LAND USE PLANNING
TRANSPORTATION PLANNING
PROJECT MANAGEMENT

MEMORANDUM

DRAFT West Linn Buildable Lands Inventory

City of West Linn

DATE	December 1, 2020
TO	Darren Wyss and Chris Meyers, City of West Linn, OR
FROM	Brandon Crawford, Matt Hastie, APG
CC	Jennifer Donnelly and Samuel Garcia, DLCD Brendan Buckley, Johnson Economics

INTRODUCTION

The purpose of this memorandum is to describe the methodology and data sources for the City of West Linn Residential Buildable Lands Inventory (BLI) and the initial results of the inventory. This BLI is a component of the West Linn Housing Needs Analysis (HNA) project, and the results will inform the Residential Land Needs Analysis (RLNA) and the Measures to Accommodate Needed Housing. The West Linn HNA is being funded through a Department of Land Conservation and Development (DLCD) grant for implementing applicable requirements of House Bills 2001 (Middle Housing) and 2003 (Regional Housing Needs Analysis) implementation. The BLI addresses land within the West Linn city limits, shown in Figure 1.

The BLI is conducted in several steps, as follows.

- **Step 1: Identify Constraints.** Constraints include the City's regulatory floodway and floodplain (100-year), steep slopes, and Title 3 and 13 areas.
- **Step 2: Classification of Land.** APG has classified every tax lot within the West Linn city limits based on residential zoning designation. The BLI for this project is confined to those properties that are designated or zoned for residential uses.
- **Step 3: Assign Development Status.** Each tax lot within the West Linn city limits is given a "development status." These development statuses are based on assessor's data, aerial photography, and staff input. Each development status type is defined later in the memo.
- **Step 4: Determine Developable Acreage and Development Capacity.** Tax lots with a "vacant" or "infill" status are given an amount of developable acreage based on their size, existing uses, and any development constraints on the property identified in Step 1. For land categorized as residential, APG has identified development capacity in number of units based on the developable acreage of a parcel and a review of the City's zoning regulations.

The remainder of this memorandum discusses these steps and initial results in greater detail.

LEGAL FRAMEWORK

STATE RULES AND STATUES

This memorandum draws on requirements related to analyzing buildable lands for UGB expansions in jurisdictions throughout Oregon and the Portland Metropolitan area. Relevant to this analysis are provisions under OAR 660 Division 24, Urban Growth Boundaries (660-024-0050 Land Inventory and Response to Deficiency) and Division 7, Metropolitan Housing (660-007). The State's Metropolitan Housing provision requires jurisdictions in the Portland Metropolitan (Metro) urban growth boundary to follow BLI guidelines for HNAs that are separate from the rest of the State's HNA requirements. This BLI uses the same methodology as the Metro Urban Growth Report (UGR, 2018).[1]

Figure 1 shows the project study area, which includes all land within the West Linn city limits, as well small portions of unincorporated land within the UGB along the southwest border of the City.

[1] Appendix 2, Buildable Land Inventory https://www.oregonmetro.gov/sites/default/files/2018/07/03/UGR_Appendix2_Buildable_Lands_Inventory.pdf

FIGURE 1. STUDY AREA

STEP 1 - CONSTRAINTS

Development constraints are factors that temporarily or permanently limit or prevent the use of economic development. Development constraints include, but are not limited to, wetlands and stream corridors (Title 3), environmentally sensitive areas such as habitat (Title 13), slope, topography, infrastructure deficiencies, parcel fragmentation, or natural hazard areas. The first step of the BLI process addresses land constrained by natural resources. Subsequent steps in the BLI removes the constrained acreage from the total area within each tax lot.

NATURAL RESOURCE CONSTRAINTS

Natural resources typically provide beneficial environmental functions or aesthetic enhancements that are necessary to preserve. The preservation of these resources often provides a constraint on the developability of an area. To reflect this, environmental resources are identified in this step and removed in subsequent steps.

