.9
Multi-family	2,407	40.0%	14.0	11.6
Row/Townhouse/Duplex	722	12.0%	10.0	7.5
Apartment	1,685	28.0%	17.0	15.0
Total	6,014	100.0%	7.2	5.7



DETERMINATION OF NEED

Table 3 Need forecast of housing, land need (gross acres) and needed density by zoning and housing type, MGMUP (2003-2023)

Housing type	Zoning					Total
	R-1	R-2	R-3	R-4	R-5	
Number of Dwelling Units						
Single-family	721	1,985	540	360	-	3,607
Detached (R-1)	601	-	-	-	-	601
Detached (Other)	-	1,504	300	-	-	1,804
Manufactured in subdivisions	120	481	-	-	-	601
Manufactured in parks	-	-	240	360	-	601
Multi-family	-	-	301	1,023	1,083	2,407
Row/townhouse	-	-	301	421	-	722
Apartment	-	-	-	602	1,083	1,685
Total	721	1,985	841	1,383	1,083	6,014
Land Need (Gross Acres)						
Single-family						
Detached (R-1)	180	-	-	-	-	180
Detached (Other)	-	368	74	-	-	441
Manufactured in subdivisions	24	97	-	-	-	122
Manufactured in parks	-	-	41	62	-	103
Multi-family						
Row/townhouse	-	-	40	56	-	96
Apartment	-	-	-	40	72	112
Total	204	465	155	158	72	1,053
Implied Density (DU/Gross Acre)	3.5	4.3	5.4	8.8	15.0	5.7

BUILDABLE LAND NEED

2003 Net Land
Need Outside the
UGB sans 110
Commercial land
need - ~1140 acres
total

Table 12. Total additional acres needed in the McMinnville UGB, 2003-2023

Category	Needed Gross Res Acres
New housing	536.9
Group Quarters	13.3
Parks	314.0
Schools	96.0
Private Schools	1.5
Religious	47.6
Government	0.9
Semi-Public Services	22.5
Infrastructure	2.6
Total	1,035.4

Source: City of McMinnville, ECONorthwest

Note: Parkland need assumes the City standard of 14.0 acres per 1,000 residents will be met. The recent \$9 million park bond is a strong indication of the City's commitment to this standard.

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BUILDABLE LAND NEED

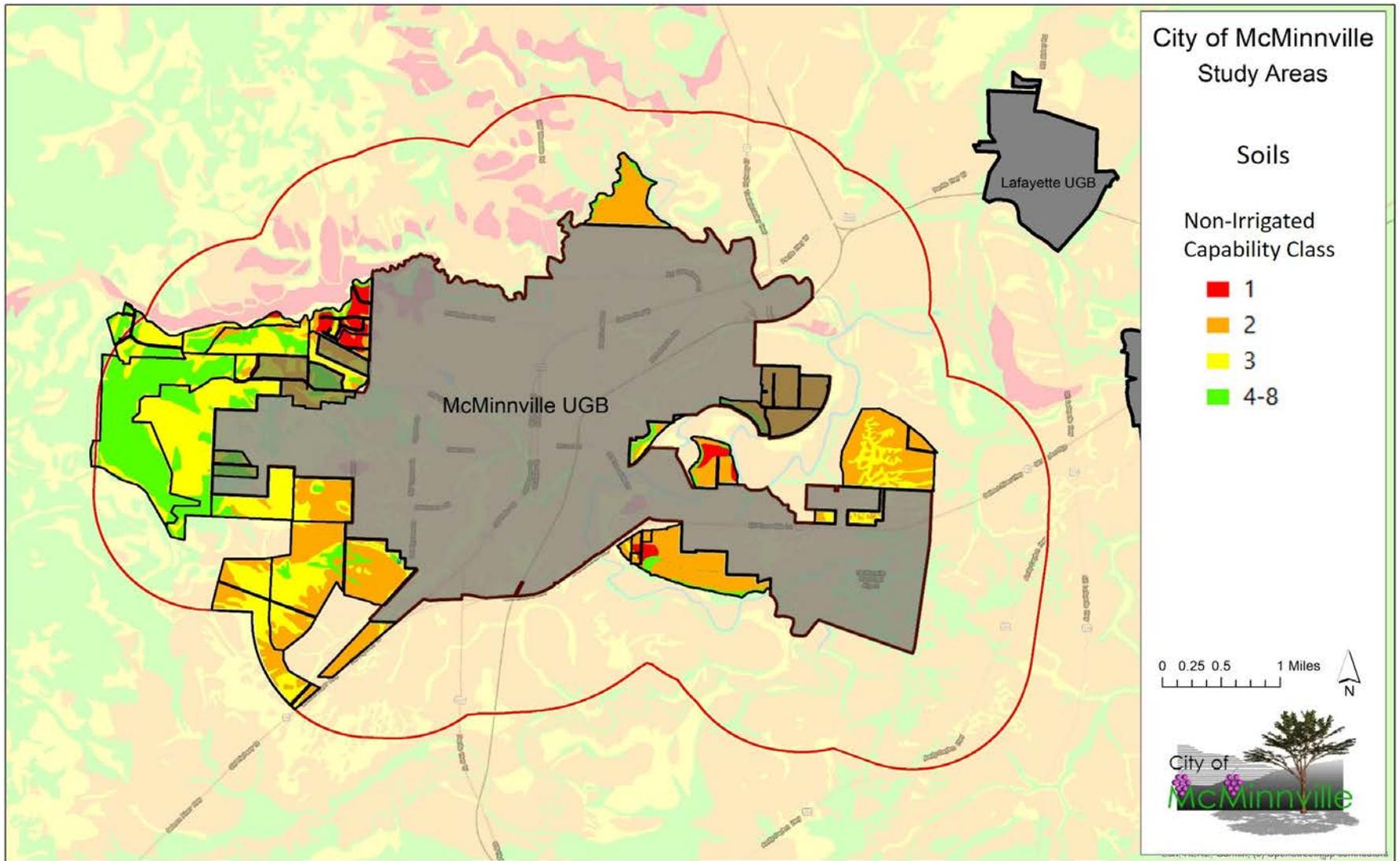
2006 Corrected Record – New Land Need

Table 14. Comparison of land supply and demand, McMinnville UGB, 2003-2023

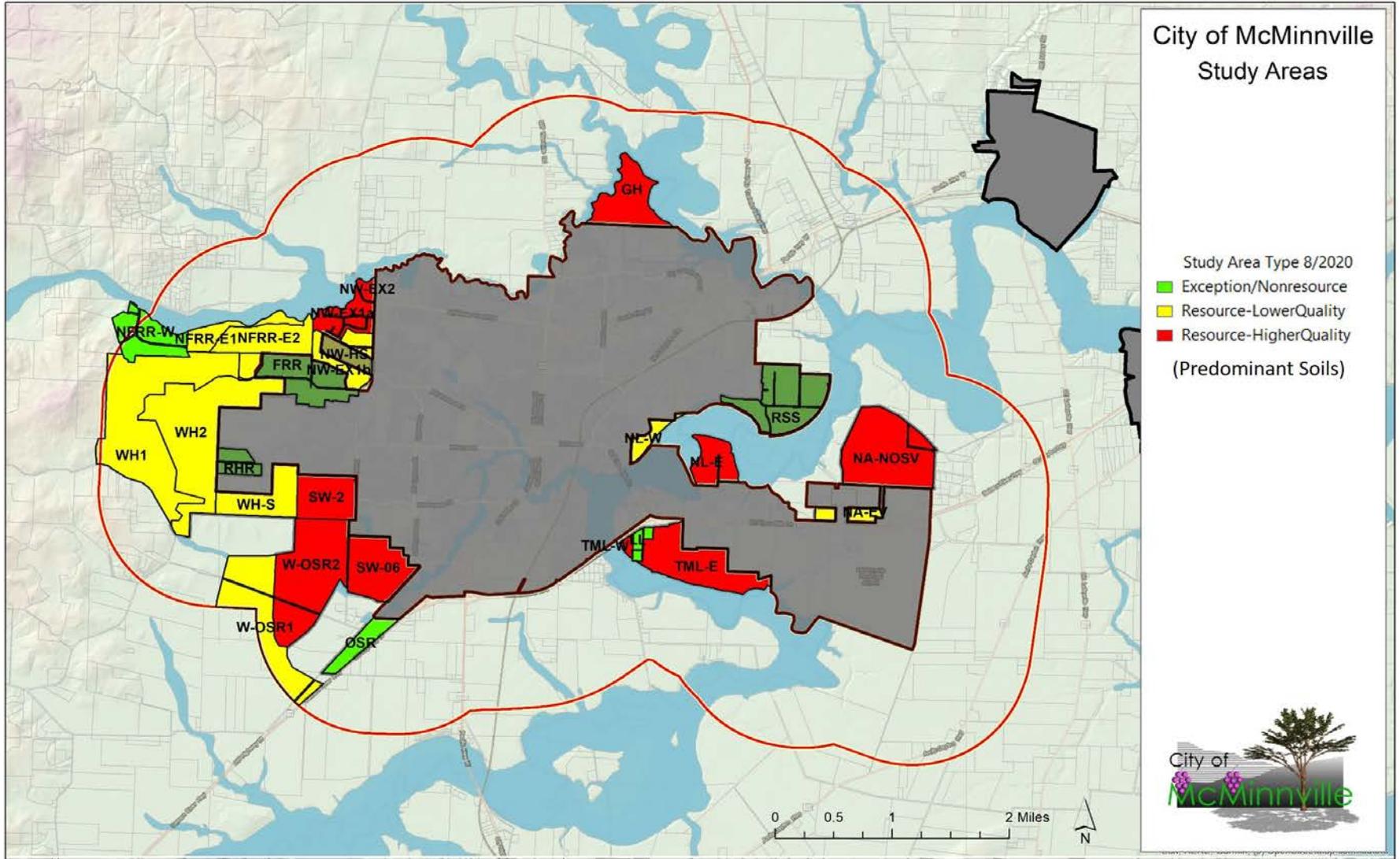
Plan Designation	Land Need (2003-2023)	Gross Buildable Acres (Jan 2003)	Deficit (Surplus)
Residential ^a	1,538.4	881.4 <u>880.5</u>	1019.2 <u>1019.8</u>
Commercial	219.1	102.4	106.0
Industrial	269.7	326 <u>327.1</u>	(44.7) <u>(46)</u>
Total Buildable Land Need Outside UGB	2,027.2	1309.5 <u>1312.9</u>	1125.2 <u>1125.8</u>

