LAND USE PLANNING
TRANSPORTATION PLANNING
PROJECT MANAGEMENT

MEMORANDUM

Buildable Lands Inventory – Methodology and Results

Happy Valley, OR

DATE	November 4, 2020
TO	City of Happy Valley, OR
FROM	Andrew Parish and Matt Hastie, APG
CC	File

INTRODUCTION

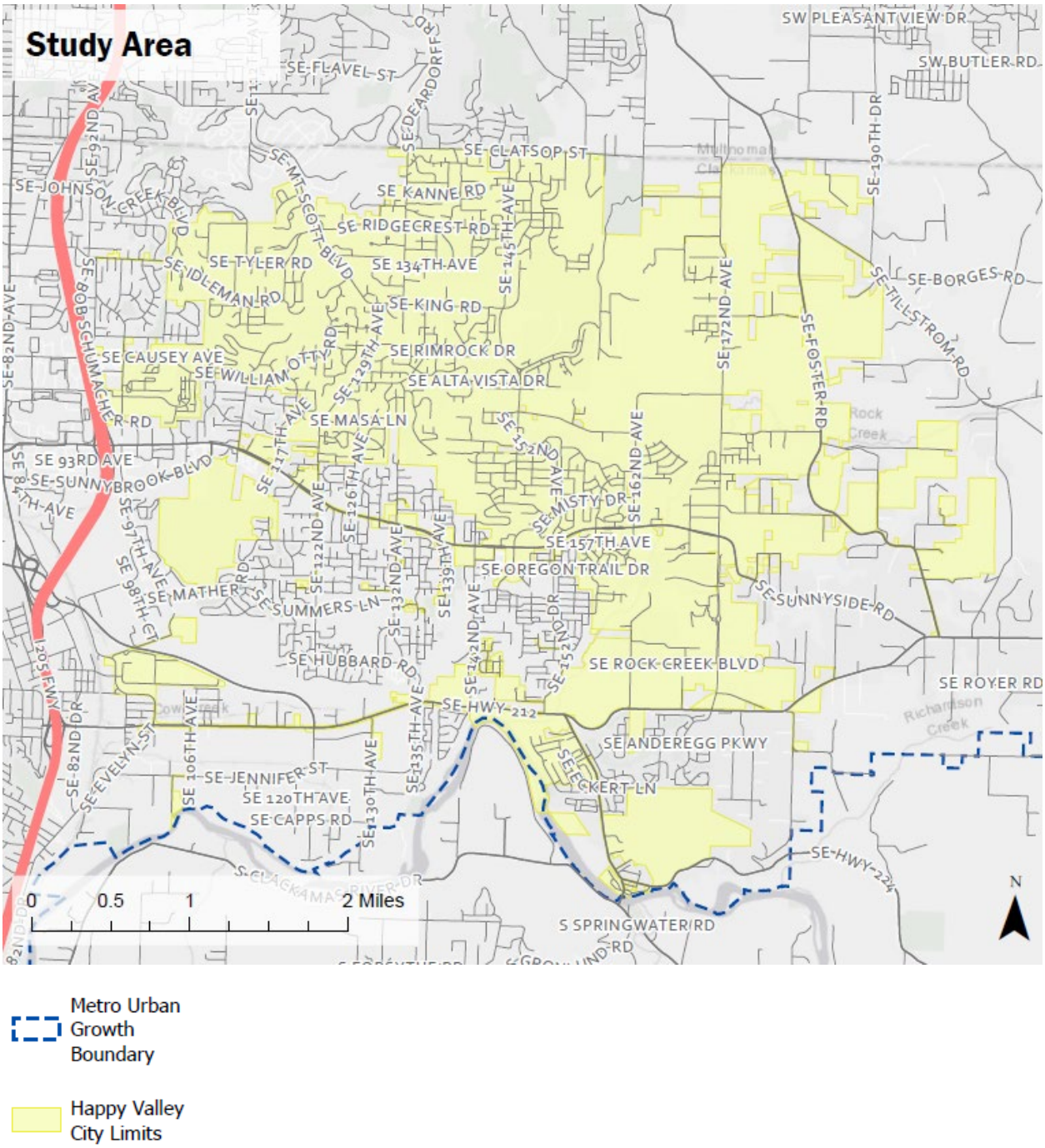
The purpose of this memorandum is to describe the methodology, and data sources, and results for the Happy Valley Residential Buildable Lands Inventory (BLI). The BLI provides an assessment of the amount of buildable land and expected capacity by unit type within the Happy Valley city Limits, shown in Figure 1.