The following natural resources were removed from buildable acreage at different rates due to the City allowing limited development in some resource areas. Using the Metro UGR method, the natural resources and their associated removal rates are as follows:

Single-family residential

1. Floodways: 100% removed
2. Floodplain: 100% removed
3. Slopes > 25% and Title 3 treated the same way: 100% removed
4. Title 13: 50% of Title 13 constrained acres removed from BLI (consistent with Title 13 model Ordinance)
5. Assume at least one unit per tax lot, even if fully constrained

Multi-family residential

1. Floodways: 100% removed
2. Floodplain: 50% removed
3. Slopes > 25%: 100% removed
4. Title 3: remove 50% of the constrained land with the other 50% considered buildable
5. Title 13: 15% of Title 13 constrained acres removed from BLI (consistent with Title 13 Model Ordinance)
6. Assume at least one unit per tax lot, even if fully constrained

Note that any given piece of land can have multiple, overlapping constraints. Examples of this includes steep slopes within the floodplain. Portions of resources with less protection/less constrained (e.g. Title 13) are removed from the overlapping area of higher constrained resources (e.g. Floodway). Once overlapping portions are consolidated, the natural resources are overlaid with City tax lots to estimate the amount of land in each parcel where development is limited.

The data for each natural resource constraint is derived from Metro's Regional Land Information System (RLIS). The full constraints, including overlapping portions, are shown on Figure 3.

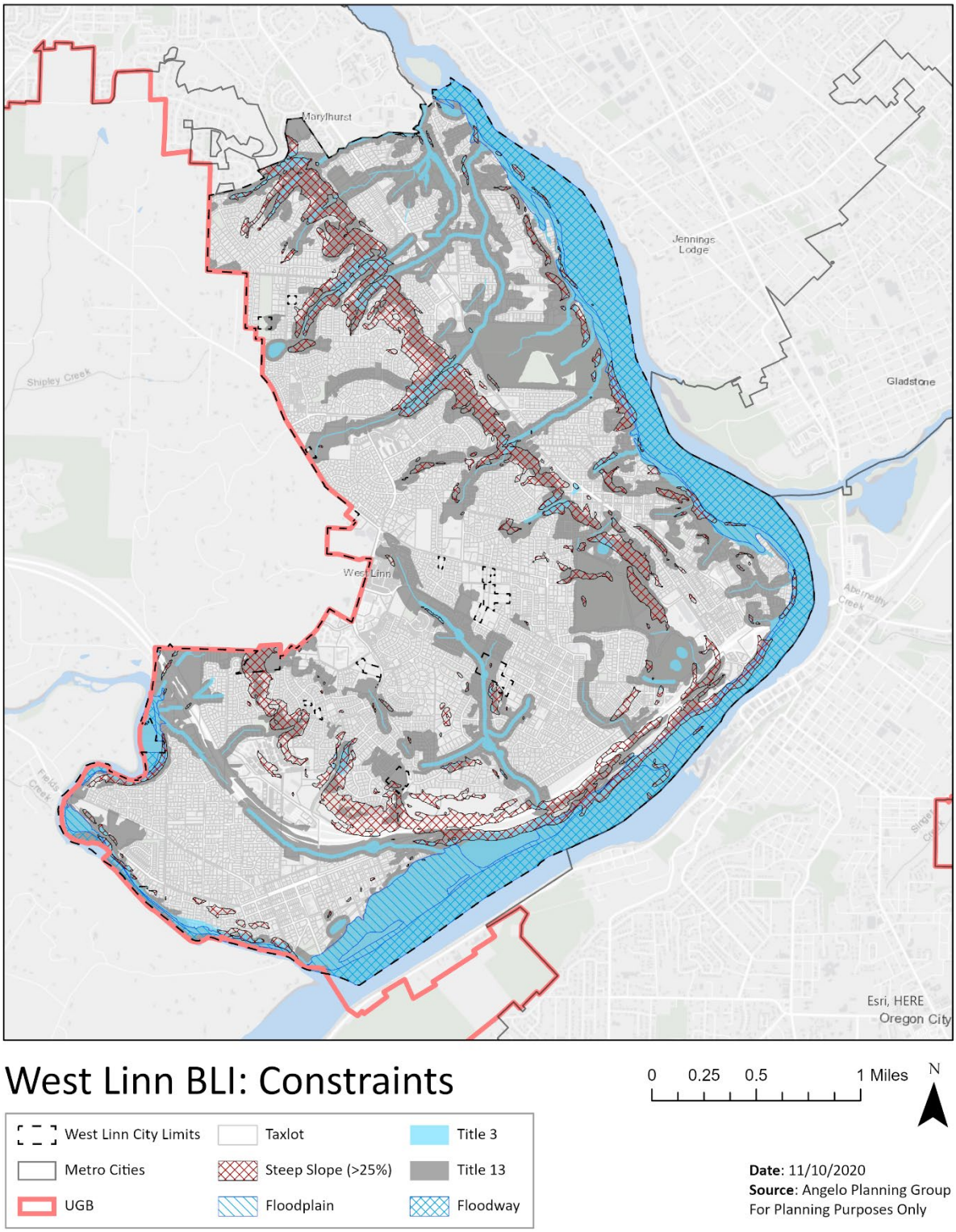
Table 1 summarizes the acreage for each constraint. Note that land can be subject to more than one constraint, as explained earlier. A significant portion of the City's natural resource constraints include Title 13 and Title 3 land, which is largely composed of stream corridors, wetlands, and upland habitat. While much of the City has Title 13 and 3 land, a substantial portion of these areas is still considered buildable, as noted above.