Source: ECONorthwest, 2003



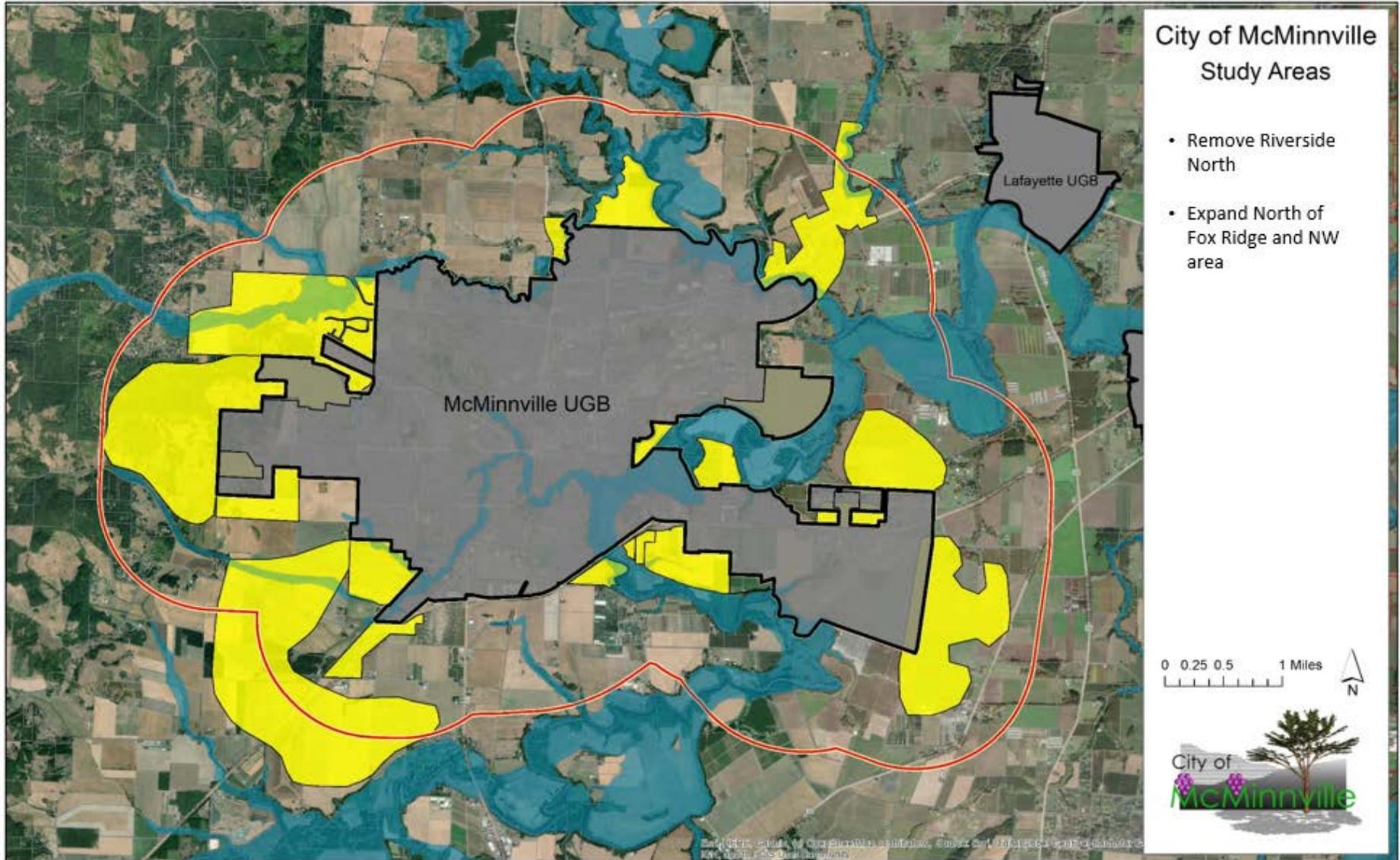


Map is a draft, and could change with future refinements

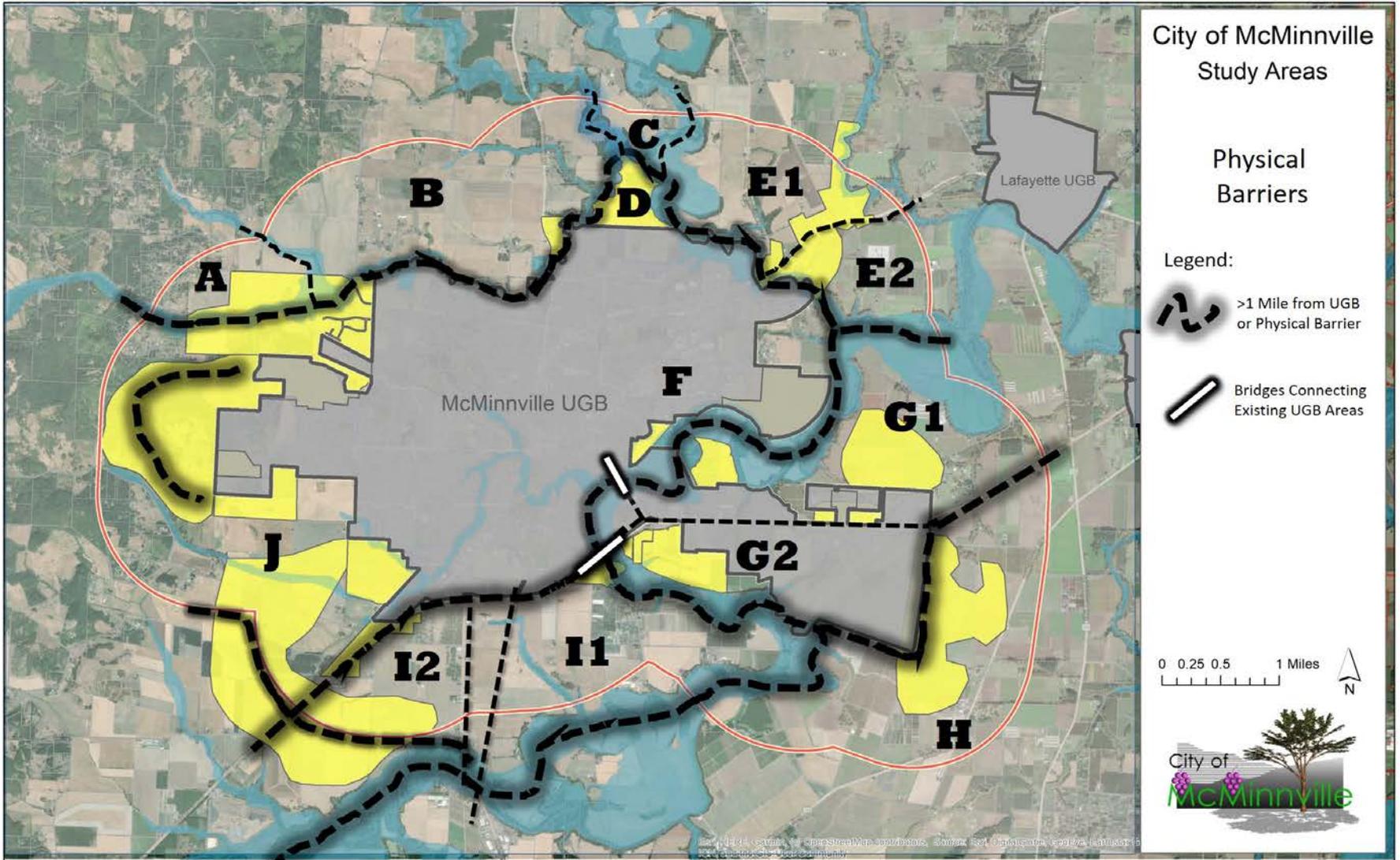


Map is a draft, and could change with future refinements

Map 3. Revised Study Areas Reflecting Court's Direction

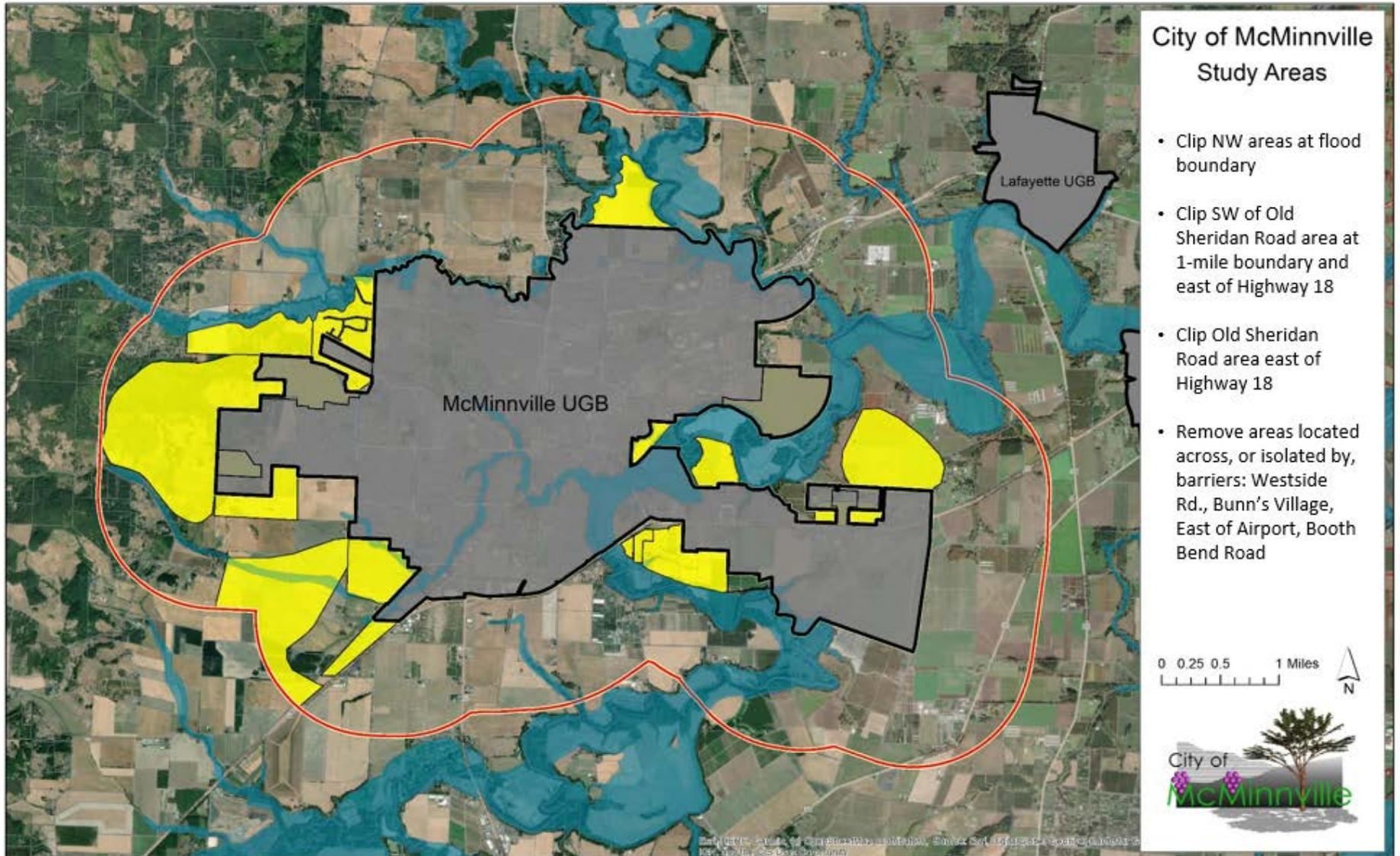


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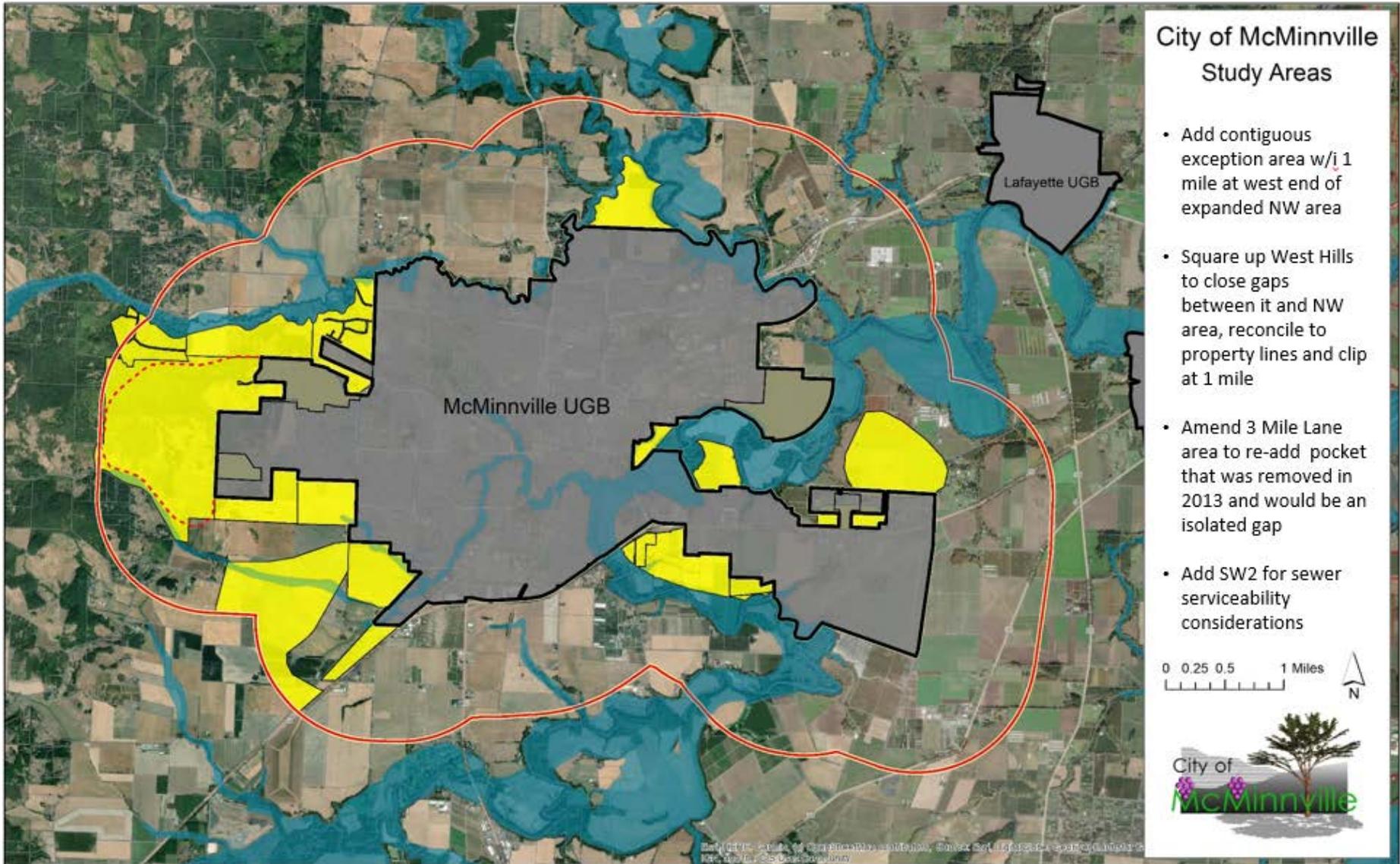
Map is a draft, and could change with future refinements

Map 5. Resulting Study Areas After Applying Barriers Filters



Map is a draft, and could change with future refinements

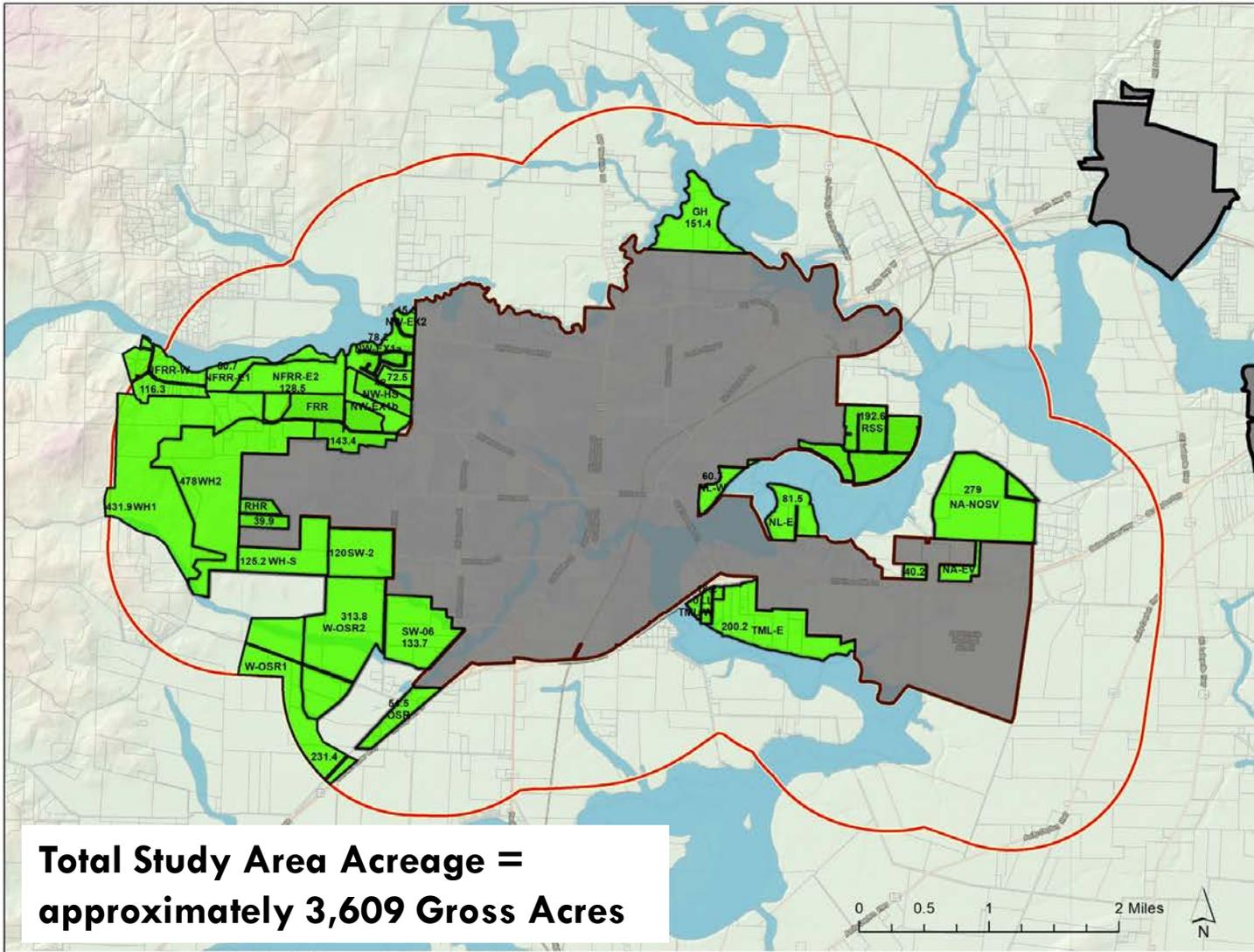
Map 6. Further Revisions



Map is a draft, and could change with future refinements

City of McMinnville
Study Areas

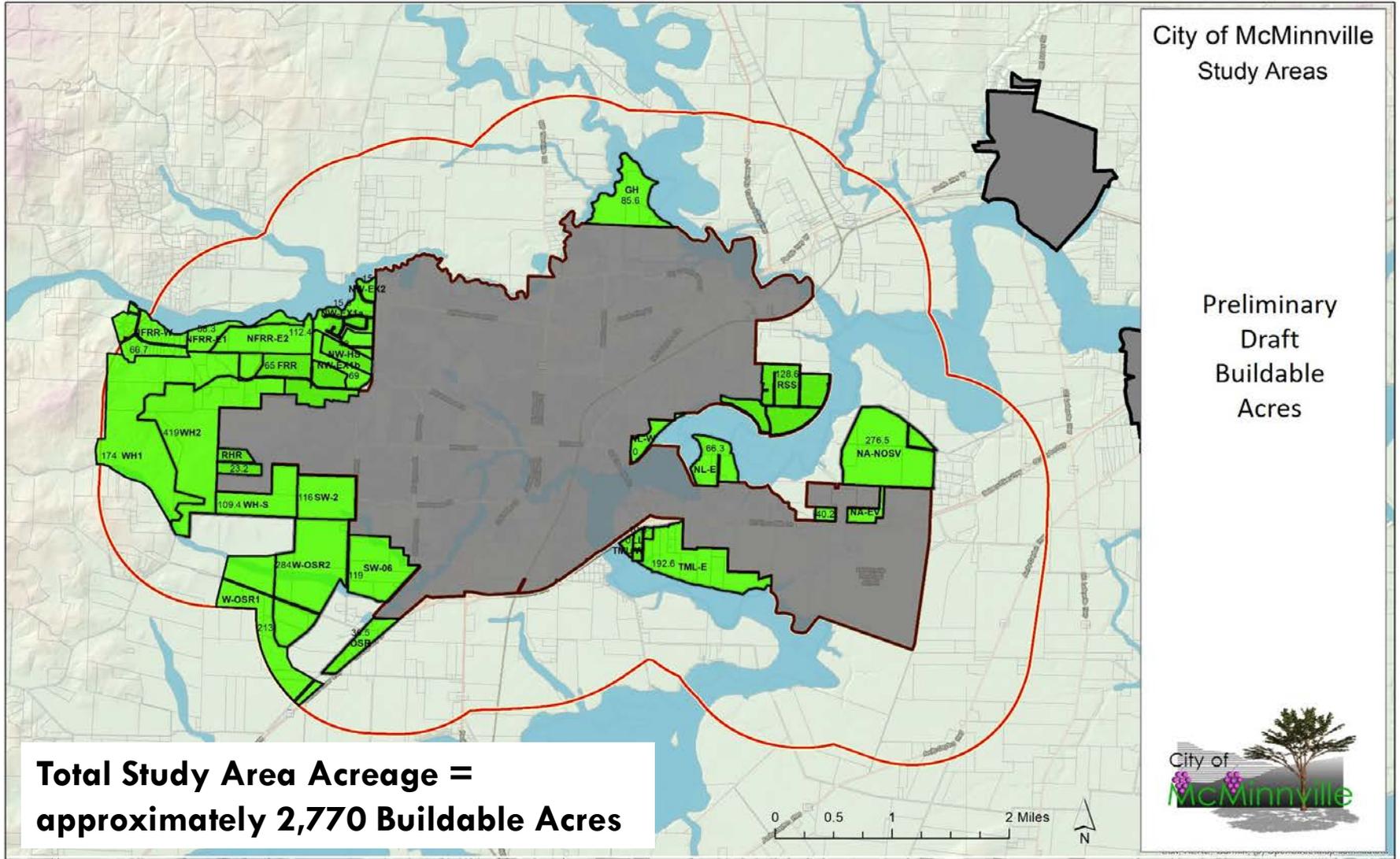
Preliminary
Draft
Gross TL
Acres



**Total Study Area Acreage =
approximately 3,609 Gross Acres**



Map is a draft, and could change with future refinements

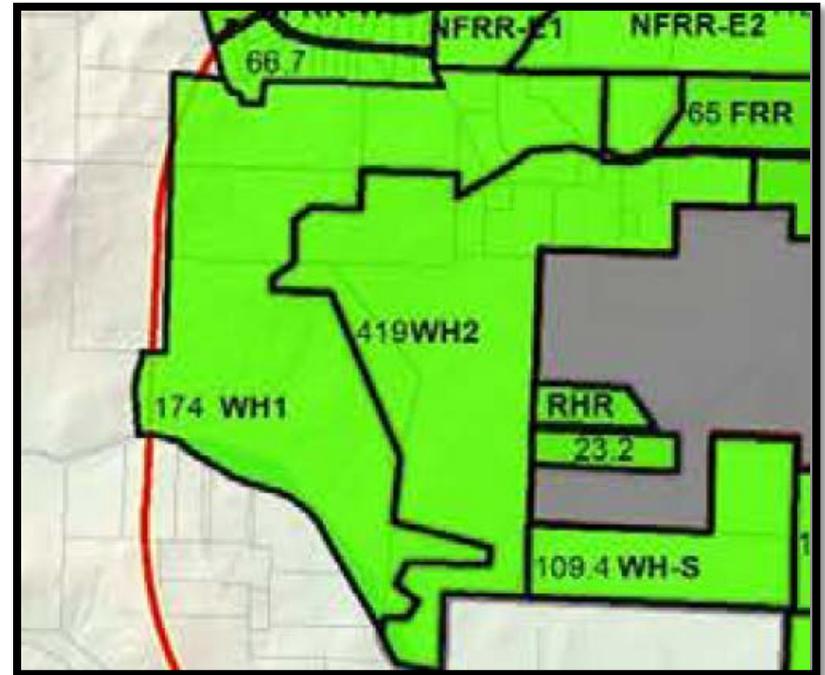
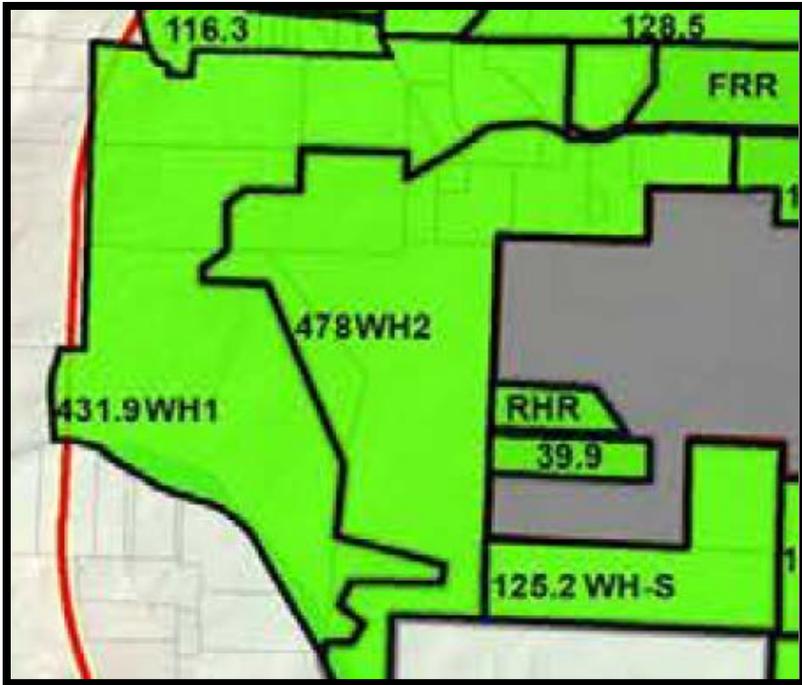


Map is a draft, and could change with future refinements

GROSS

VS.

BUILDABLE



WH1: 431.9
WH2: 478.0
WH-S: 125.2
RHR: 39.9

WH1: 174.0
WH2: 419.0
WH-S: 109.4
RHR: 23.2

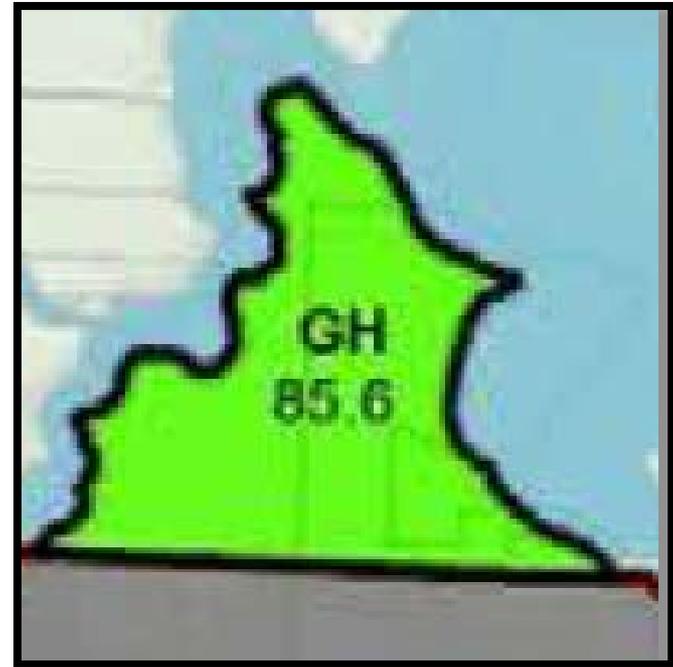
GROSS

VS.