The BLI is conducted in several steps, as follows.

- **Step 1. Classification of Land.** We have classified every taxlot within the city boundaries as either residential, employment, rural, or "other" based on zoning designation, assessor's data, and staff input. The BLI for this project is confined to those properties that are zoned for residential, mixed use (residential and commercial), and rural uses. The inclusion of rural zones is unusual for a BLI and described in more detail later in this memorandum.
- **Step 2. Identify Constraints.** Constraints include conservation slopes (greater than 25%), transition slopes (between 15% and 25%), protected water quality resources (PWQR) and associated buffers, floodplains, and utility corridors. This step approximates the city's development regulations that limit residential capacity in these areas.
- **Step 3. Development Status.** Each taxlot within the City of Happy Valley was given a "development status" of either developed, vacant, partially vacant, or committed, based on assessor's data, aerial photography, and staff input.
- **Step 4. Determine Developable Acreage.** Taxlots with a vacant or partially vacant status were given an amount of developable acreage based on their size, existing uses, and any development constraints on the property identified in Step 1.
- **Step 5. Determine Development Capacity.** For land categorized as residential, we identified identify development capacity in number of units based on the developable acreage of a parcel and an review of the city's zoning regulations. A redevelopment screen was also used to evaluate whether lower-intensity uses in mixed use/multifamily zones would be likely to yield additional residential capacity.

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

FIGURE 1. STUDY AREA MAP



LEGAL FRAMEWORK

This memorandum draws on the methodology used in the Metro 2018 Buildable Land Inventory[1], which is consistent with State of Oregon rules and statutes related to analyzing buildable lands for planning purposes, including potential Urban Growth Boundary (UGB) expansions.[2]

These statutes and rules provide the following guidance for assessment of buildable lands:

- Physical constraints on the developability of land to include floodways and water bodies, land with greater than 25% slopes and lands subject to Goal 5, Goal 6, or Goal 7;
- Land should be categorized as vacant, partially vacant, or developed;
- A BLI must consider lands for public facilities such as roads, stormwater facilities, schools, etc.; and,
- Publicly owned land is not generally considered available for development.

CITY OF HAPPY VALLEY LAND USE REGULATIONS

The following Land Development Code (Title 16 of the Municipal Code) provisions are applicable to this BLI effort and have informed this methodology:

- Density provisions for residential/mixed use zoning designations (16.2);
- Regulations of the Steep Slopes Development Overlay Zone (16.32);
- Regulations of the Natural Resources Overlay Zone (16.34); and,
- Density calculations for Land Divisions (16.63.020 (F)).

STEP 1 - CLASSIFICATION OF LAND

Land within the City of Happy Valley is categorized as either Residential, Employment, or Other based on zoning designation. Residential land is further broken down into sub-categories, which differ in how natural resources are addressed on parcels:

- **Residential** – Land with a single family, multifamily, or mixed-use zoning designation, as follows:
    - Single Family Zones: R-40, R-20, R-15, R-10, R-8.5, R-7;
    - Mixed Use/Multifamily Zones: MUR-A, MUR-X, MUE, PMU, MUR-M1, MUR-M2, MUR-M3;
    - High Density Attached: MUR-A, SFA, VTH;
    - Medium Density Single Family: MUR-S, R-5, VR5/7;
    - Low Density Single Family: R-10, R-8.5, R-7; and,
    - Very Low Density Single Family: R-40, R-20, R-15