TABLE 1: ENVIRONMENTAL CONSTRAINT SUMMARY

Constraint	Total (acres) *
Total	*4,811.4*
Steep Slopes	586.4
Floodway	511.9
Floodplain	216.6
Title 3	1,013.6
Title 13	2,482.9

* Note: Total acres does not account for overlap among categories

FIGURE 2. CONSTRAINTS MAP



STEP 2 - CLASSIFICATION OF LAND

For the purpose of this analysis, residential land is identified as the following:

- Lands identified as a residential zone in the City's Zoning Code. These include:
    - Single-Family Detached (R-40, R-20, R-15, R-10)
    - Single-Family Detached and Attached/Duplex (R-7, R-5, R-4.5)
    - Single-Family and Multiple-Family (R-3, R-2.1)

Land zoned for other uses (commercial, industrial, open space, etc.) is excluded. Although the City's zoning code allows for limited residential uses in other, non-residential zones, it is not the primary purpose of these zones and there is no guarantee that land so designated will be used for residential purposes. The City's residential zones are shown in Figure 3.

FIGURE 3: RESIDENTIAL ZONES IN WEST LINN

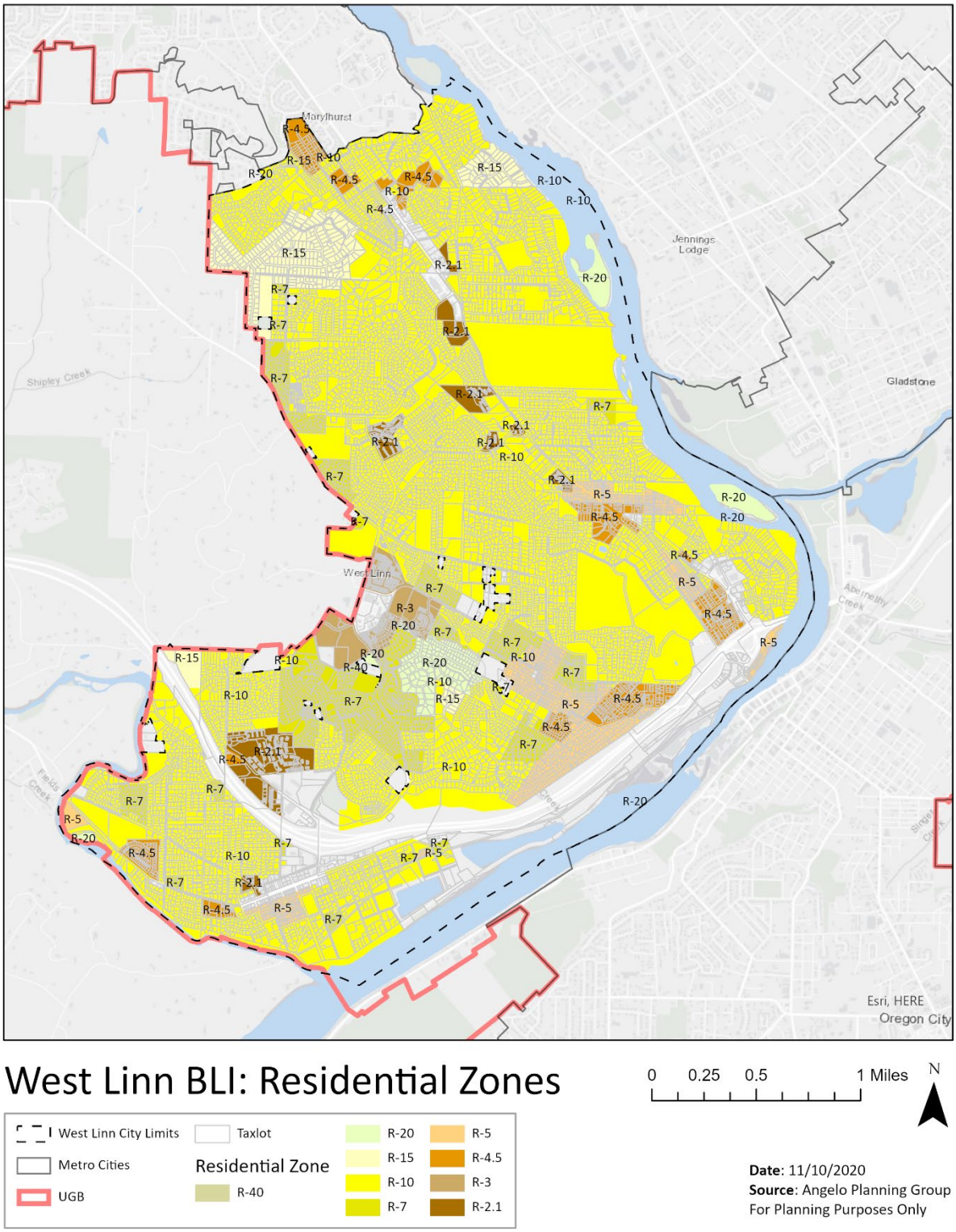


Table 2 summarizes the amount of residentially zoned and land that is constrained. There is a total of 3,499 acres of residential land within the City. As shown, R-10 represents a significant portion of all residential land within the City at approximately 2,528 acres (approximately 72% of residential land).