BUILDABLE



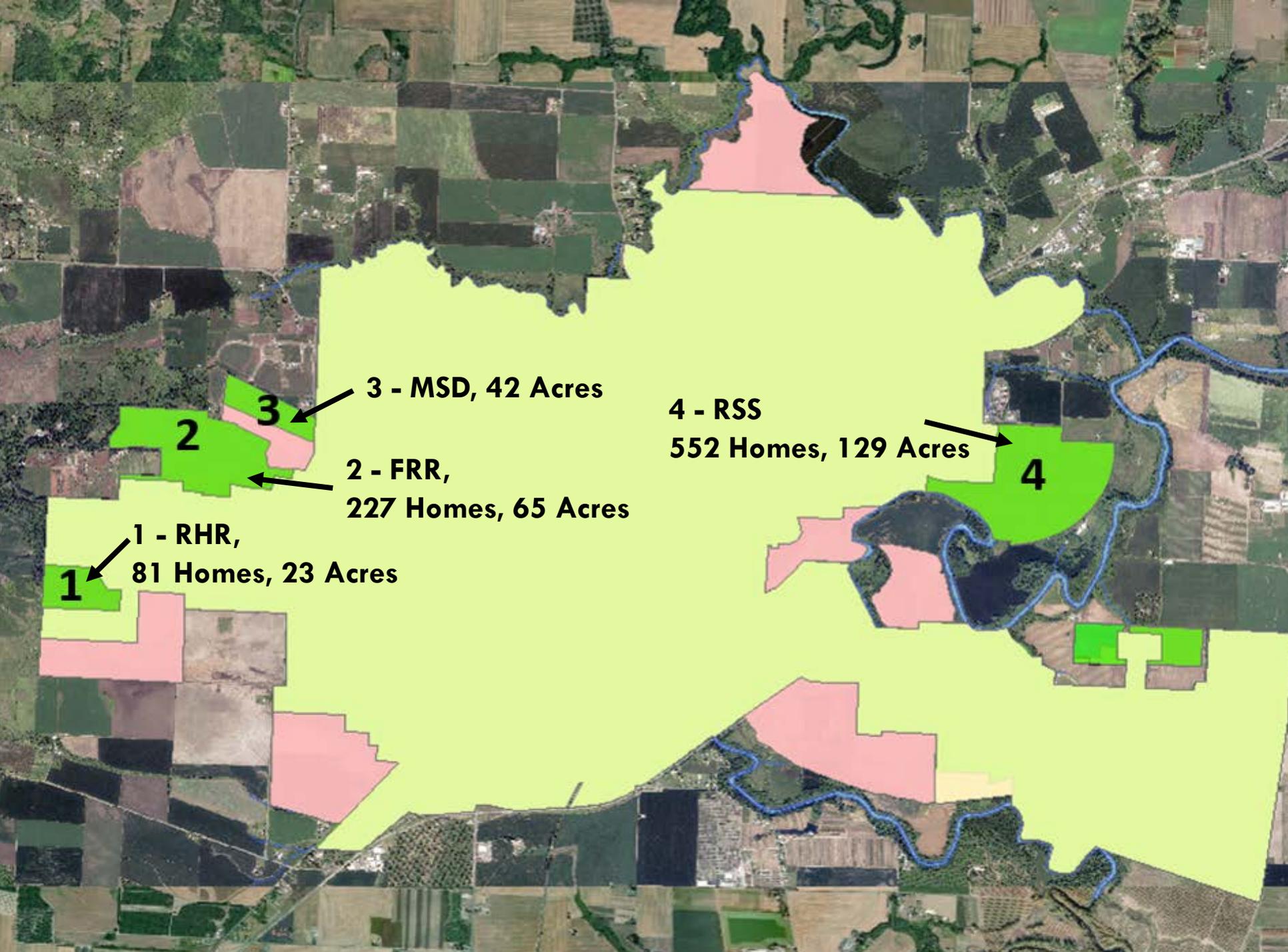
GH: 151.4



GH: 85.6

Table 16: Summary of land supply (MGMUP 2003-2023)

	Land Need (measured in dwelling units)	Land Need (measured in acres)	Gross Density
Housing:			
Housing unit need	6,014	1053.00	5.7
Housing unit capacity (inside UGB)	2,949		
Unmet housing unit need	3,065	538.00	5.7
Proposed Measures To Increase Residential Land Capacity (inside UGB):			
Allow ADU's in residential zones	200	35.09	
Rezone portion of West Hills from R-1 to R-2	204	35.79	
Rezone other residential and non-residential properties	80	14.04	
Direct increased density to transit corridors	90	15.79	
Direct increased density to Northwest Neighborhood Activity Center	238	41.75	
Direct increased density to Grandhaven Neighborhood Activity Center	143	25.09	
Add downtown upper floor housing opportunities to buildable land inventory	61	10.70	
Total Proposed Measures Adjustments	1,016	178.25	
Adjusted Housing Unit Capacity (inside UGB):	3,965		
Adjusted Housing Unit Need:	2,049	359.75	5.7
Housing Unit Capacity (outside existing UGB):			
<u>Exception Lands</u>	906	227.51	4.0
Riverside South	552	128.60	4.3
Lawson Lane	46	10.76	4.3
Redmond Hill Road	81	23.15	3.5
Fox Ridge Road	227	65.00	3.5
<u>Resource Lands</u>	4,082	653.15	6.3
Northwest	876	140.22	6.3
Grandhaven	857	137.06	6.3
Southwest	950	151.97	6.3
Norton Lane	414	66.27	6.3
Three Mile Lane	985	157.63	6.3
Total Housing Unit Capacity (outside existing UGB):	4,988	880.66	5.7
Housing Unit Surplus or (Deficit) (in du's)	2,939		
Acres surplus or (deficit) (assumes 5.7 du/gr ac)	515.65	520.91	
Other lands need (acres):			
Public schools	96.00	96.00	
Public parks	254.00	254.00	
Religious	47.60	47.60	
Commercial land	106.00	106.00	
Other	27.50	27.50	
Total Other Land Need (acres):	531.10	531.10	
Total Acres Surplus or (Deficit)	(15.45)	(10.19)	



1

**1 - RHR,
81 Homes, 23 Acres**

2

**2 - FRR,
227 Homes, 65 Acres**

3

3 - MSD, 42 Acres

4

**4 - RSS
552 Homes, 129 Acres**

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Public schools	(42 Acres)	96.00	96.00	
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EXCEPTION LANDS

HOUSING NEED?

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EXCEPTION LAND HOUSING CAPACITY

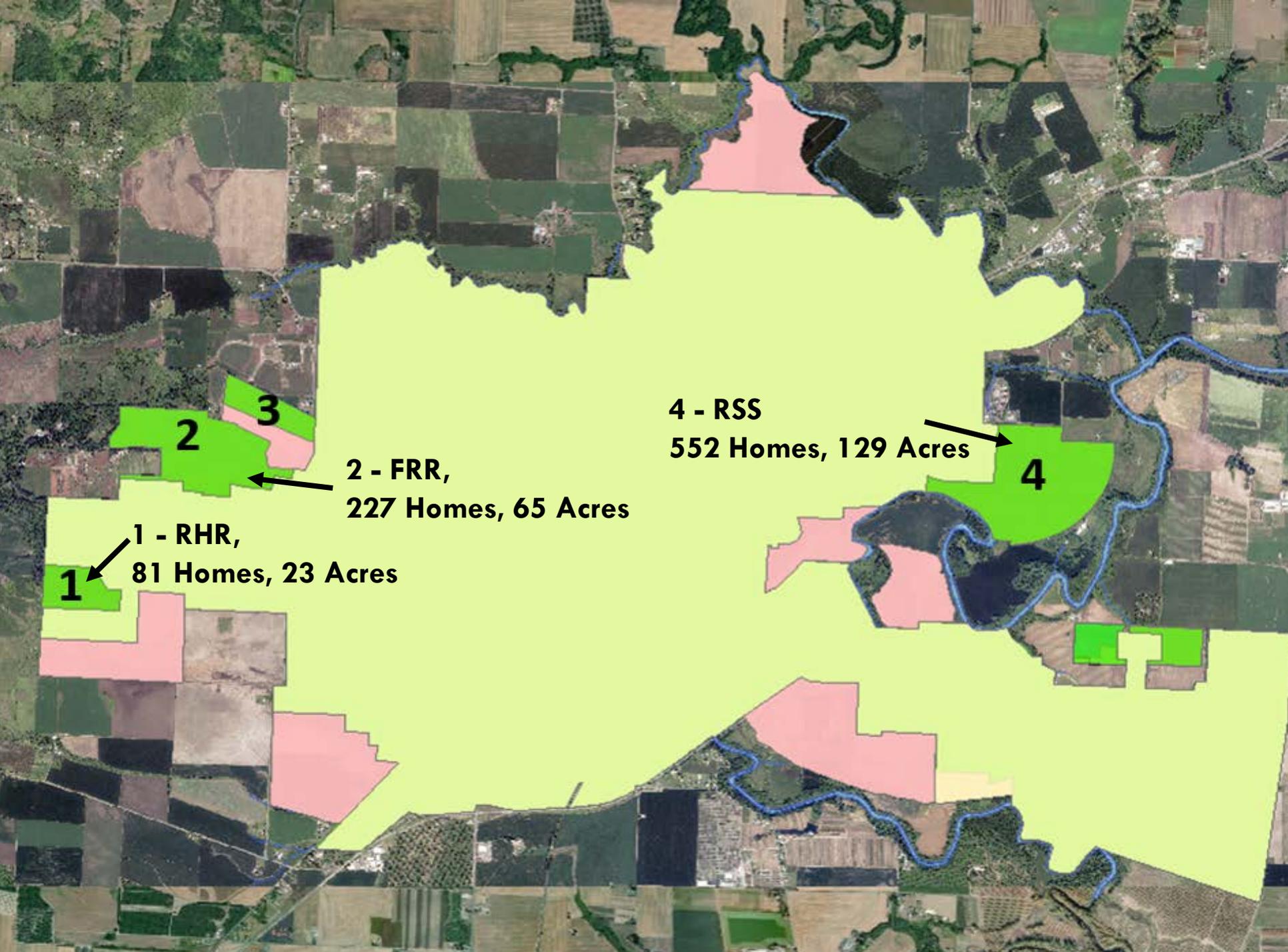
Issue: MGMUP Table 16 reflects significant housing development on three exception land areas that were brought into the UGB in 2004 but no urban development has taken place.

In addition, planned zoning for multi-family in transit corridors rescinded after the remand decision.

And NACs did not move forward.

Question: *Should we amend the record to revise the housing capacity in the exception lands and the existing UGB?*





1

**1 - RHR,
81 Homes, 23 Acres**

2

**2 - FRR,
227 Homes, 65 Acres**

3

**4 - RSS
552 Homes, 129 Acres**

4

EXCEPTION LAND HOUSING CAPACITY

2003 Revised Buildable Land Analysis: Housing Capacity in Exception Areas

Exception Area	Assumed Capacity	Planned Zoning	Remaining Capacity
Riverside South	552	R-2	552
Fox Ridge Road	227	R-1 and R-2	227
Redmond Hill Road	81	R-1	81
Total	860		860

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EXCEPTION LAND HOUSING CAPACITY

2003 Revised Buildable Land Analysis: Housing Capacity in Exception Areas

Since the 2003 MGMUP submittal, there has been a study conducted by ECONorthwest demonstrating that parcelized rural residential land brought into a UGB does not typically redevelop into urban densities, especially one and two acre parcels.

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020



EXCEPTION LAND HOUSING CAPACITY

2003 Revised Buildable Land Analysis:

The 2003 MGMUP proposed that 15.6 acres of vacant land in future transit corridors be rezoned for MFR as an efficiency measure. It reverted to its prior SFR zoning after the remand. This land has developed at lower density SFR.

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020



EXCEPTION LAND HOUSING CAPACITY

Planned Neighborhood Activity Centers did not move forward.

The 2003 MGMUP proposed a Neighborhood Activity Center as a mixed-use development with high density residential in two specific expansion areas:

Northwest Neighborhood Activity Center and Grandhaven.
Both areas have since developed with lesser housing density.



CITY COUNCIL DIRECTION

Option 1: Amend the record

Pros:

- Provides a more realistic capacity forecast.

Cons:

- Likely to be challenged.
- Stepping outside a “safe harbor” approach invites a legal challenge. Affirmed record is the “safe harbor.”



CITY COUNCIL DIRECTION

Option 2: Leave the record as is and address this question as part of the URA process.

Pros:

- **Avoids legal challenge on this issue.**
- **These areas may provide an opportunity for park and open space uses.**

Cons:

- **Plan likely overstates 20-year UGB capacity.**
- **Retains significant “faux” inventory in the UGB.**



STAFF RECOMMENDATION:

Option #2: Leave the record as is and address this question as part of the URA process, but start the URA process immediately.



AFFORDABLE HOUSING HOUSING NEED?

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020



AFFORDABLE HOUSING: LAND NEEDS

Issue: The 2001 Residential Land Need Analysis included information about low/mod housing needs but did not forecast how many households nor estimated land needs for that housing. Staff has prepared an estimate for this cohort based on information in the record. We also researched land needs including the impact of site development costs on housing costs.

Question: *Should we amend the record to include affordable housing needs and land suitability facts?*



AFFORDABLE HOUSING: LAND NEEDS

RLNA Findings:

- The distribution of household incomes in McMinnville is likely to remain the same over time.
- ~43% of new households will be considered low and moderate income and of that ~30% will be low income.
- More than 60% households headed by persons under age 35 and over age 65 will be low income.



AFFORDABLE HOUSING: LAND NEEDS

RLNA Findings:

- **Most moderate income households (i.e. $\leq 80\%$ of median income) will live in rental housing.**
- **Most low income households (i.e. $\leq 50\%$ of median income) will live in apartments.**
- **In response, future housing products are likely to transition toward smaller units and more attached housing.**



AFFORDABLE HOUSING: LAND NEEDS

RLNA Findings:

Given limited redevelopment opportunities in existing neighborhoods, most housing for new residents, including for low and moderate income households, will need to come from new construction on vacant land.

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020



AFFORDABLE HOUSING: LAND NEEDS

2023 Low/Mod Housing Forecast

Total Housing Mix:

SFR/Detached, including mobile homes: 60%

Attached dwellings, including townhouses: 40%

Detached SF	Manufactured Home	Townhome/ Row House	Apartments	Total
2406	1201	722	1685	6014

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020



AFFORDABLE HOUSING: LAND NEEDS

2023 Low/Mod Housing Forecast

- **Data Source: 2000 US Census Household Income Moderate**
Moderate Income : Earning up to 80% of Median Income
- **Low Income: Earning up to 60% of Median**

	Median and above	Moderate Income	Low and Very Low	Total
Percentage	57%	13%	30%	
Estimated Dwellings	3419	761	1834	6014

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020



AFFORDABLE HOUSING: LAND NEEDS

Public vs Private Production

The 2003 Buildable Land Analysis found that YCHA and other organizations were likely to build 300 to 400 assisted housing units in McMinnville through 2023.

The balance must be built by the private sector: 83%



AFFORDABLE HOUSING: LAND NEEDS

Housing Development Cost Analysis: SFR

PSU Center for Real Estate Studies:

- Single Family housing built on land with slopes $>10\%$ had $\sim 24\%$ higher site development costs than on land with less slope. This added an estimated \$20 – 34 thousand dollars per lot and as much as \$100K to the final price.
- Target market decisions aside, land with $>10\%$ slope is much more expensive to develop and more difficult to develop for income constrained households.



AFFORDABLE HOUSING: LAND NEEDS

Housing Development Cost Analysis: MFR

- Multi-family housing built on land with slopes $>10\%$ carried $\sim 50\%$ higher site development costs than land with less than 5% slope.
- The research found many fewer market-rate projects on steeper slopes and those found tended to have much higher overall cost for finished products.



AFFORDABLE HOUSING: LAND NEEDS

Housing Development Cost Analysis: MFR

PSU Center for Real Estate Studies:

- Researchers found only a few examples of affordable housing projects on land with slopes $>5\%$.
- Affordable developers in general said they do not build on sloped sites. “There is an additional cost burden which sloped sites cause for such projects.”



AFFORDABLE HOUSING: LAND NEEDS

Housing Development Cost Analysis

PSU Center for Real Estate Studies:

- Researches found that slope posed similar cost markups for affordable projects to the impact on market-rate projects. Slopes added 40-50% higher site development costs.
- The burden that slope adds to affordable projects is compounded by the competitive nature of the financing process. Sites with higher unit costs have a harder time competing for funding than those without that burden.



AFFORDABLE HOUSING: LAND NEEDS

Question: Should McMinnville add affordable housing need to the record and use it as a criterion for screening land to add to the UGB?

Pros:

- Addresses this need more directly in the plan
- Establishes a fact basis for rating land based on development considerations.

Cons:

- Introduces new information into the record that could be challenged.



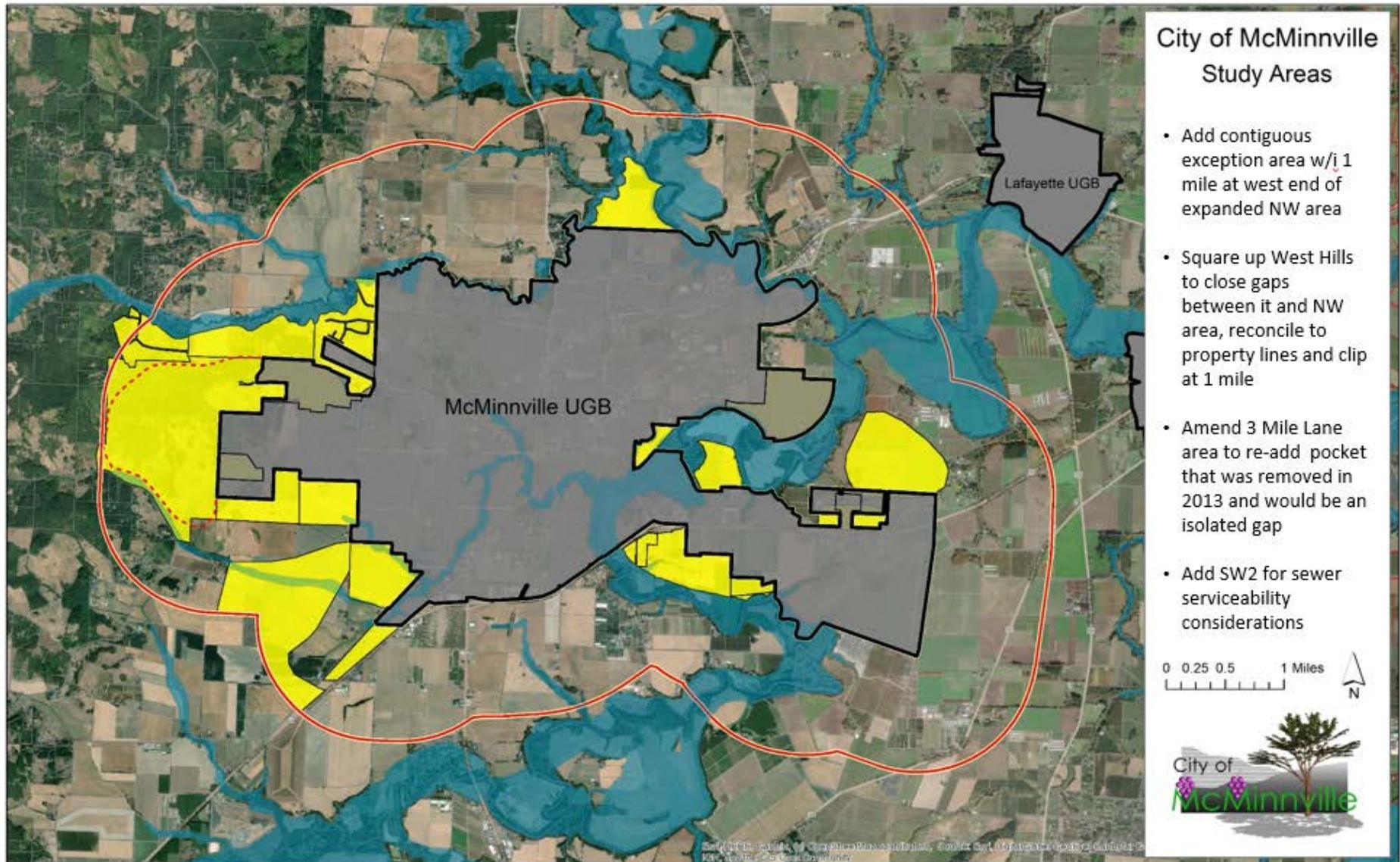
“SERVICEABILITY”

BUILDABLE LAND?

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020



UGB REMAND RESPONSE STUDY AREA MAP



Map is a draft, and could change with future refinements

BUILDABLE LAND: SERVICEABILITY ANALYSIS

Engineering – Public Facility Service Concepts

- Jacobs Engineering Serviceability – preliminary results
- All study areas can be “served” but some are very challenging and not economically practical.
- Service concepts rated based on “first principles” for ease of implementation.
- A 1-5 point system will be used to evaluate areas with areas that have fewer constraints being assigned more points.