[1] https://www.oregonmetro.gov/sites/default/files/2018/07/03/UGR_Appendix2_Buildable_Lands_Inventory.pdf
[2] (OAR 660-009-0005 (Definitions); 660-007-0005 (Definitions); 660-024-0050 (Land Inventory and Response to Deficiency); 660-038 (Simplified Urban Growth Boundary Method))

- **Employment** – Land with a zoning designation of RC, RC-ME, RC-MU, CCC, EC, IC, MCC, MUC, VO, VC, RI;
- **Rural:** – EFU, FF10, FU10, RRFF5, RA2; and,
- **Other:** River, IPU

Zoning districts are shown on Figure 2, and land classification is shown on Figure 3. The focus of this BLI analysis is residential land; taxlots with classifications of "Employment" and "Other" are not addressed further in this report.

Rural designations are included in the analysis but treated separately – it is unlikely that significant residential development will occur in these areas without application of urban zoning such as through the Pleasant Valley/North Carver Concept Plan (currently in progress) or other means. These areas represent future additional capacity for residential development, but that capacity cannot be accurately estimated prior to application of specific urban Comprehensive Plan and zoning designations.

FIGURE 2. CITY OF HAPPY VALLEY ZONING MAP

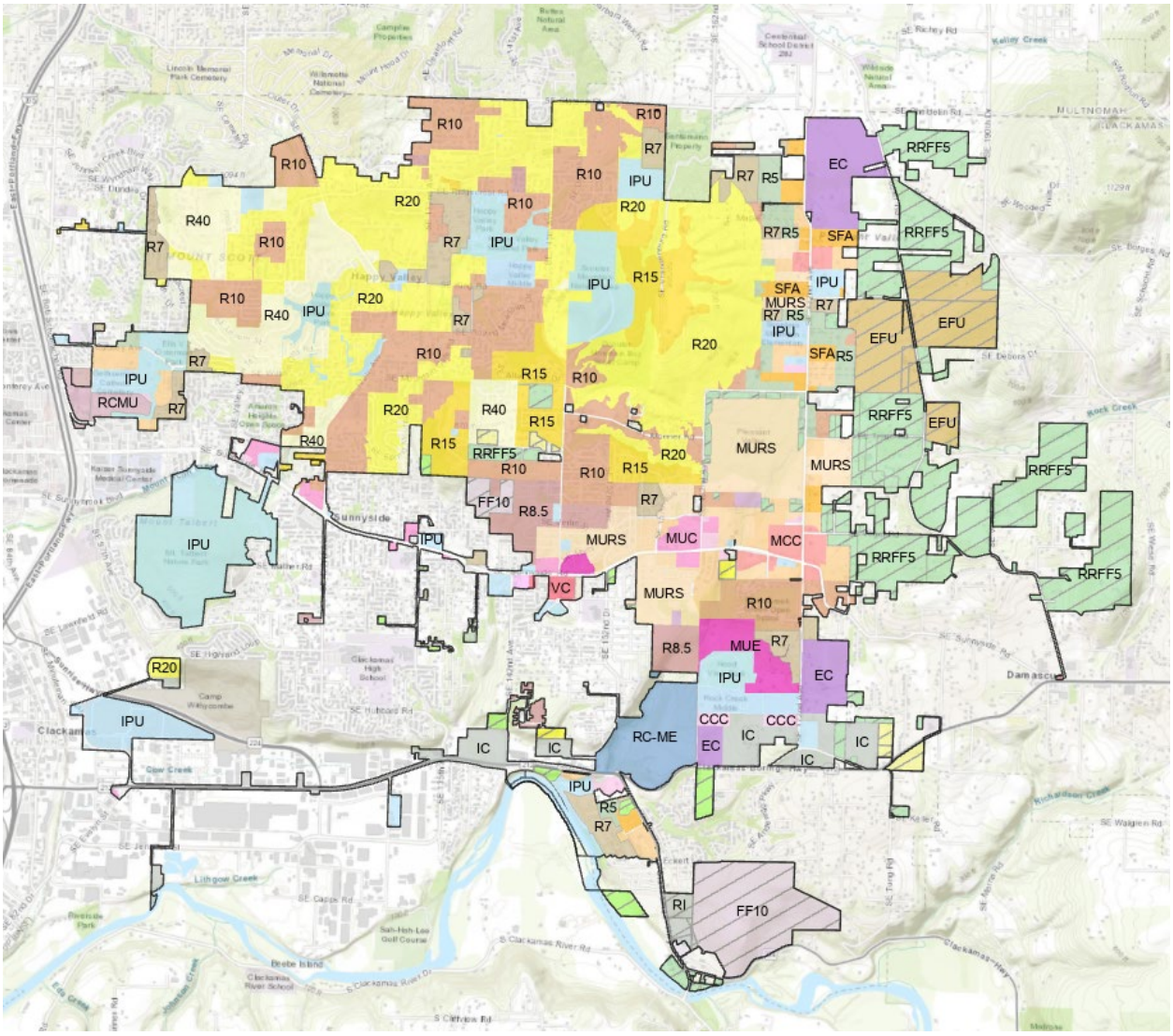
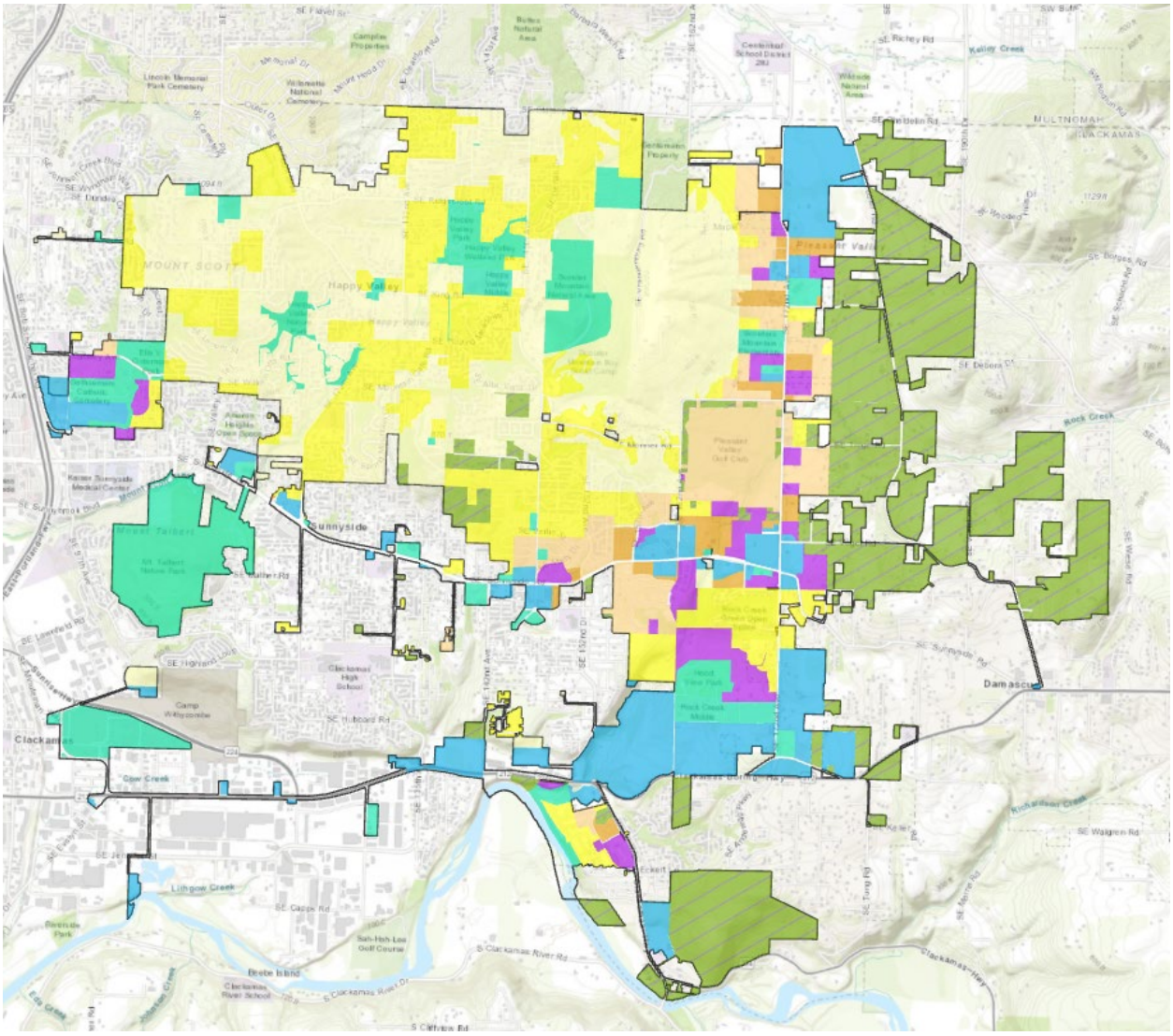