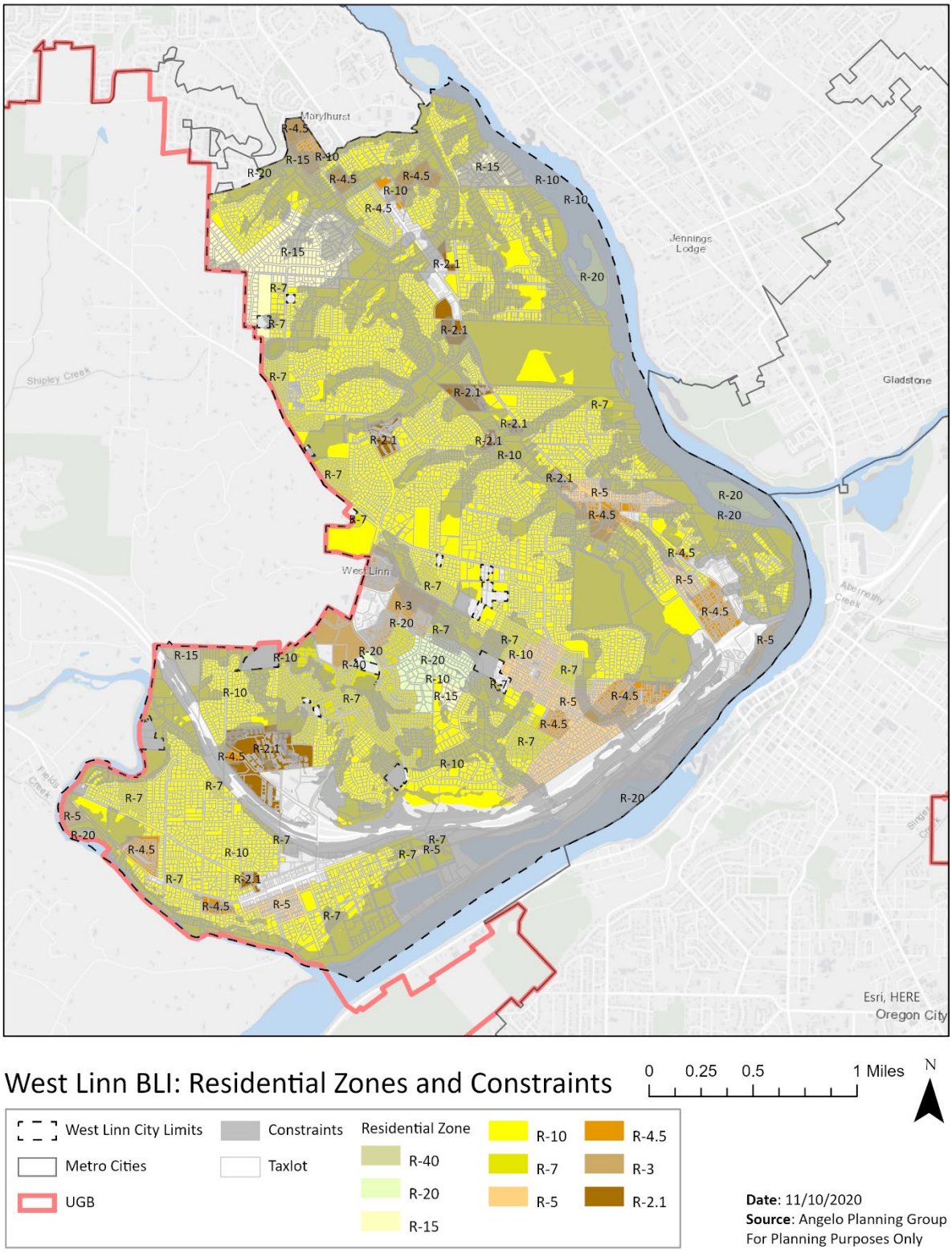
Most zones have a significant amount of natural resource constrained area relative to their total area, with R-20, R-15, R-10, and R-2.1 all showing nearly half their land as constrained. Every residential zone's constrained land represents at least 20% of the zone's entire land base (aside from R-40), while nearly half the City's residential land has some constraint on it (1,701 acres). Note that this table accounts for overlapping constraints, thus includes fewer constrained acres than shown in Table 1.

TABLE 2: GROSS ACREAGE IN RESIDENTIAL LAND INVENTORY

Zone/Comp Plan	Constrained (acres)	Unconstrained (acres)	*Total (acres)*
R-40	0.0	0.9	*0.9*
R-20	60.0	43.0	*103.0*
R-15	80.2	86.4	*166.6*
R-10	1,344.2	1,184.0	*2,528.2*
R-7	72.0	193.4	*265.4*
R-5	33.5	101.9	*135.5*
R-4.5	56.9	70.5	*127.4*
R-3	14.7	55.0	*69.7*
R-2.1	39.7	62.9	*102.6*
Total	**1,701.2**	**1,798.0**	***3,499.2***

Residential land classifications with constraints overlaid are shown in Figure 4. Consistent with the table and figures above, a substantial portion of constrained appears in R-10 areas, which represents most of the City's residential land overall.

FIGURE 4. RESIDENTIAL ZONES AND CONSTRAINTS



STEP 3 - DEVELOPMENT STATUS

Each residential tax lot within the West Linn city limits has a "development status" of either vacant, infill, committed, or developed. These designations are based on County tax assessor's data, aerial photography, and staff input. Criteria for these categories follows the Metro UGR methodology and are described below.