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020



BUILDABLE LAND: SERVICEABILITY ANALYSIS

Engineering – Public Facility Service Concepts

**Study Areas with relatively few serviceability issues:
Gravity sewers, PZ-1 water, accessible from public roads**

- **Three Mile Lane/SE Areas (water pressure solved)**
- **Southwest 1, 2, and South West Hills**
- **Old Sheridan Road**
- **West of Old Sheridan Road**

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020



BUILDABLE LAND: SERVICEABILITY ANALYSIS

Engineering – Public Facility Service Concepts

Study Areas with moderate service constraints that require a less than ideal solution for water, sewer, or transportation

- Grandhaven (transportation access east side)
- Riverside South (pump sewage)
- Norton Lane East (pump sewage)
- Northwest 1 (pump sewage in small portion)
- Northwest 2 (pump sewage)
- Redmond Hill Road (water pressure zone 2)



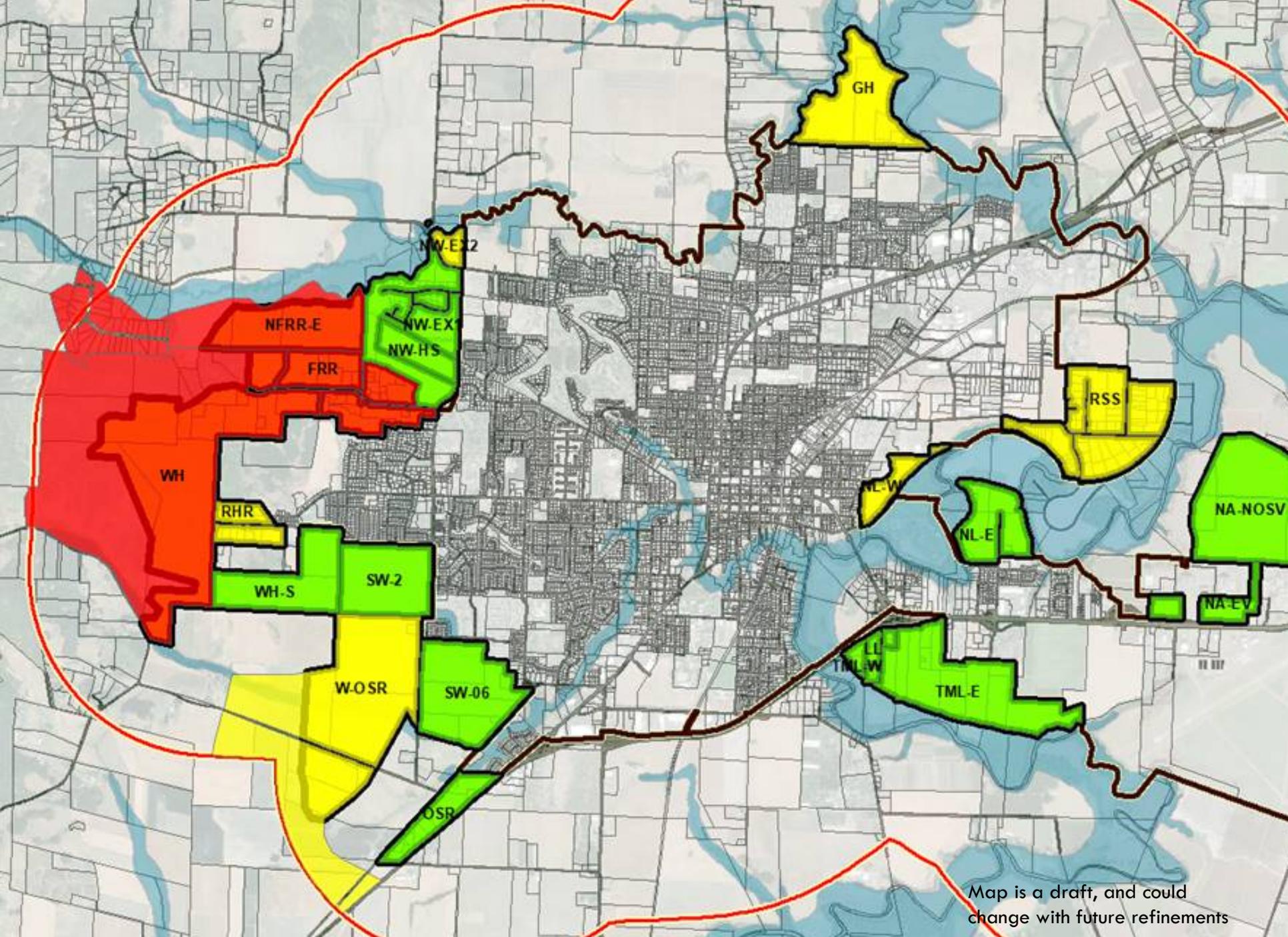
BUILDABLE LAND: SERVICEABILITY ANALYSIS

Engineering – Public Facility Service Concepts

Study Areas with significant serviceability constraints that require less than ideal solutions for multiple services:

- West Hills (pump sewage in places, water PZ's 2 - 5, transportation accessibility, shallow rocky soils, steep slopes hamper road design/construction)
- Fox Ridge Road (water PZ 2-3, transportation accessibility, steep slopes in places)
- North of Fox Ridge (most sewage requires pumping, water PZ 2, transportation accessibility)





Map is a draft, and could change with future refinements

BUILDABLE LAND: SERVICEABILITY ANALYSIS

Engineering – Public Facility Service Concepts

Next Steps:

- Size infrastructure extensions to “buildable” land
- Assess “downstream” system capacity constraints.
- Evaluate cost for expansion and, where necessary, capacity corrections.
- Rate study areas using 1-5 point system with 5 points indicating easiest to serve and 1 point for areas that are impractical to serve.

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020



“GRANDHAVEN CONSERVATION EASEMENT”

BUILDABLE LAND?

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020

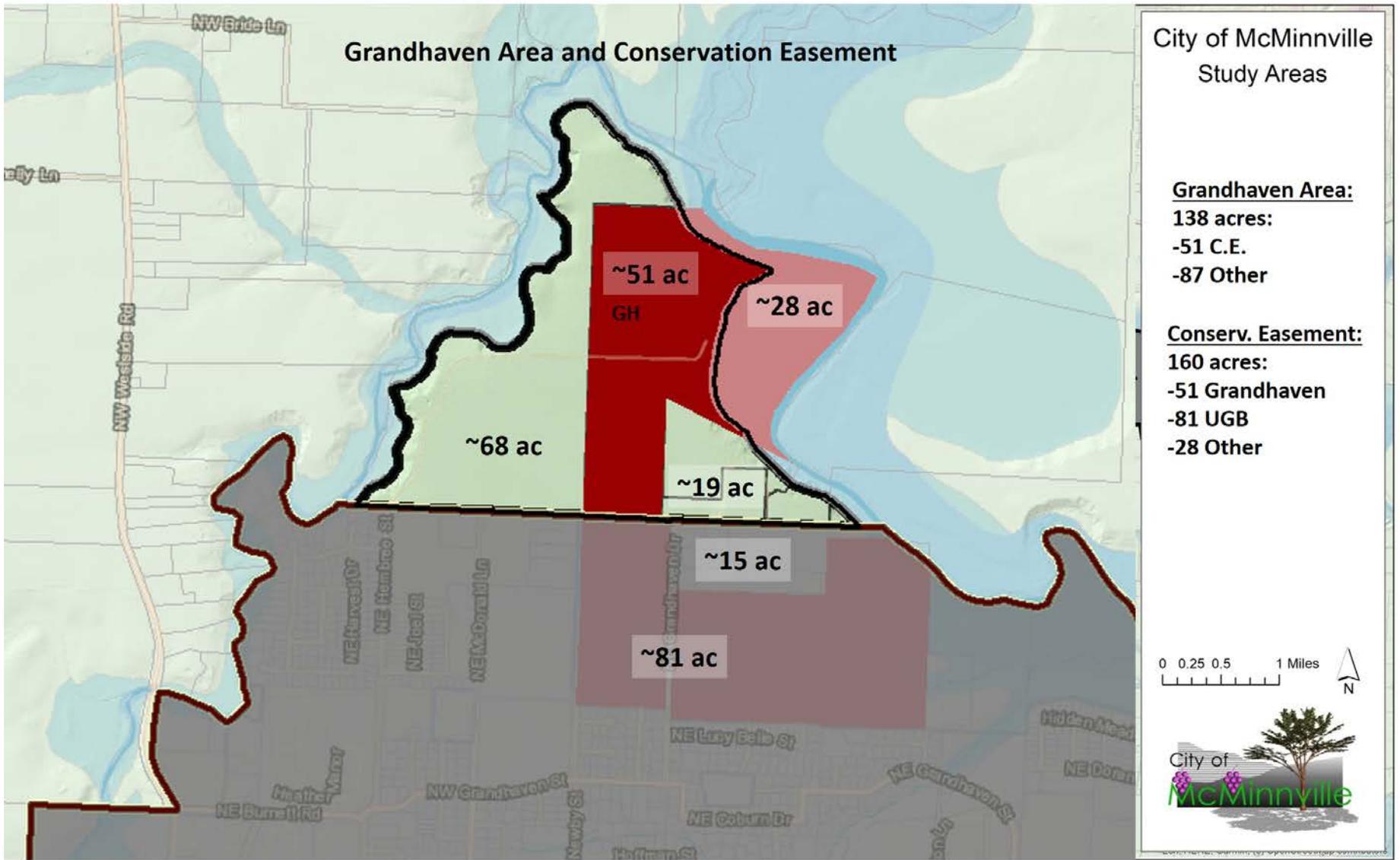


GRANDHAVEN CONSERVATION EASEMENT

Issue: In 2008, a conservation easement was placed on 170 acres of land in the Grandhaven area. Of these, 81 acres are in the existing UGB. That land is designated for residential development on the plan map. The easement in effect removes that land from our buildable inventory. It also removes an additional 15 acres from the buildable land inventory due to lack of access for a total of 96 acres.

Question: *Which course of action should we pursue to resolve the loss of residential capacity in the UGB?*





Map is a draft, and could change with future refinements

CITY COUNCIL DIRECTION

Option 1: Address in Remand Submission

Pros:

- First opportunity to resolve the issue
- Addresses lost capacity in the plan

Cons:

- Could be challenged if analysis to identify replacement areas in the UGB are considered insufficient.
- Increases the amount of land needed outside the UGB



CITY COUNCIL DIRECTION

Option 2: Address in URA Submission

Pros:

- Addresses lost capacity in the plan

Cons:

- Could be challenged if analysis to identify replacement areas in the UGB are considered insufficient.
- Would necessitate a UGB amendment on the heels of the remand submission.
- Delays resolution until the URA process is completed.



CITY COUNCIL DIRECTION

Option 3: Prepare a UGB Swap

Pros:

- Addresses lost capacity in the plan
- Focuses just on this one issue
- Solution predicated on “like for like” swap

Cons:

- Could be challenged if analysis to identify replacement areas in the UGB are considered insufficient.
- Requires separate submission/approval by LCDC
- Timeline to complete is uncertain



STAFF RECOMMENDATION

Option 3: Prepare a UGB Swap, after UGB Remand Response and prior to URA Submittal.

It will keep the process clean and straightforward.

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020



“HAZARD AREAS”

BUILDABLE LAND?

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020



GOAL 7 – AREAS SUBJECT TO NATURAL HAZARDS

Oregon Land Use Goal #7 requires local governments to adopt comprehensive plans inventories, policies and implementing measures to reduce risk to people and property from natural hazards.

Natural hazards for purposes of this goal are: floods, landslides, earthquakes, wildfire, etc.



GOAL 7 – AREAS SUBJECT TO 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 – AREAS SUBJECT TO NATURAL HAZARDS

Issue: The McMinnville Comprehensive Plan states, *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.* The 2003 MGMUP identified and eliminated slopes over 25% and floodplains as building but did not identify any other hazard areas. Recent data shows significant risk in portions of McMinnville and study area for high risk landslides and liquefaction during an earthquake.

Question: *Should we identify the high risk hazard areas and identify them as unbuildable or limit development on them?*



NEW HAZARD INFORMATION FOR MCMINNVILLE

State Hazard Mitigation Plan – Just Released Draft (Chapter on Yamhill County – HR Landslides and Earthquakes)

Yamhill County NHMP – Draft Update in Circulation

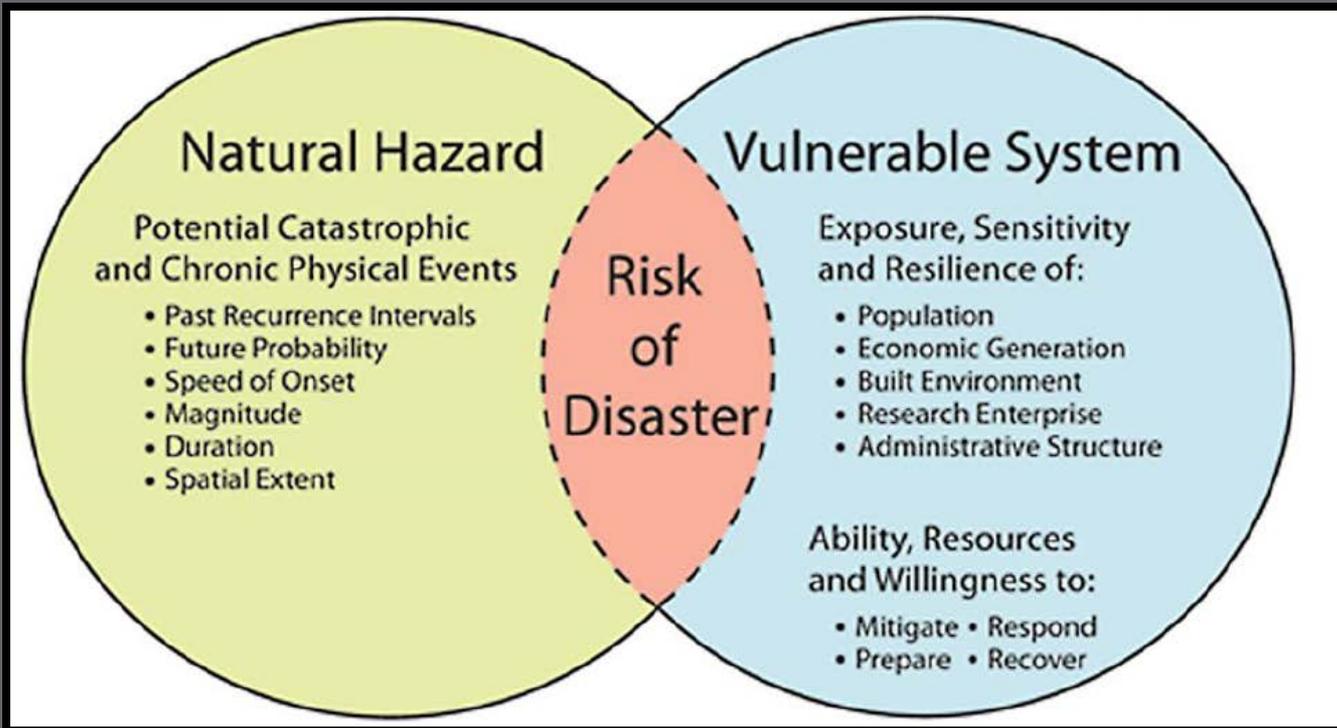
McMinnville NHMP – Addendum to YC NHMP in Circulation

McMinnville Hazards Study – Just Completed – UGB/URA

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DRAFT 2020 OREGON NHMP – SEPTEMBER 2020

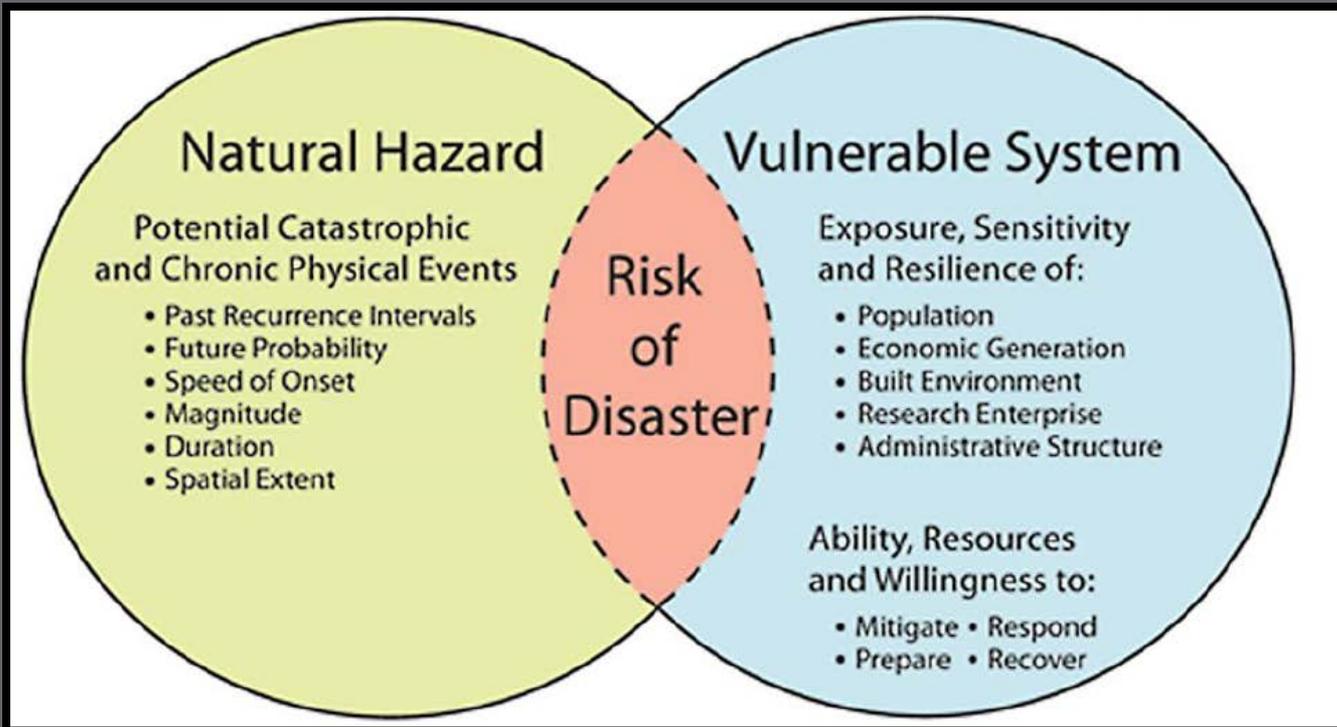


1. Identify Hazards
2. Identify “Who” and “What “ Is Vulnerable
3. Assess Risk

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DRAFT 2020 OREGON NHMP – SEPTEMBER 2020