FIGURE 3. LAND TYPE MAP



STEP 2 – IDENTIFY CONSTRAINTS

The next step of the BLI process addresses land constrained by topography, water resources, habitat areas, and utility easements by removing constrained acreage from the total area of tax lots. Within the City of Happy Valley, constraints include the following:

- **Constrained Land**
  - Conservation slope areas (slopes twenty-five percent and greater) as defined in Chapter 16.32;
  - Potentially hazardous analysis areas (lands within twenty-five (25) feet of the top or toe of slopes of conservation slope areas) as defined in Chapter 16.32, approximated for this study by a simple 25' buffer from conservation slope areas;
  - Protected water quality features; and,
  - Land within powerline and natural gas utility easements.
- **Partially Constrained Land**
  - Transition slope areas (slopes of 15% or greater) as defined in Chapter 16.32;
  - Vegetated corridors (maximum 200' buffer from protected water quality features); and,
  - High and Moderate value habitat conservation areas (HCAs) as defined in Section 16.34.020(D)(2).

The City of Happy Valley has varying regulations for developability and density transfer for each of these constraints. Table 1 describes how they are treated in this analysis and provides references to the city's LDC .

TABLE 1. CONSTRAINTS

Resource Area	Developability/Density Transfer	Other Provisions/citation
HCA – High and Medium	10% developable at 2 du/ac transfer	**Table 16.63.020-1** Simplified to 10% developable for both high and medium HCA.
Conservation Slopes (including 25' buffer)	2 du/ac transfer	**16.32.090**
Transition Slopes	50% of land at 2 du/ac transfer, 50% developable at base density	**16.32.090.** The amount of transition slopes eligible for density transfer varies based on the proportion of the site affected. For this high-level analysis, we have simplified the coverage data and used 50% (the high end allowable).
Protected Water Quality Resource Areas	Unbuildable, density transfer at 2 du/ac	**16.34.060**
Vegetated Corridor (200' buffer from Water Quality Resource Areas)	50% developable at base density (no density transfer), 50% at 2 du/ac	**16.34.060.** Buffer widths vary depending on a formula applied during development review. 200' is the widest buffer possible.
Utility Corridor	Unbuildable, no density transfer	**Table 16.63.020-1**

The maximum allowed density of a parcel is 175% of the density permitted by the underlying zone district.
Constraints are shown on Figure 4 and Figure 5.