DEVELOPMENT STATUS FOR RESIDENTIAL TAX LOTS

- **Vacant** – Vacant tax lots have no existing development, as identified by assessor data or the Metro RLIS Developed GIS layer. Vacant tax lots are identified as follows:
  - Any tax lot that is fully vacant, based on Metro aerial photo.
  - Tax lot with less than 2,000 sq. ft. developed AND developed portion is under 10% of the entire tax lot area.
  - Tax lots that are 95% or more "vacant" from the GIS vacant land inventory.
- **Infill** – These tax lots have existing single-family and meet the following criteria:
  - Lot size threshold > 2.5 times the minimum zoned lot size and less than $300,000 in improvement/building values.
  - Any parcel that is > 5 times the minimum zones lot size, regardless of property value.
- **Committed** – These properties include parcels in common ownership (e.g., homeowners' association common areas), are in private and public rights-of-way, and/or are designated or planned for other public facilities (e.g., schools, parks, water treatment facilities, etc.), and are assumed to be unavailable for additional residential uses. They are also properties under 1,000 square feet. The RLIS datasets for schools and Outdoor Recreation and Conservation Areas (ORCA) are the primary datasets used to identify committed parcels.
- **Developed** – Tax lots with this designation are assumed to be fully developed and unavailable for additional uses. Any tax lot that was not previously identified as vacant, infill, or committed was assumed to be developed.[2]

Table 3 summarizes the number of tax lots within each development status category by the respective zoning designation. As shown in the table, there is an estimated 706 vacant or infill tax lots within the City (approximately 7% of residentially zoned tax lots).

[2] Developed lots were assessed for redevelopment in multifamily zones using the Metro UGR methodology. This approach assumes that a total real market property value (RMV) to property area ratio below a certain threshold has a high redevelopment probability. The Metro UGR method uses a $10/sqft threshold, or "strike price", for suburban areas, which includes West Linn. There are no multi-family properties in the City that are below the $10/sqft strike price. Therefore there are no properties in the City that meet "redevelopment" development status criteria.