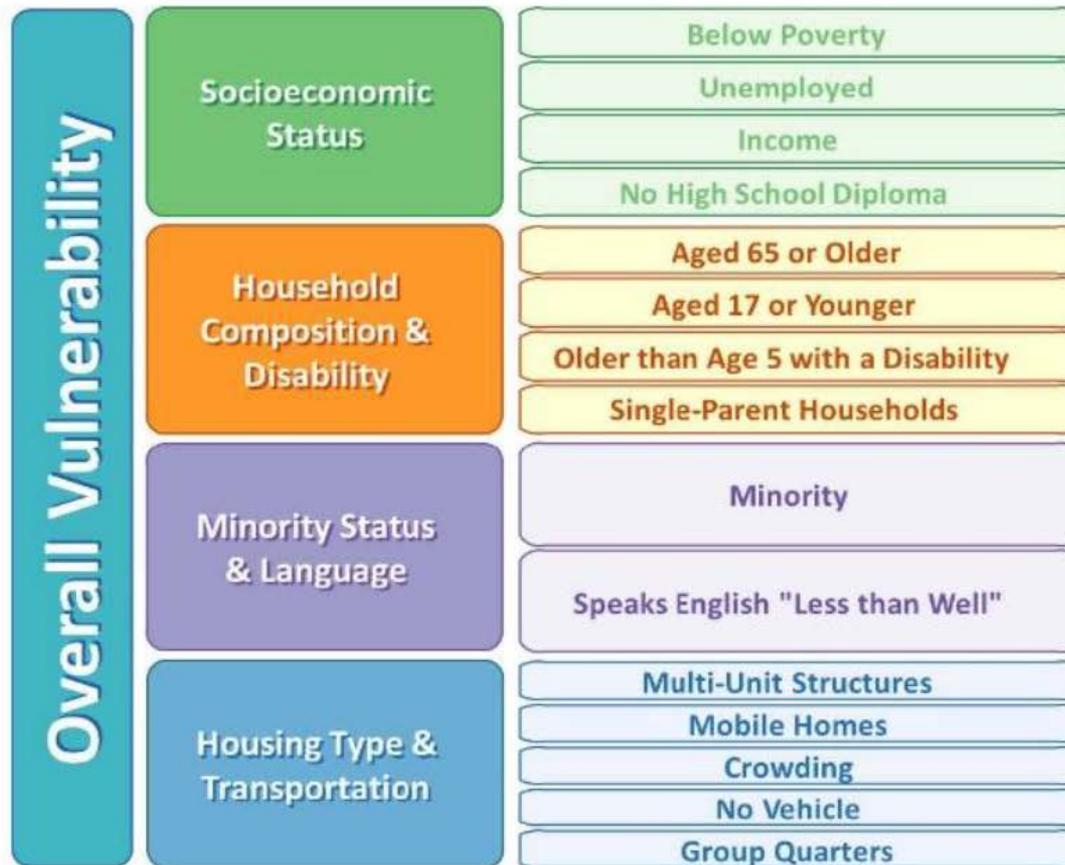
1. Identify Hazards
2. Identify “Who” and “What “ Is Vulnerable
3. Assess Risk

**SOCIAL
VULNERABILITY
ASSESSMENT**

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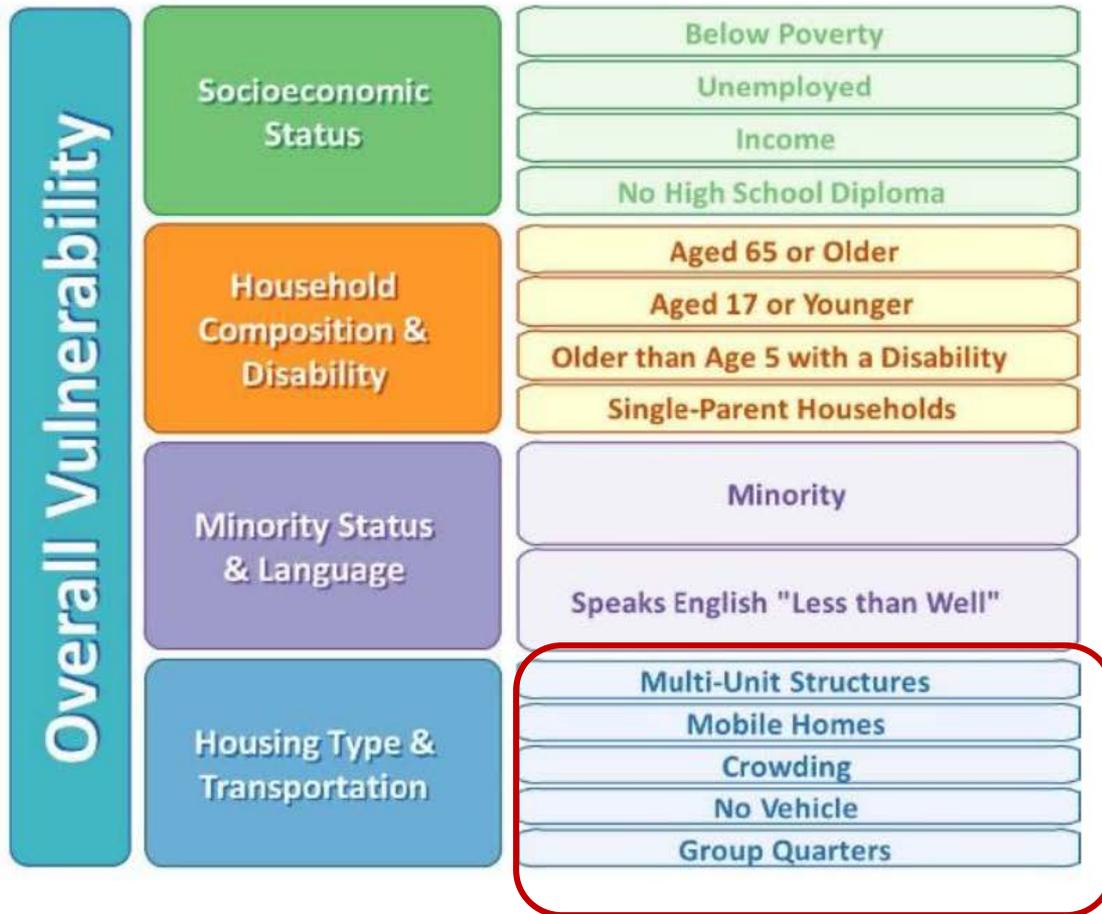


Figure 2-19. CDC Social Vulnerability Themes and Components



Source: Centers for Disease Control and Prevention/ Agency for Toxic Substances and Disease Registry/ Geospatial Research, Analysis, and Services Program, 2016

Figure 2-19. CDC Social Vulnerability Themes and Components



MHs are more likely to shift on their foundations and create hazardous conditions for occupants and their neighbors. This is a vulnerability for Yamhill County as it has a higher share of mobile homes.

Source: Centers for Disease Control and Prevention/ Agency for Toxic Substances and Disease Registry/ Geospatial Research, Analysis, and Services Program, 2016

DRAFT 2020 OREGON NHMP – SEPTEMBER 2020

State evaluates 11 Hazards:

Coastal Hazards

Droughts

Earthquakes

Extreme Heat

Floods

Landslides

Tsunamis

Volcanoes

Wildfires

Windstorms

Winter Storms

*“Risk is a function of
probability and vulnerability”*

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020



DRAFT 2020 OREGON NHMP – SEPTEMBER 2020

State evaluates 11 Hazards:

Coastal Hazards

Droughts

Earthquakes

Extreme Heat

Floods

Landslides

Tsunamis

Volcanoes

Wildfires

Windstorms

Winter Storms

We are going to focus on:

Earthquakes

Floods

Landslides

All have a High Local Vulnerability Ranking for Yamhill County (Low, Medium High)

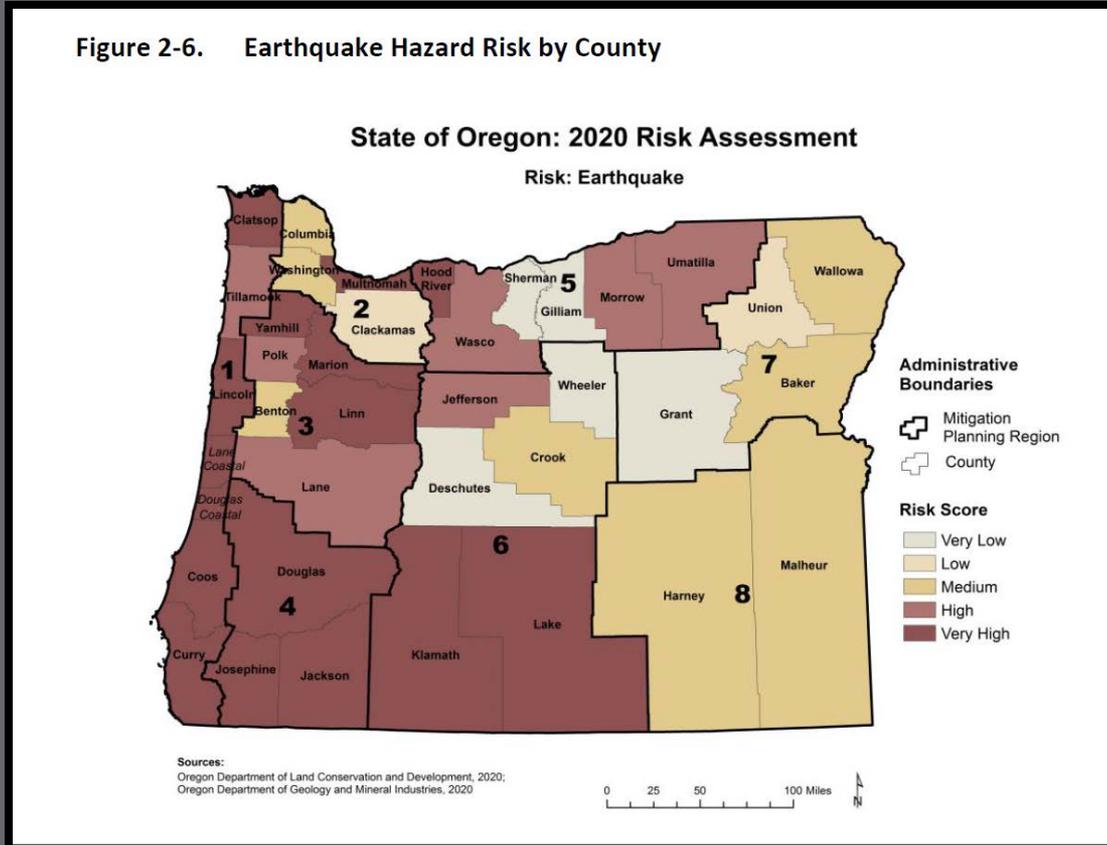
And Earthquakes and Landslides have a Very High Risk/Probability Factor for Yamhill County (Very Low, Low, Moderate, High, Very High)

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DRAFT 2020 OREGON NHMP – EARTHQUAKES

Figure 2-6. Earthquake Hazard Risk by County



Probability = 4.0

Social
Vulnerability = 4.0

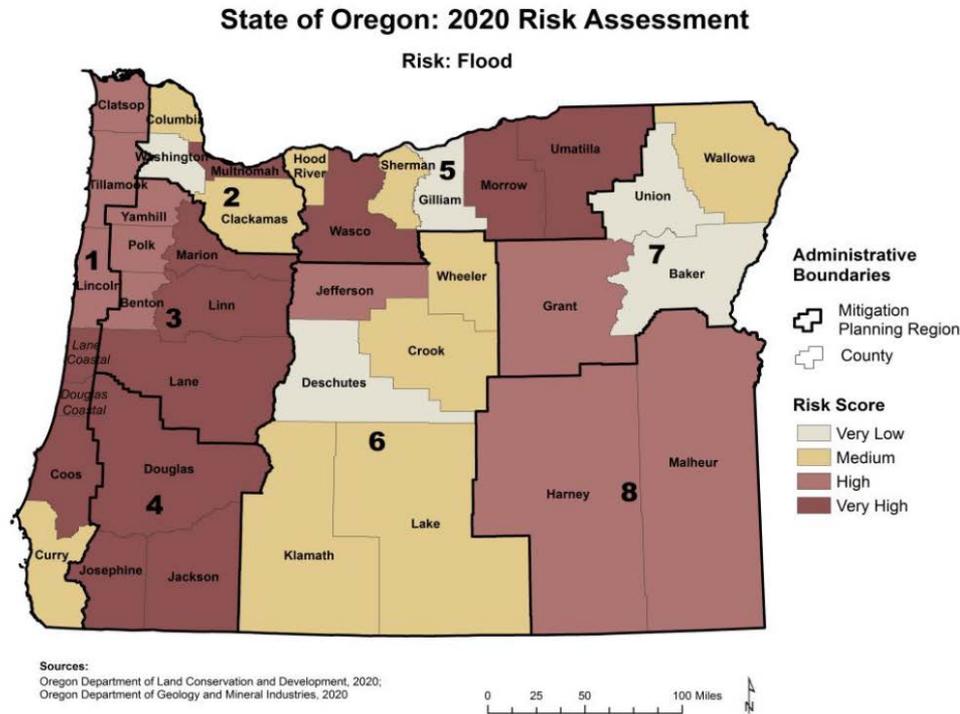
Risk = VH

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

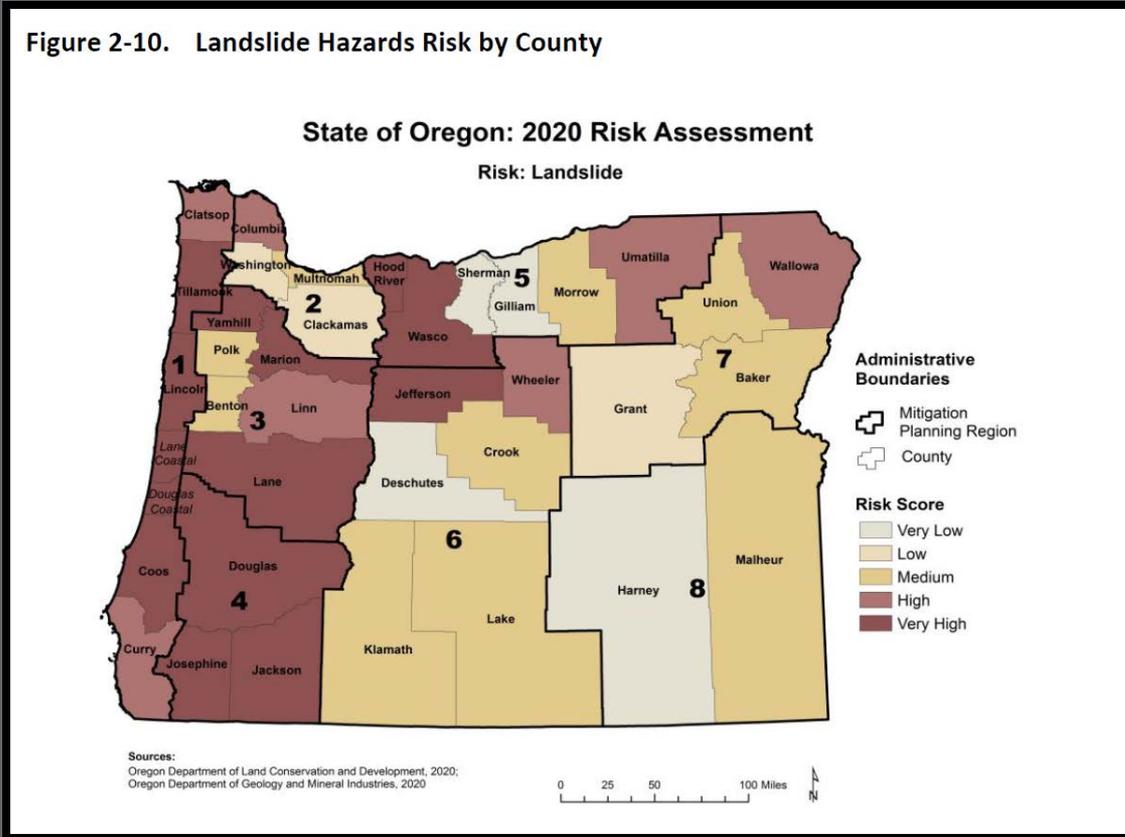
Risk = H

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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



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



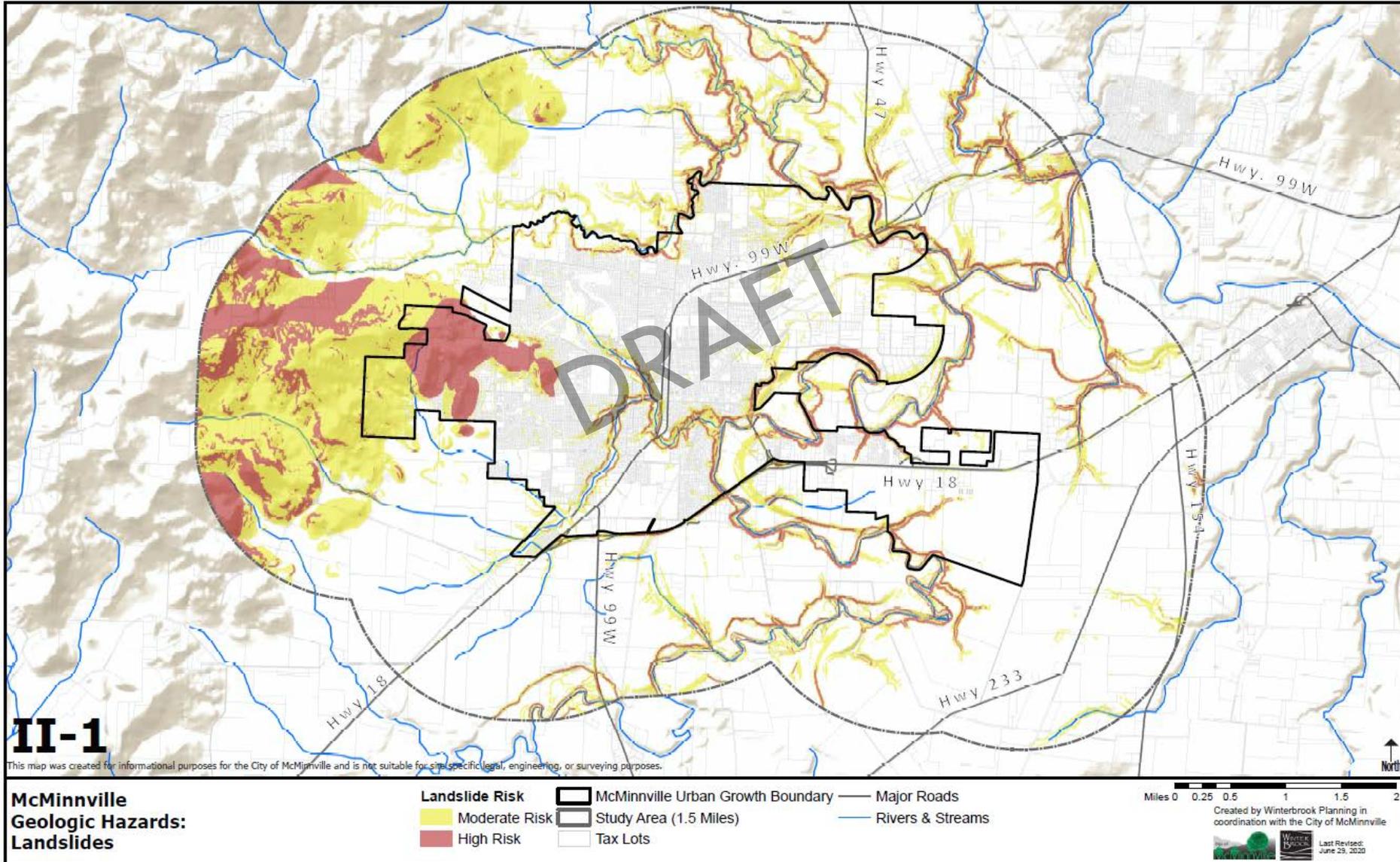
HAZARDS TO PEOPLE AND PROPERTY - LANDSLIDES