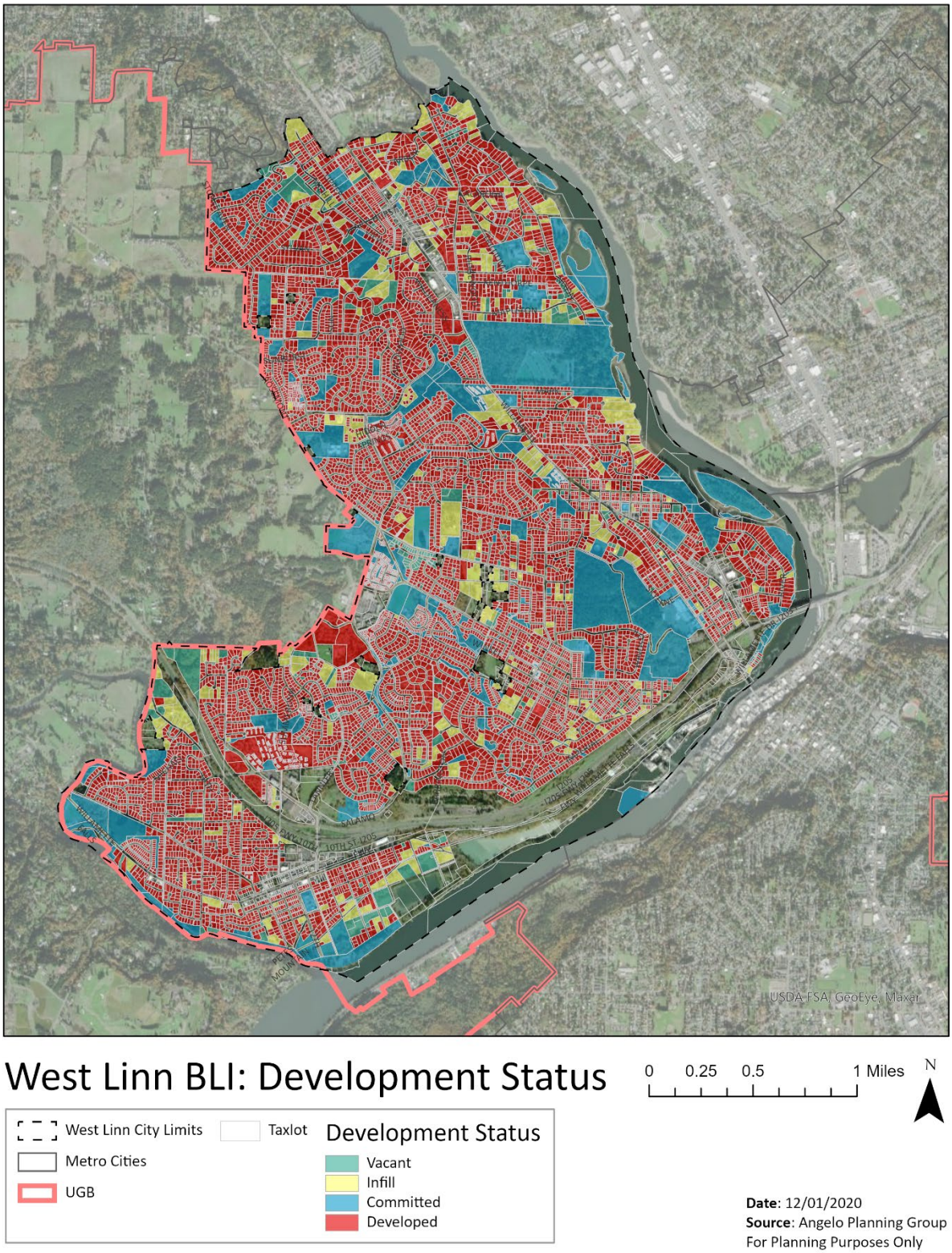
TABLE 3. NUMBER OF TAX LOTS BY DEVELOPMENT STATUS AND ZONE

Zoning/ Comp Plan	Vacant	Infill[3]	Committed	Developed	Grand Total
R-40				1	*1*
R-20	1		15	139	*155*
R-15	13	5	5	292	*315*
R-10	280	212	225	5,302	*6,019*
R-7	37	11	40	1,076	*1,164*
R-5	37	30	47	612	*726*
R-4.5	35	33	34	440	*542*
R-3	2	1	21	310	*334*
R-2.1	4	5	686	241	*936*
Grand Total	**409**	**297**	**1,073**	**8,413**	***10,192***

Figure 5 illustrates the location and development status of tax lots within the City. As shown, most of the area is developed throughout the City. New residential development opportunities in the City are sparse, with vacant and infill lots scattered throughout the City and a few small, concentrated pockets of vacant lots along the fringes.

[3] The infill estimation based on the Metro UGR methodology may overestimate the number of lots that are likely to redevelop or add capacity during the planning period. This BLI analysis identified a number of small lots that fit the Metro UGR infill criteria but that appear to be unlikely to experience addition development within the next 20 years, given the size of the lot, the value of the home, and/or the placement of the existing home on the lot. The Metro UGR criteria applies to the whole region, and therefore may overestimate infill capacity for smaller jurisdictions with less development pressure.

FIGURE 5. DEVELOPMENT STATUS



STEP 4 - DETERMINE DEVELOPMENT CAPACITY

The capacity of developable residential land is estimated based on the City's zoning provisions of the West Linn Development Code. Buildable land is the unconstrained acreage minus the assumed future right-of-way (ROW) dedication to accommodate dwelling units (e.g. streets). Consistent with Metro UGR methods, ROW dedication removal from unconstrained acreage was determined from the following sliding scale:

- Tax lots under 3/8 acre, assume 0% set aside for future streets.
- Tax lots between 3/8 acre and 1 acre, assume a 10% set aside for future streets.
- Tax lots greater than an acre, assume an 18.5% set aside for future streets.