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.**

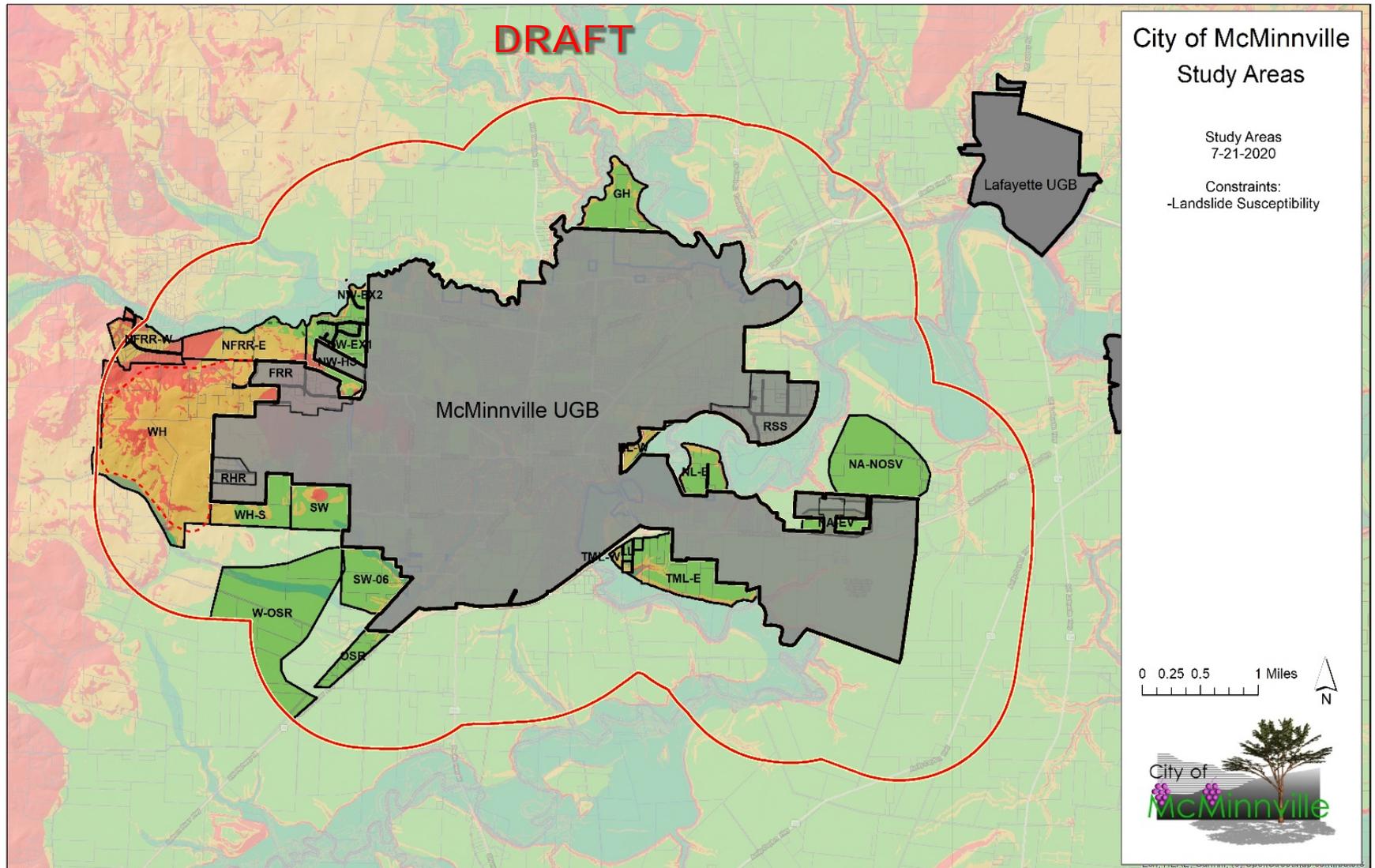


GEOLOGIC - LANDSLIDES



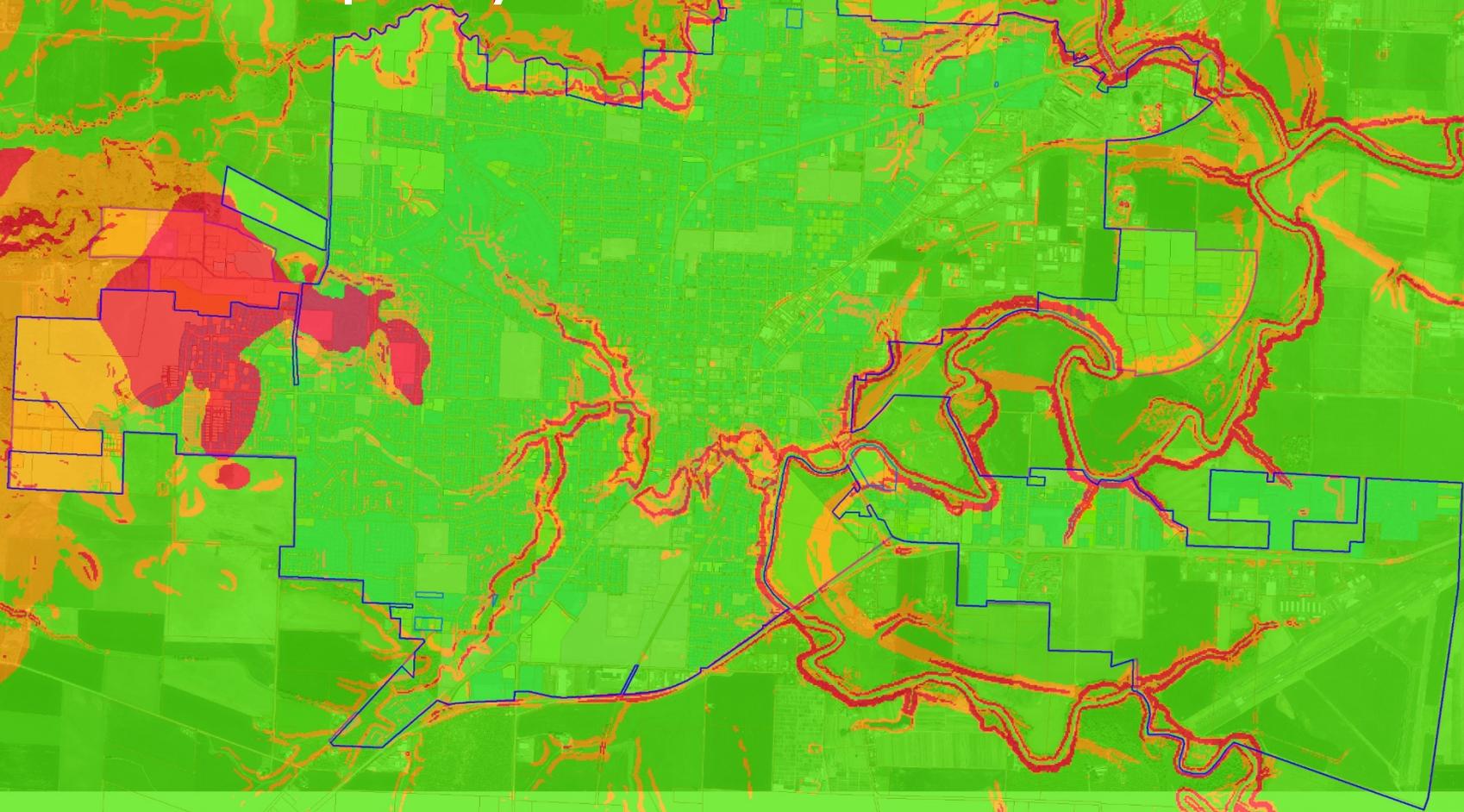
Map is a draft, and could change with future refinements

UGB REMAND RESPONSE STUDY AREA- LANDSLIDES



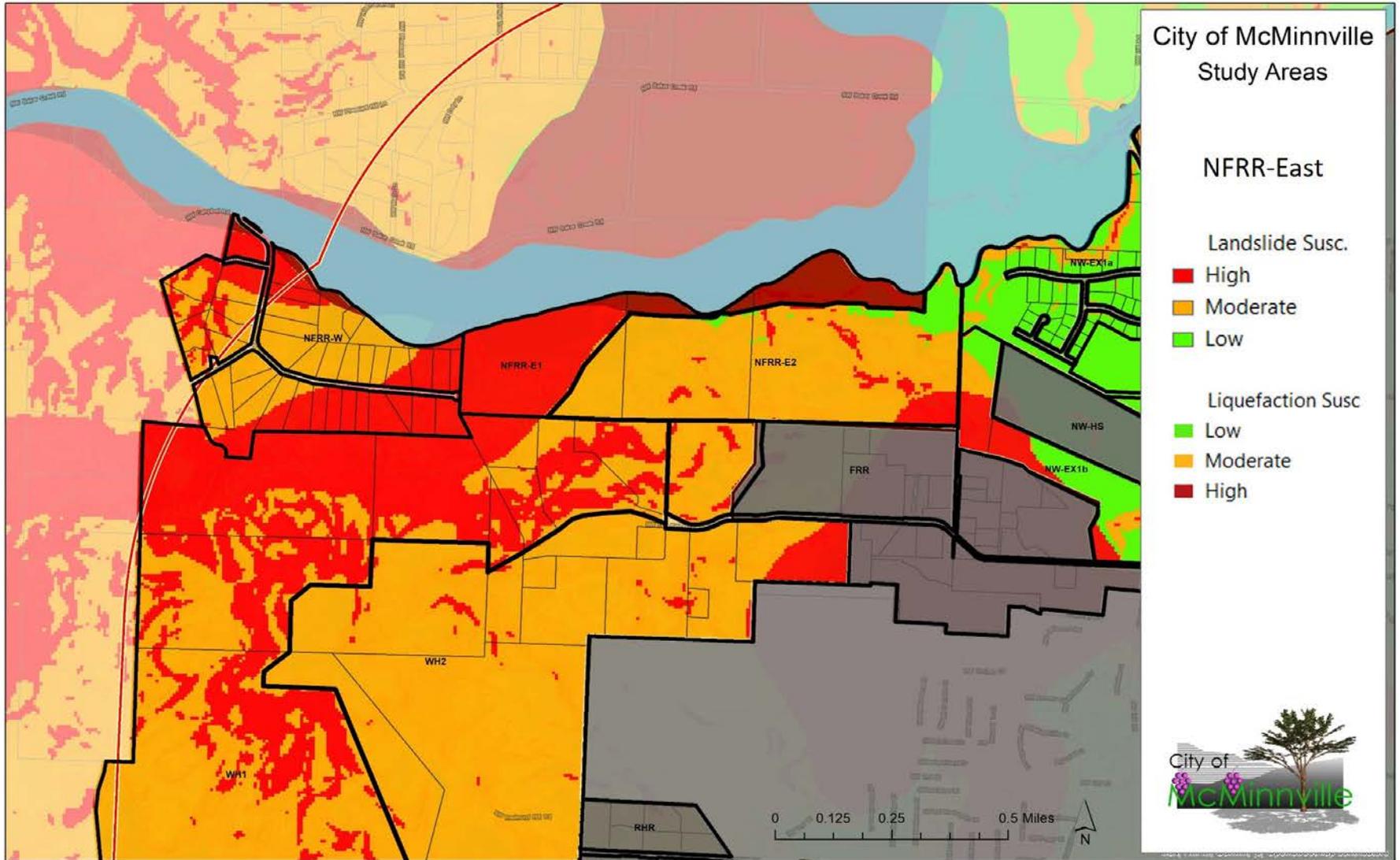
Map is a draft, and could change with future refinements

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



Map is a draft, and could change with future refinements

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?

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



LANDSLIDES – CITY COUNCIL DIRECTION

Option 1: Declare High Risk Unbuildable and Develop Policies and Findings

Pros:

- Minimize risk to people and property in a known high hazard area.

Cons:

- Could be challenged, as it is introducing new data into the record.
- Could result in takings issues for existing land in the UGB.



LANDSLIDES – CITY COUNCIL DIRECTION

Option 2: Limit density allocation on High Risk landslides soils as part of the Goal 14 screening criteria.

Pros:

- Minimize risk to people and property in a known high hazard area.
- Minimizes challenges.

Cons:

- Could still be challenged, as it is introducing new data into the record.



STAFF RECOMMENDATION:

Option #2: Proceed with caution. Low density development with mitigation measures. Adopt Hazard policies in the future.

Look for park land opportunities. (Scenic views, lookouts, natural open space parks, etc.)

Look for rural/urban transition and buffer zones.



HAZARDS TO PEOPLE AND PROPERTY - EARTHQUAKES

Four types of earthquakes affect Yamhill County:

Shallow crustal events

Deep intra-plate events

Cascadia Subduction Zone

Renewed volcanic activity

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
Deep intra-plate events
Cascadia Subduction Zone
Renewed volcanic activity

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



HAZARDS TO PEOPLE AND PROPERTY - EARTHQUAKES

Four types of earthquakes affect Yamhill County:

- Shallow crustal events
- Deep intra-plate events
- Cascadia Subduction Zone
- Renewed volcanic activity

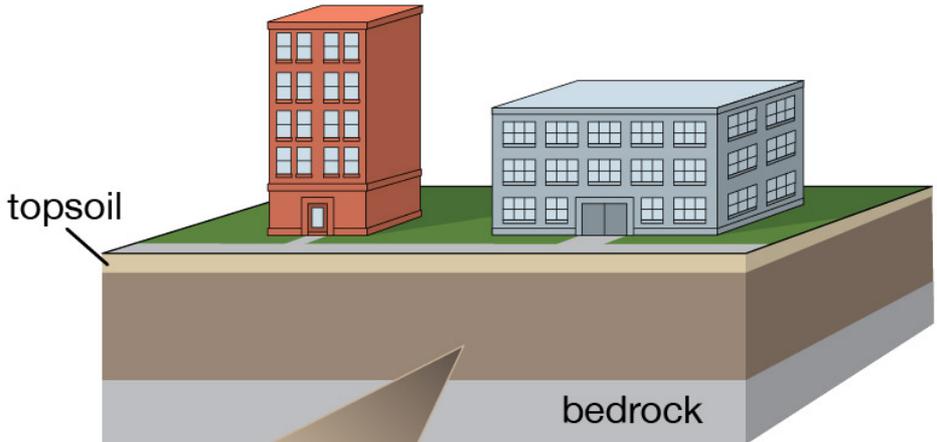
McMinnville is especially vulnerable to the Cascadia event due to the liquefaction soils it is built on and that surround the city, which will lead to landslides damaging property.

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



Soil liquefaction

stable soil



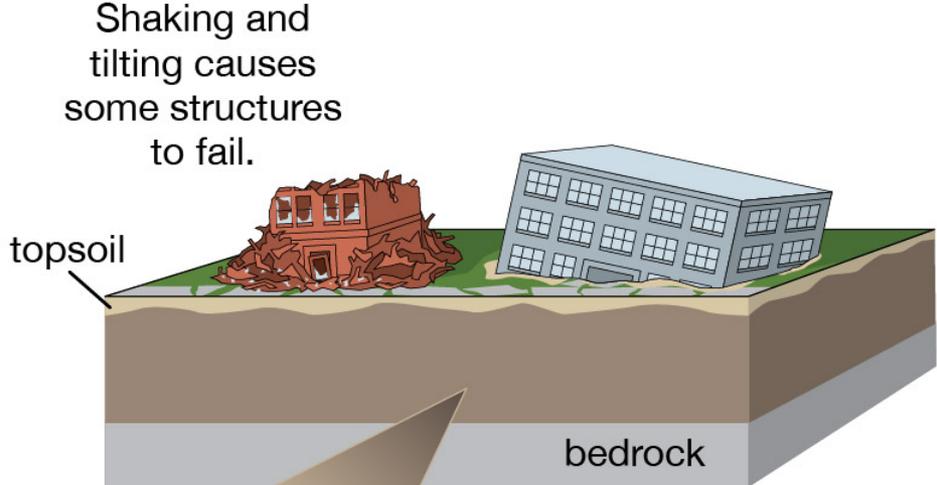
topsoil

bedrock

Building stands erect on stable soil.

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

liquefied soil



topsoil

bedrock

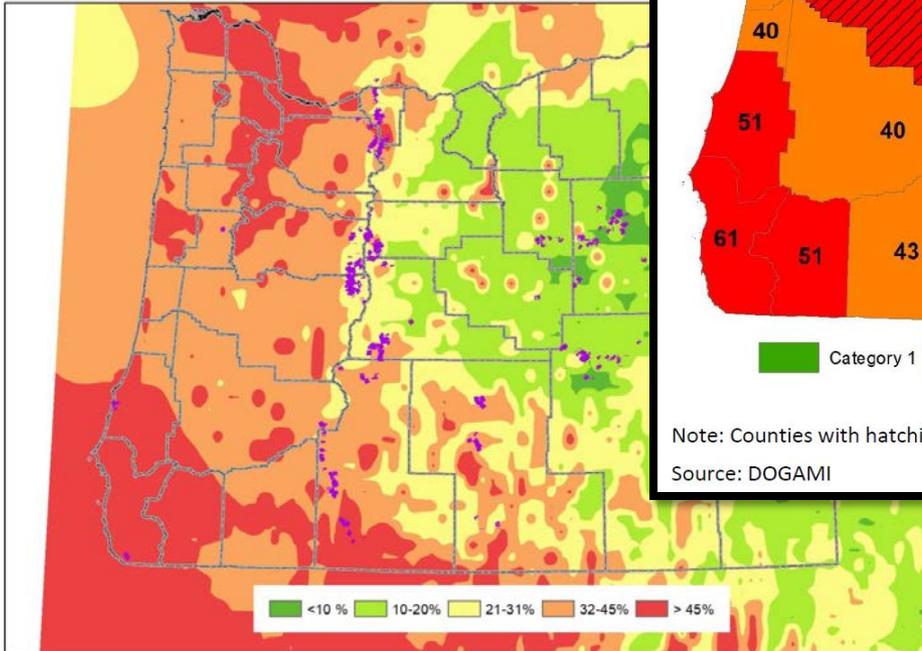
Shaking and tilting causes some structures to fail.

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.