Assumed densities for each zone were determined by the minimum lot sizes shown in Table 4, coupled with data related to the density of previously permitted developments, and an assumption that future densities are likely to be marginally higher based on allowed middle housing types in these zones.

TABLE 4: RESIDENTIAL AREAS, MINIMUM LOT SIZE, AND DENSITY ASSUMPTION

Zone	Minimum Lot Size(s) (square feet)	Density Assumption	City's Current Density Provisions
Single-Family Detached (R-40)	SFR – 40,000	1.2 DU/acre	1.1 DU/acre
Single-Family Detached (R-20)	SFR – 20,000	2.5 DU/acre	2.18 DU/acre
Single-Family Detached (R-15)	SFR – 15,000	3.5 DU/acre	2.9 DU/acre
Single-Family Detached (R-10)	SFR – 10,000	5 DU/acre	4.35 DU/acre
Single-Family Detached and Attached (R-7)	SFR – 7,000, SFR Attached – 5,500	6.5 DU/acre	6.2 DU/acre
Single-Family Detached and Attached/Duplex (R-5)	SFR – 5,000, SFR Attached – 4,500	9 DU/acre	8.7 DU/acre
Single-Family Attached and Detached Duplex (R-4.5)	SFR – 4,500, SFR Attached – 4,000	10 DU/acre	9.68 DU/acre
Single-Family and Multiple-Family (R-3)	SRR (detached and attached) – 3,000, MFR – 3,000 per unit	14 DU/acre	14.5 DU/acre
Single-Family and Multiple-Family R-2.1	SFR – 4,000, SFR Attached – 2,700, MFR – 2,100	20 DU/acre	20.74 DU/acre

The housing capacity was estimated by multiplying the assumed density by the estimated buildable acreage for each zone. Additionally, housing capacity for each parcel was rounded to the nearest whole number. Specifically, all parcels with a calculated capacity greater than one unit were rounded down, while those calculated to be less than one unit were rounded up. As previously mentioned, every lot that is fully constrained is assumed to accommodate at least one unit, consistent with Metro UGR methodology. This approach assumes that every vacant or infill parcel can accommodate at least one unit. The buildable acreage is shown in Table 5, and the estimated housing capacity and density assumptions are shown in Table 6. Housing capacity estimates are mapped in Figure 6.

TABLE 5: ESTIMATED BUILDABLE ACRES BY DEVELOPMENT STATUS AND ZONE

Residential Area	Vacant	Infill[4]	Grand Total
R-40	--	--	--
R-20	--	--	*0.0*
R-15	6.1	1.2	*7.3*
R-10	38.6	106.2	*144.7*
R-7	5.6	10.3	*15.9*
R-5	3.3	9.9	*13.2*
R-4.5	3.1	11.3	*14.5*
R-3	0.1	0.2	*0.4*
R-2.1	0.4	1.9	*2.3*
Grand Total	**57.3**	**141.0**	***198.3***

TABLE 6: HOUSING UNIT CAPACITY ESTIMATE AND DENSITY ASSUMPTIONS[5]

Residential Area	Assumed Density	Vacant	Infill[6]	Grand Total
R-40	1.2 DU/acre	--	--	--
R-20	2.5 DU/acre	1		*1*
R-15	3.5 DU/acre	29	5	*34*
R-10	5 DU/acre	318	489	*807*
R-7	6.5 DU/acre	46	63	*109*
R-5	9 DU/acre	40	76	*116*
R-4.5	10 DU/acre	40	105	*145*
R-3	14 DU/acre	2	2	*4*
R-2.1	20 DU/acre	7	36	*43*
Grand Total	**N/A**	**483**	**776**	***1,259***

[4] See footnote 3 on page 12 regarding potential infill capacity.
[5] There are minor discrepancies between some of these figures and the product of multiplying the buildable acreage (Table 5) for some zones with their corresponding assumed density. This is because multiplying each zone's total buildable acreage with its assumed density does not account each parcel's rounding to the nearest whole number, which was discussed in the Step 4 methodology.
[6] See footnotes 3 and 4.

FIGURE 6: ESTIMATED HOUSING UNIT CAPACITY