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

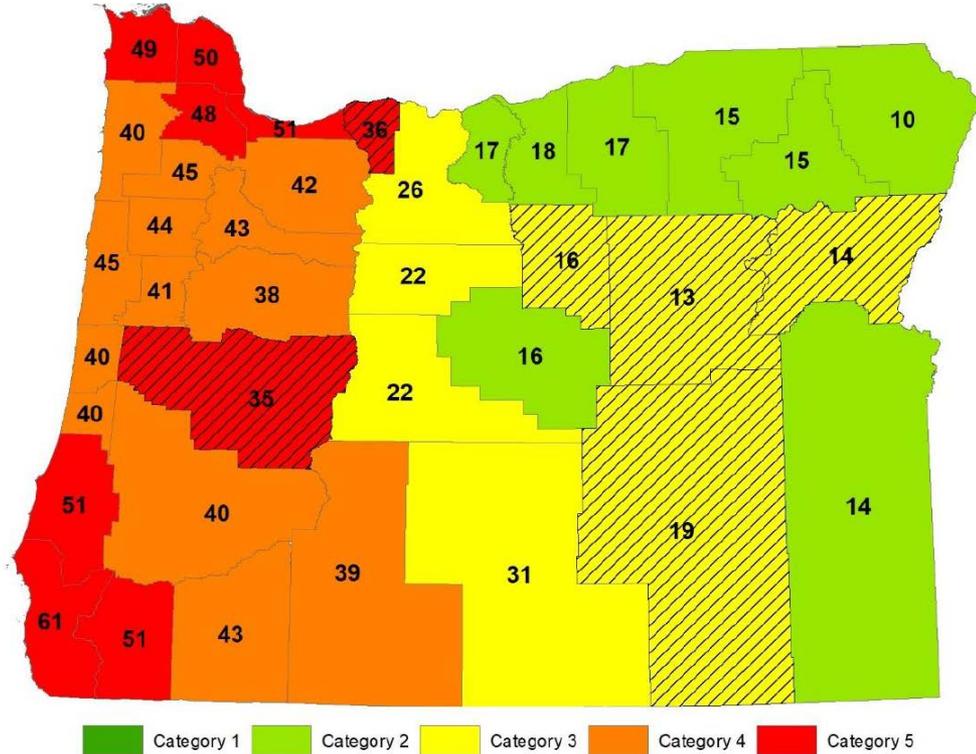
Figure 2-58. Probability of experiencing shaking of Modified Mercalli during the next 100 years



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)

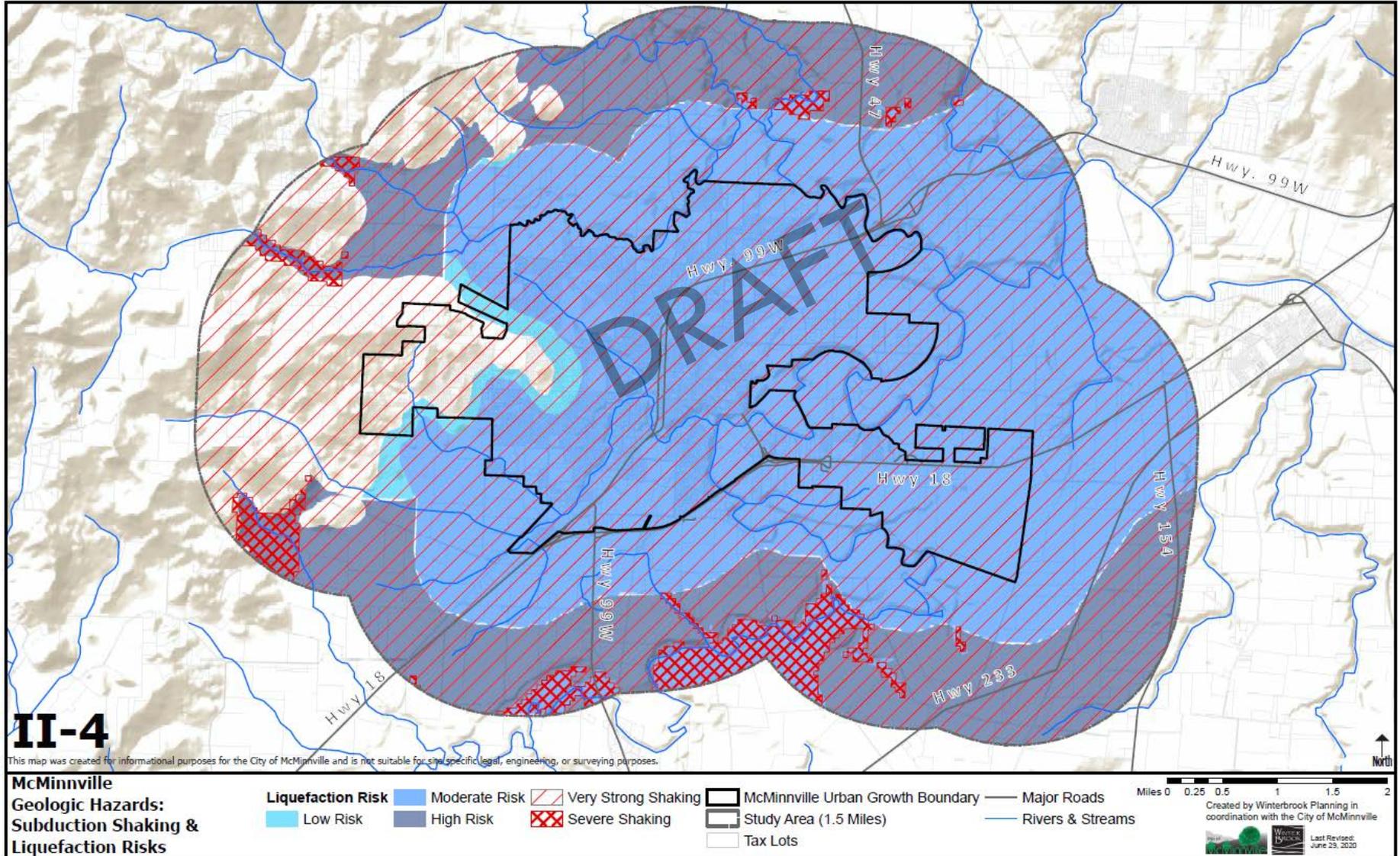


Note: Counties with hatching had their probability category increased one step due to newly discovered faults.

Source: DOGAMI

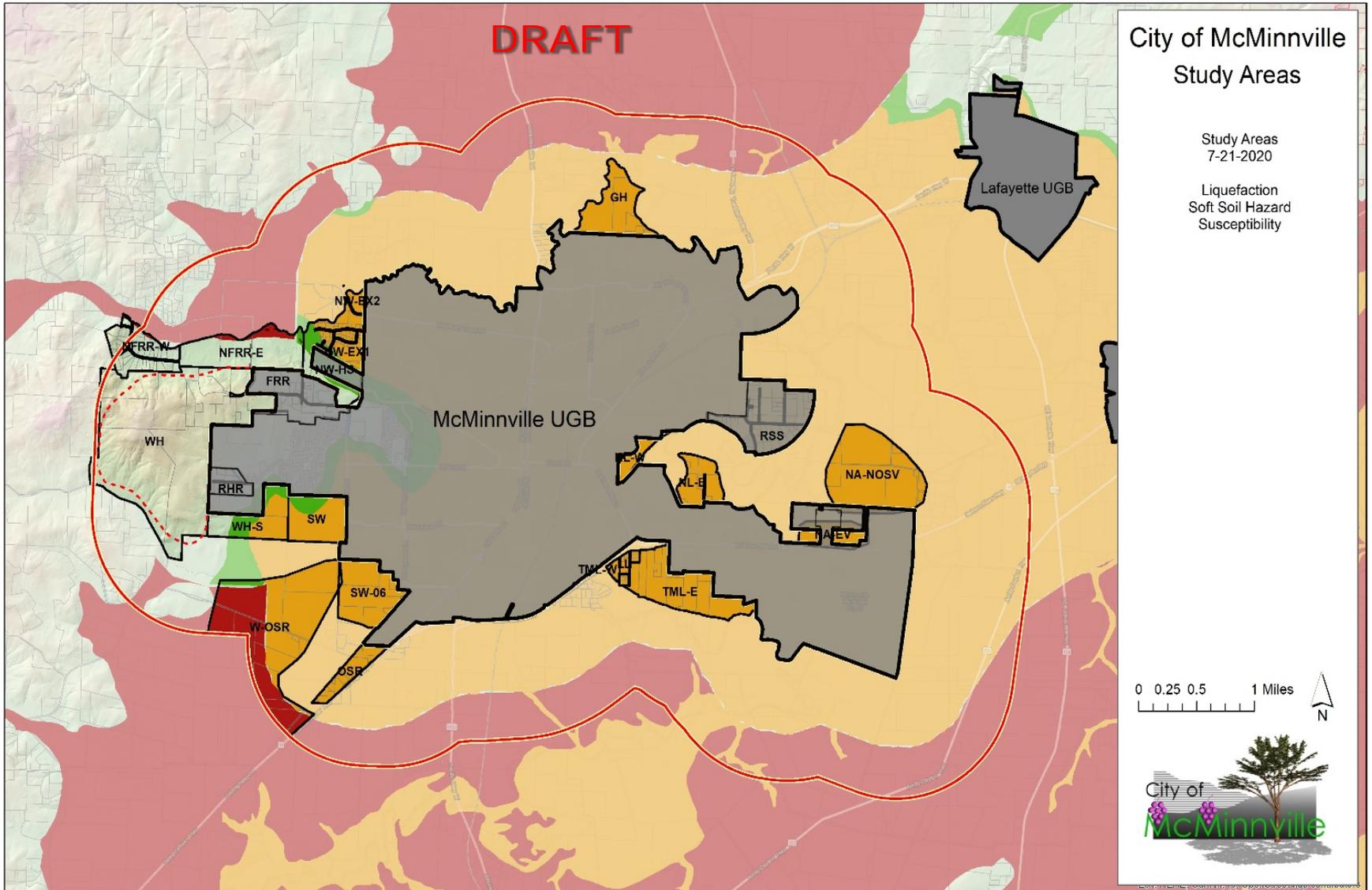
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GEOLOGIC – LIQUEFACTION RISK

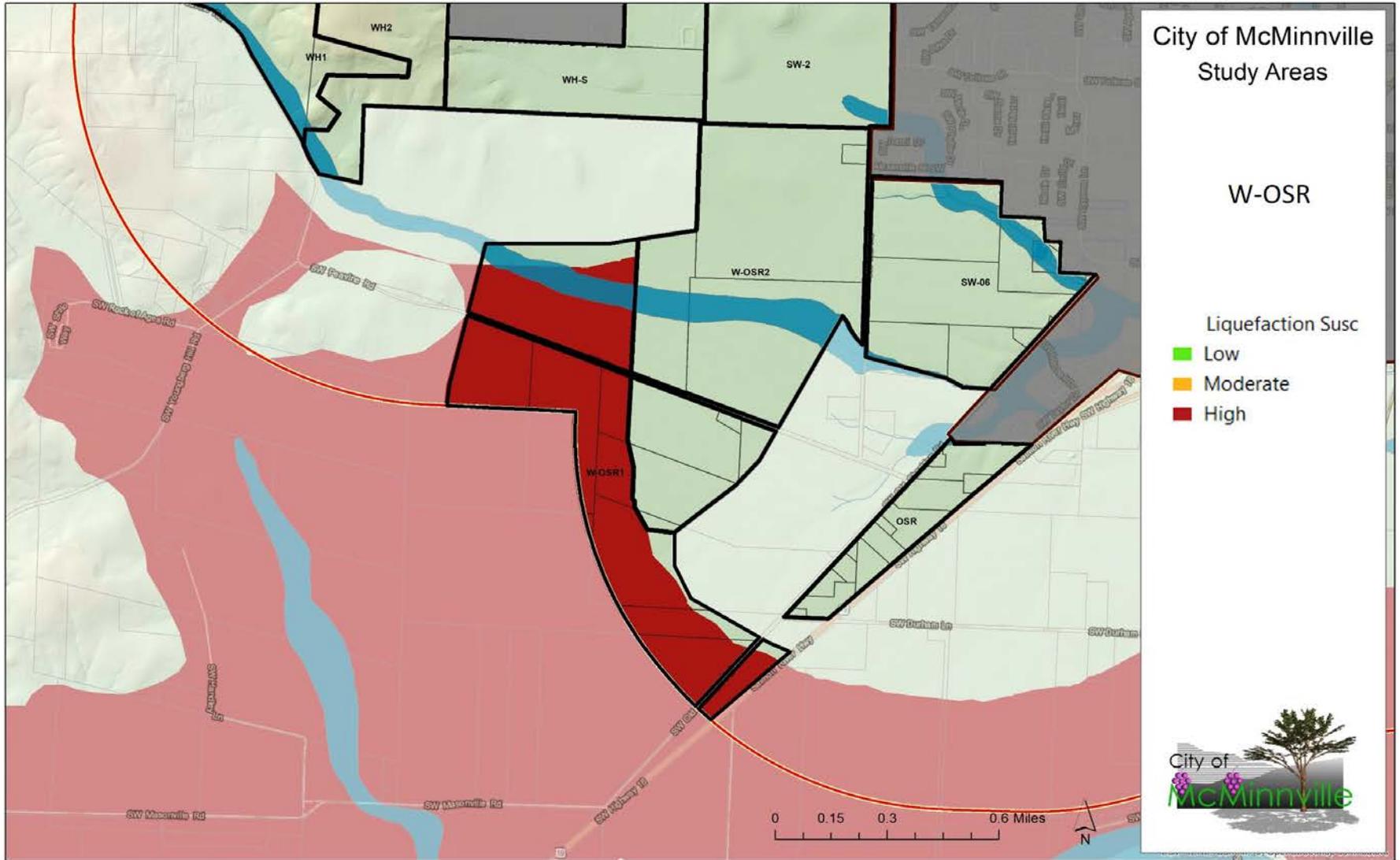


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UGB REMAND RESPONSE STUDY AREA- LIQUEFACTION RISK



Map is a draft, and could change with future refinements



Map is a draft, and could change with future refinements

EARTHQUAKES/LIQUIFICATION – CITY COUNCIL DIRECTION

Option 1: Declare High Risk Unbuildable and Develop Policies and Findings

Pros:

- Minimize risk to people and property in a known high hazard area.

Cons:

- Could be challenged, as it is introducing new data into the record.



LANDSLIDES – CITY COUNCIL DIRECTION

Option 2: Limit density allocation on High Risk liquefaction soils as part of the Goal 14 screening criteria.

Pros:

- Minimize risk to people and property in a known high hazard area.
- Minimizes challenges.

Cons:

- Could still be challenged, as it is introducing new data into the record.



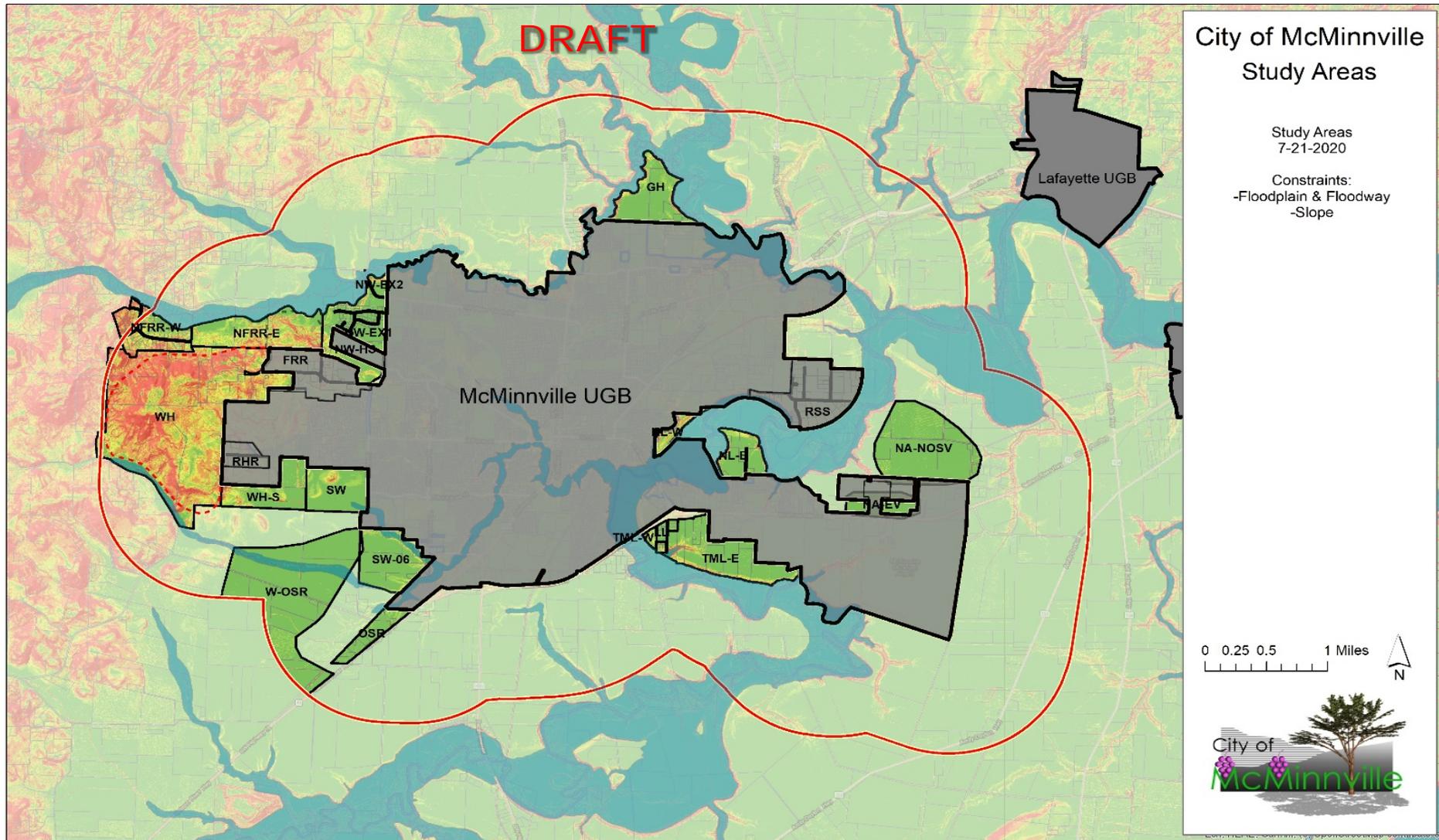
STAFF RECOMMENDATION:

Option #2: Proceed with caution. Low density development with mitigation measures. Adopt Hazard policies in the future.

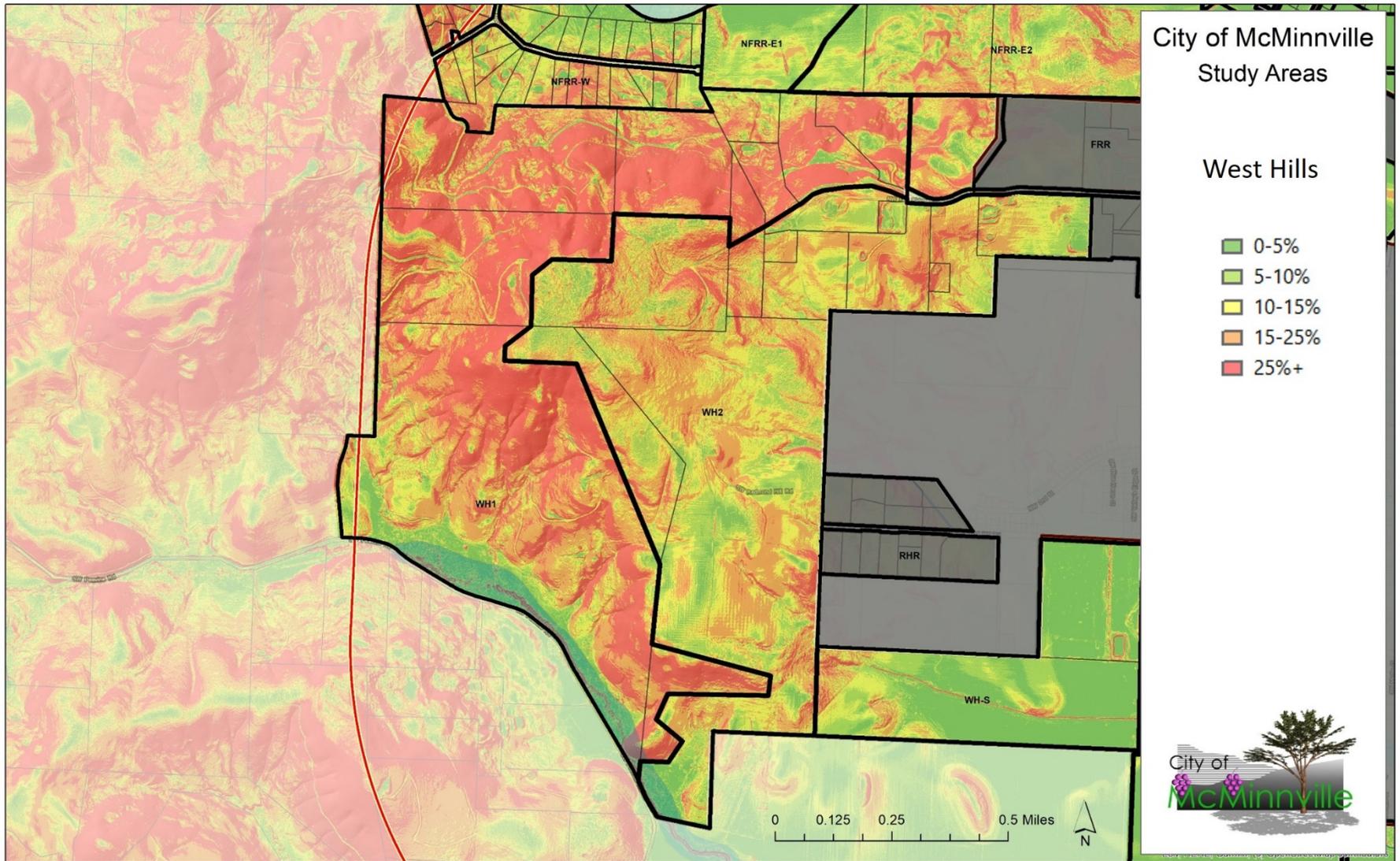
Look for park land opportunities, or rural/urban transition and buffer zones.



UGB REMAND RESPONSE STUDY AREA – STEEP SLOPES



Map is a draft, and could change with future refinements



Map is a draft, and could change with future refinements

STEEP SLOPES – CITY COUNCIL DIRECTION

Option 1: Remove from buildable lands inventory per allowance in state law.

Pros:

- **Minimize risk to people and property in a known high hazard area.**
- **Minimizes challenges.**

Cons:

- **Less land in the study area for the locational analysis.**



STEEP SLOPES – CITY COUNCIL DIRECTION

Option 2: Keep it in to retain acreage in the study area.

Pros:

- **Larger study area.**

Cons:

- **Significant hazards to property and people.**
- **Decision to remove protected by state law.**

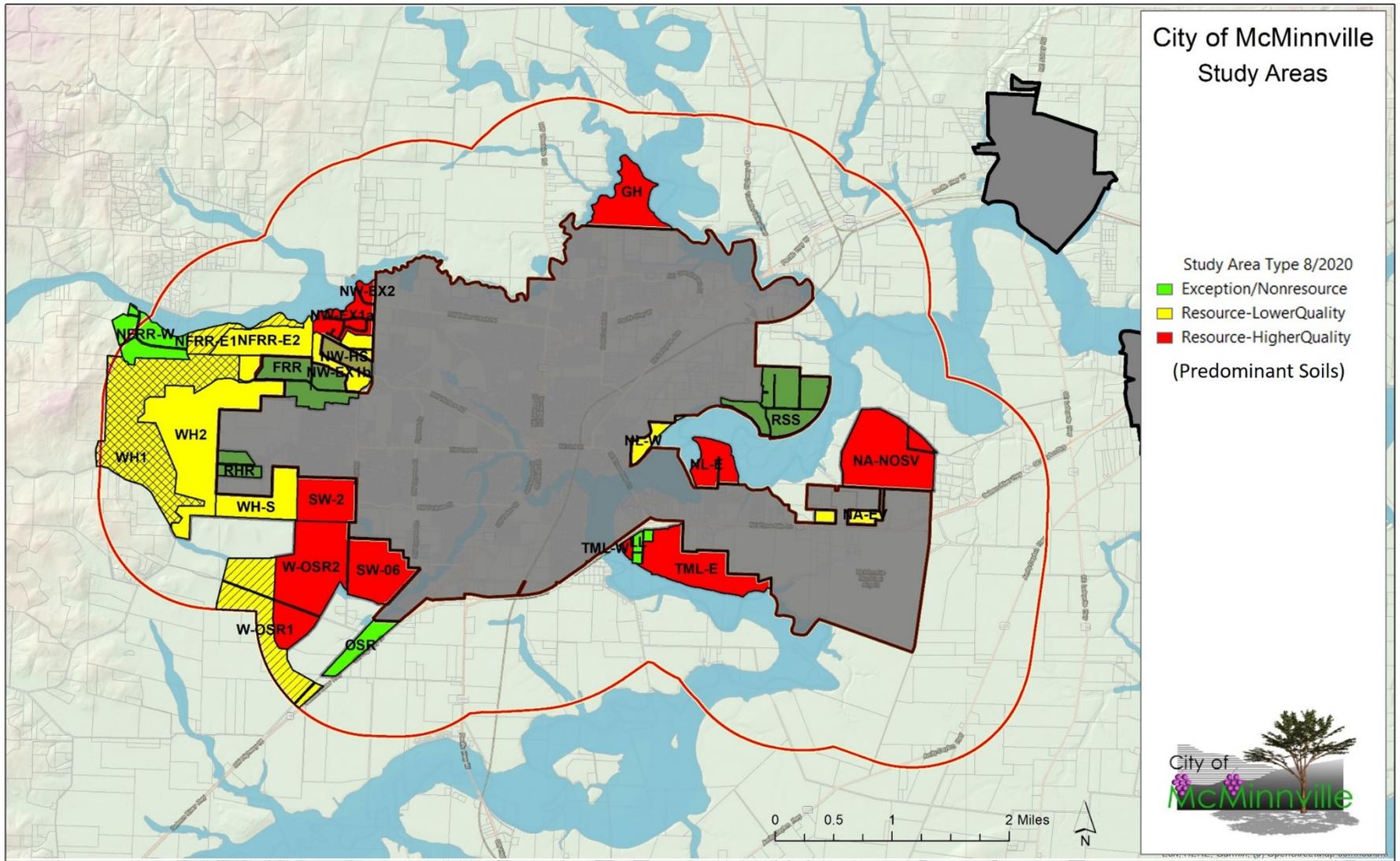


STAFF RECOMMENDATION:

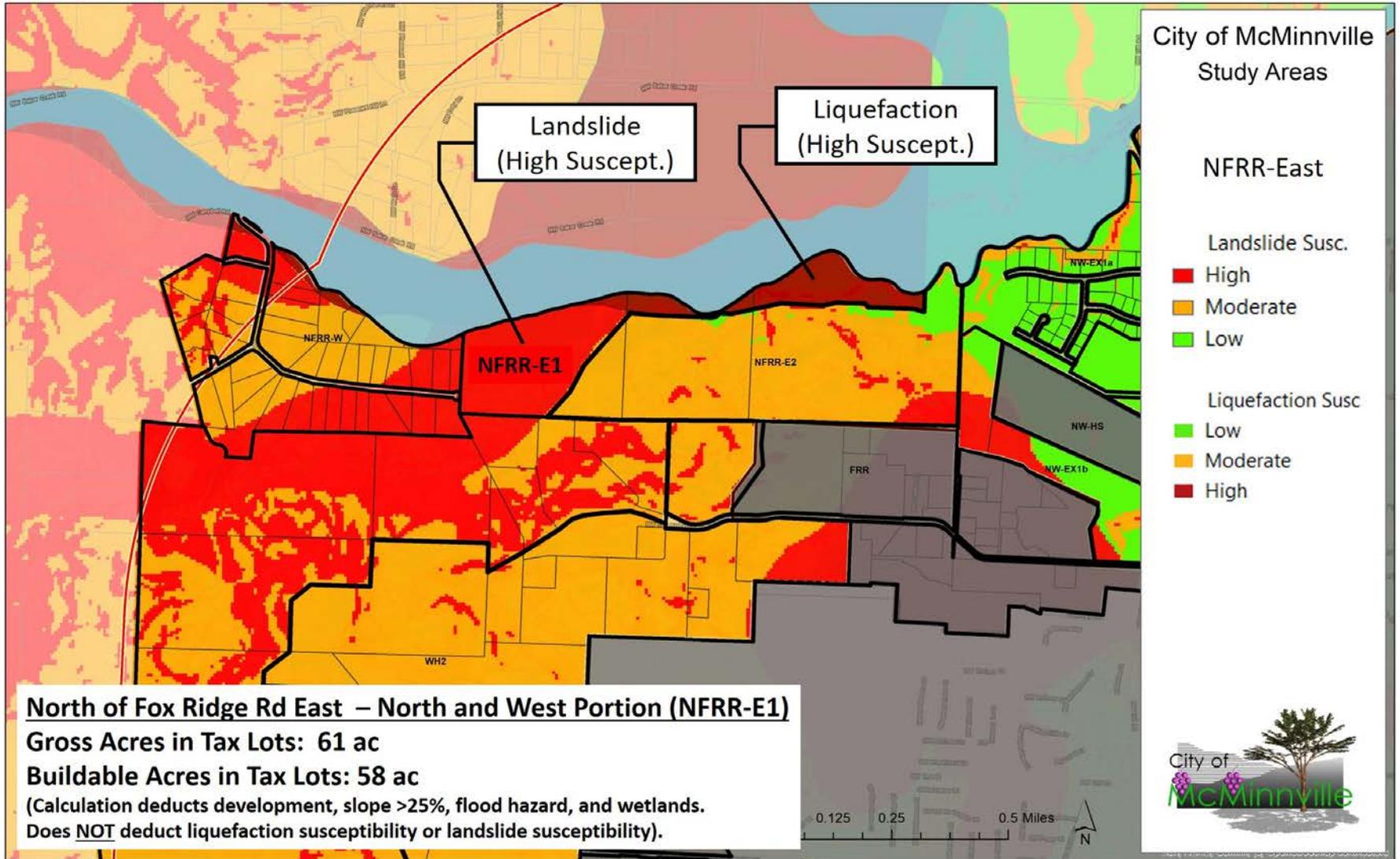
Option 1: Remove from buildable lands inventory per allowance in state law.

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020

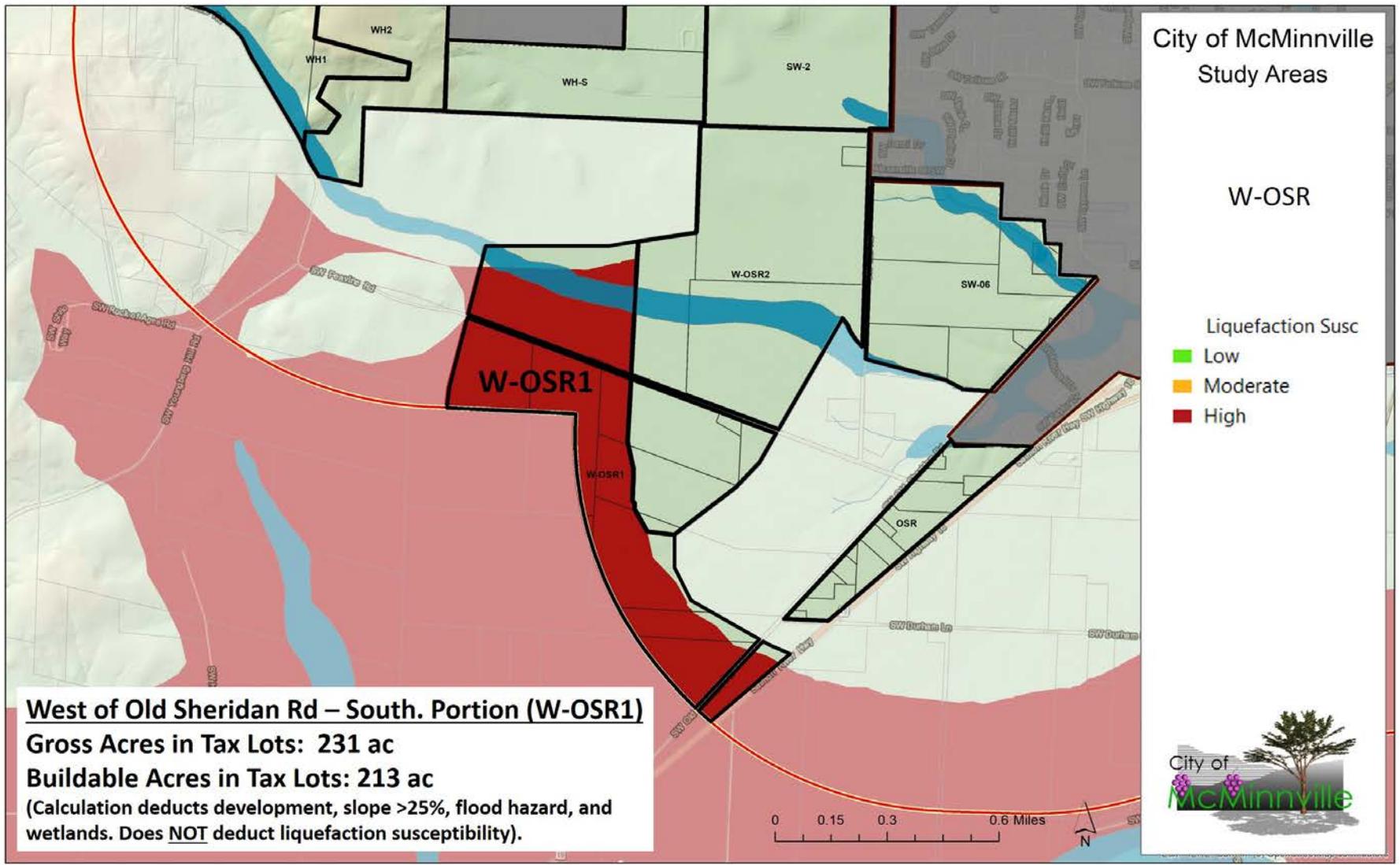




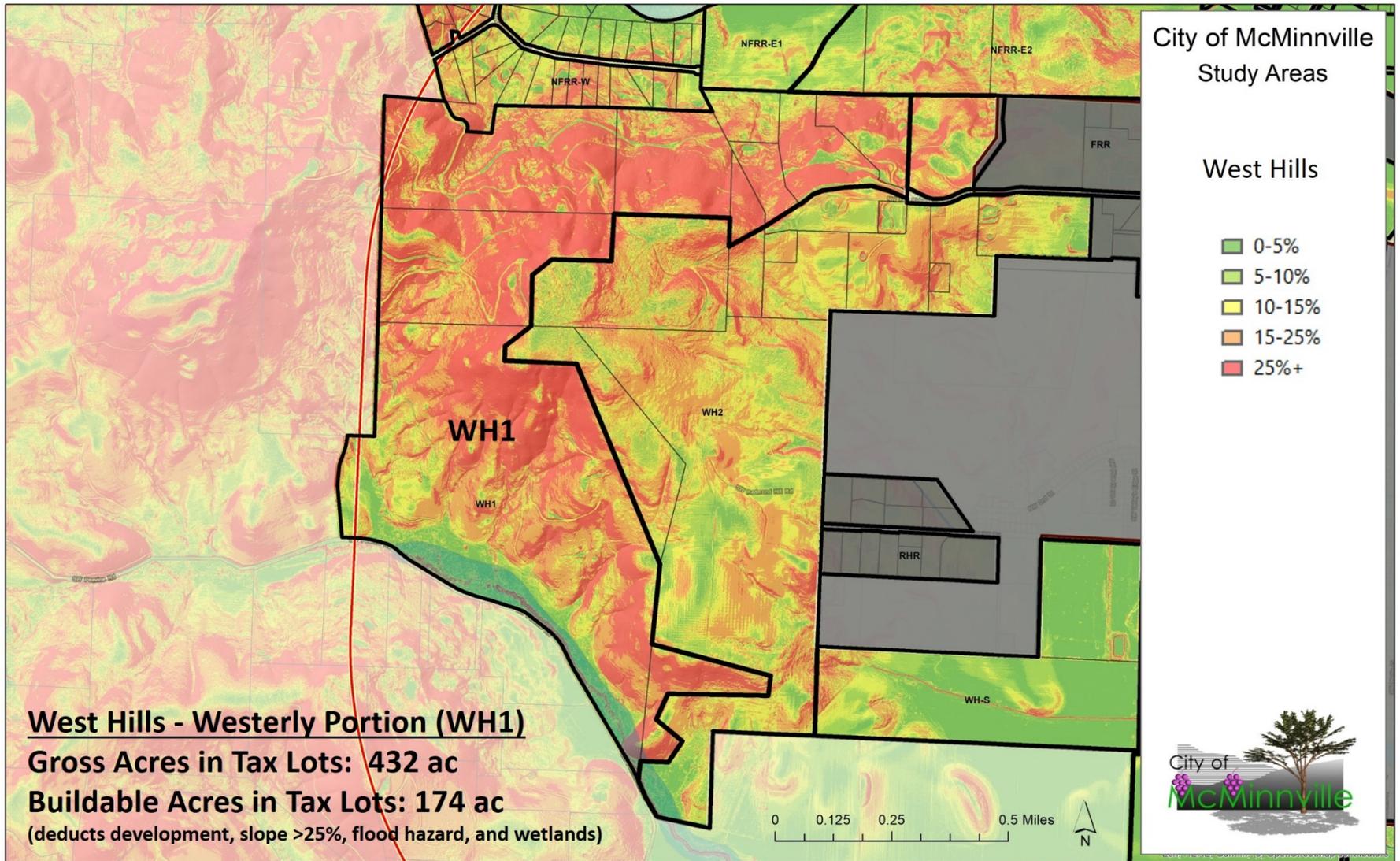
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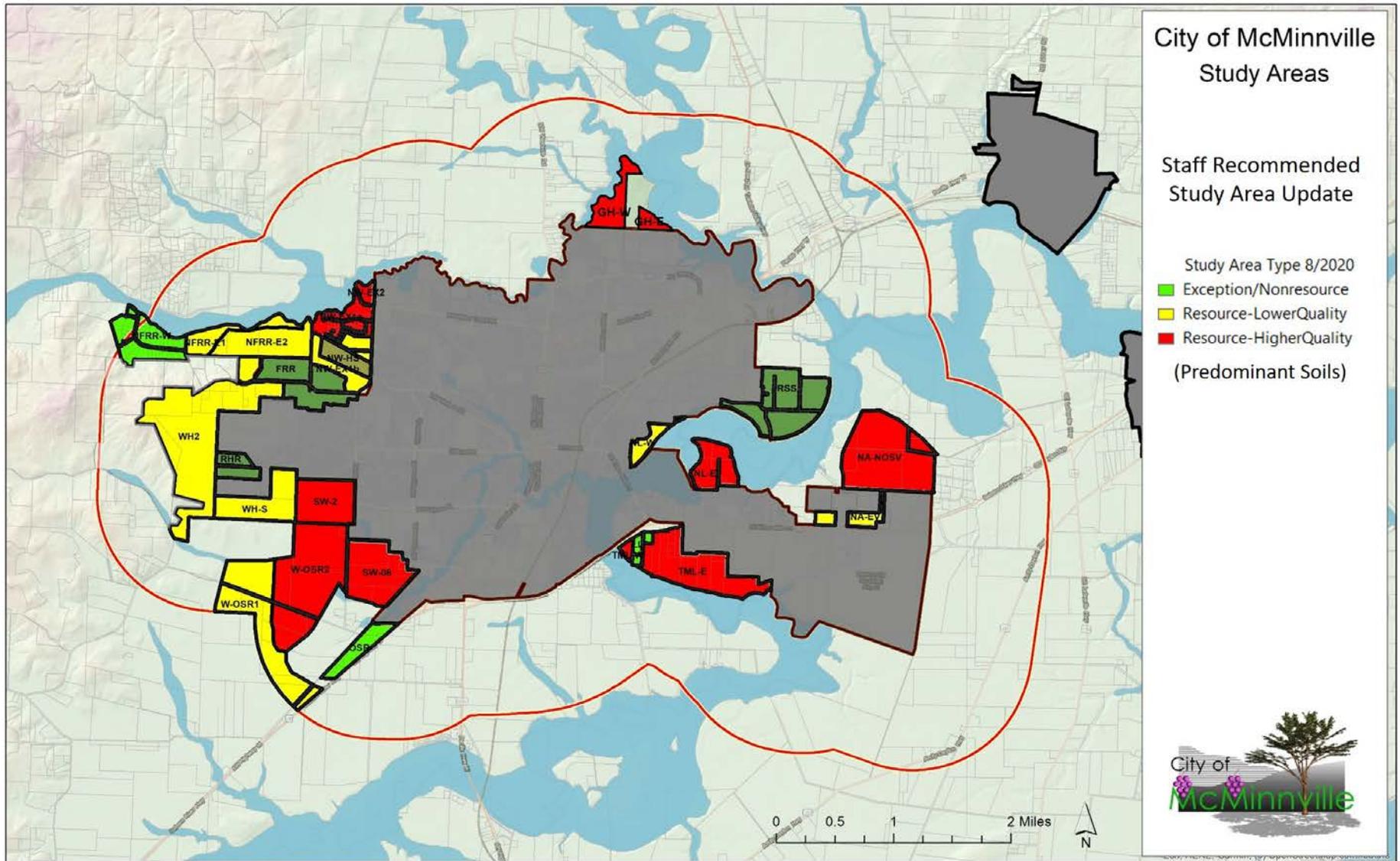


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Map is a draft, and could change with future refinements



Removed 174 acres in WH1 due to steep slopes and serviceability beyond the steep slopes, and 70 acres in GH due to Chegwyn Farms Conservation Easement.

NEXT STEPS

- ❖ **September - Application of ORS 197.298 to Buildable Land Map**
- ❖ **September - Application of Goal 14 Screening Criteria**
- ❖ **Early October – Draft UGB Map**
- ❖ **Late October – Draft Documents**
- ❖ **November – Joint CC/BOCC Meeting**
- ❖ **December – Joint CC/BOCC Public Hearing and Adoption**

CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020



GROWTH PLANNING – MCMINNVILLE, Moving Forward Mindfully



CITY COUNCIL UGB REMAND RESPONSE UPDATE, AUG 19, 2020





Growing McMinnville
MINDFULLY