FIGURE 4. HCA, WATER QUALITY RESOURCES, AND UTILITY CORRIDORS

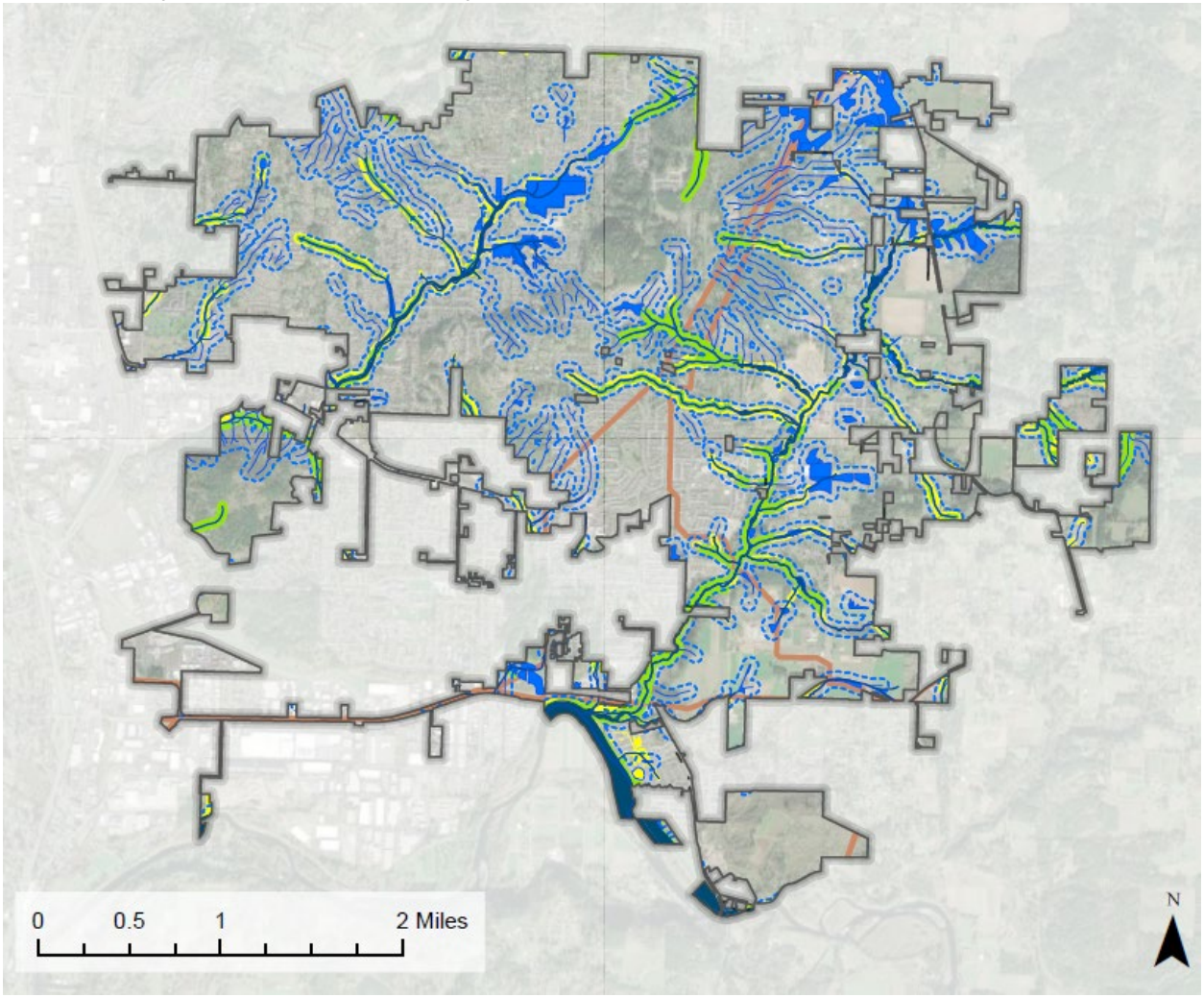
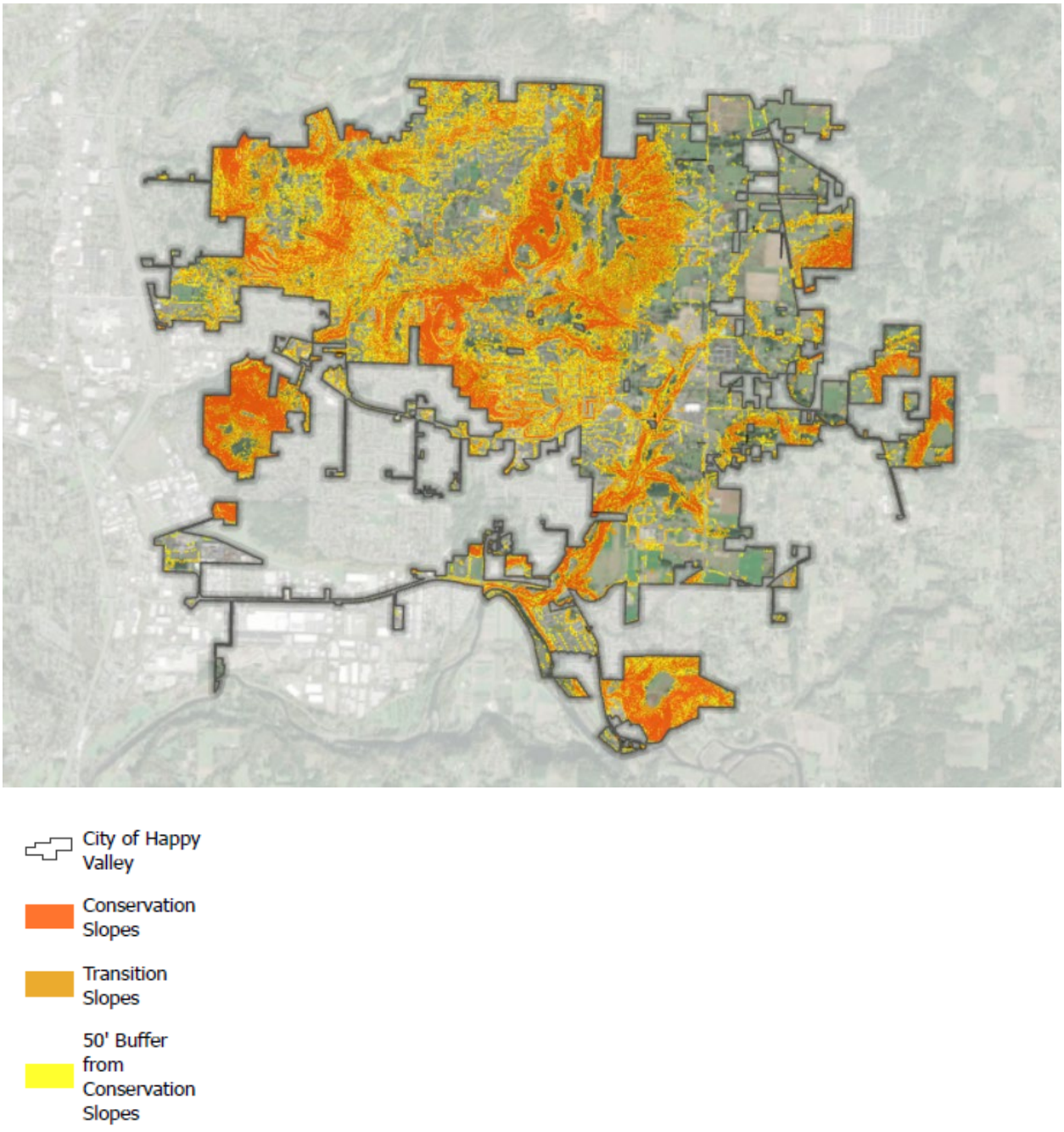
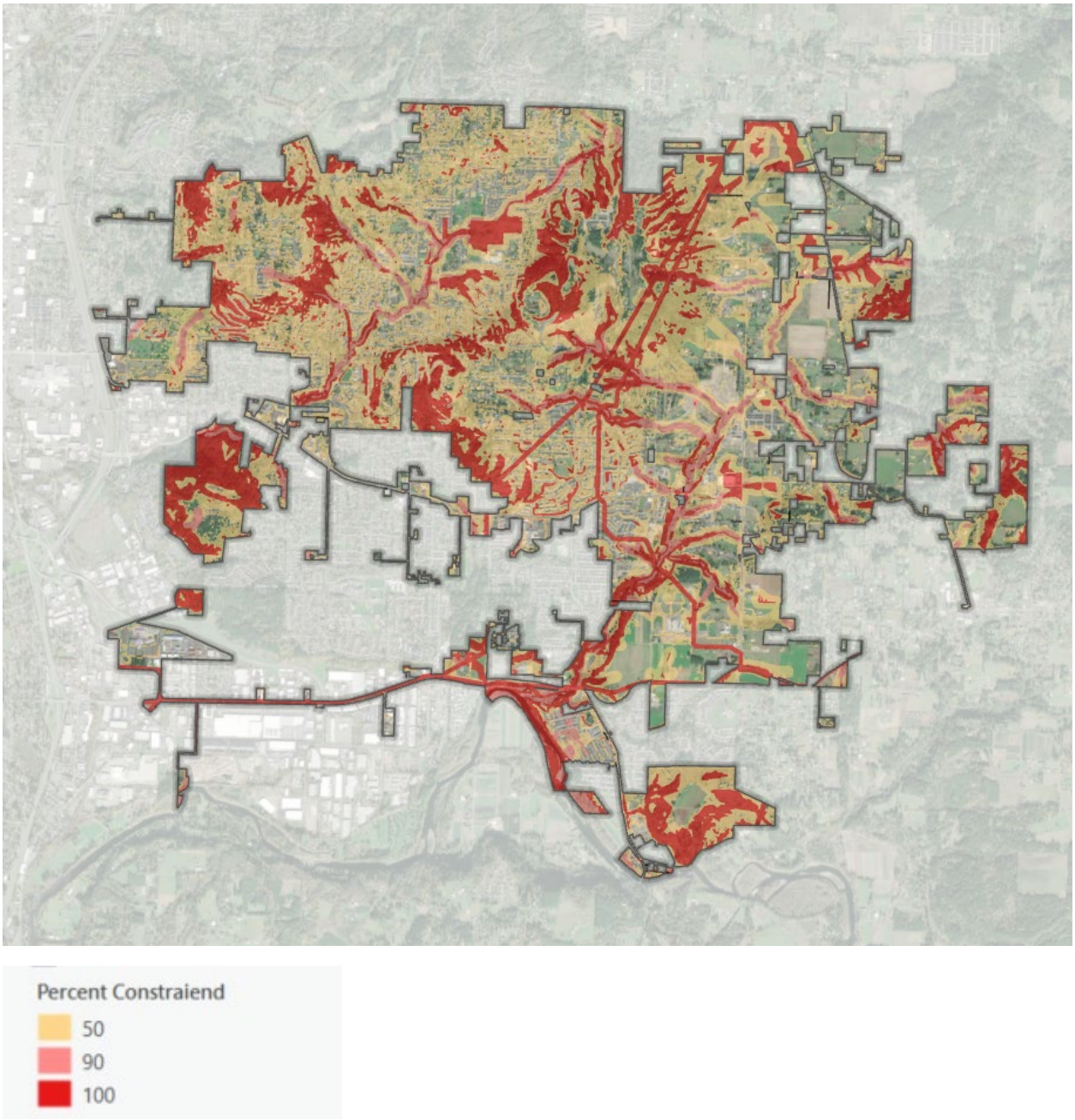


FIGURE 5. STEEP SLOPES MAP



Constraints were processed via spatial unions and intersections with Happy Valley taxlots, providing the total amount of each type of constraint present on each taxlot in the city. This information is the basis for calculations of buildable land and development status in the following steps. The overall constraints are shown in Figure 6.

FIGURE 6. OVERALL CONSTRAINTS



STEP 3 - DEVELOPMENT STATUS

Each residential taxlot within the Happy Valley city limits was given a "development status" of either developed, vacant, partially vacant, or committed. This designation is based on assessor's data, aerial photography, and staff input. Criteria for these categories are described below.

DEVELOPMENT STATUS FOR RESIDENTIAL TAXLOTS

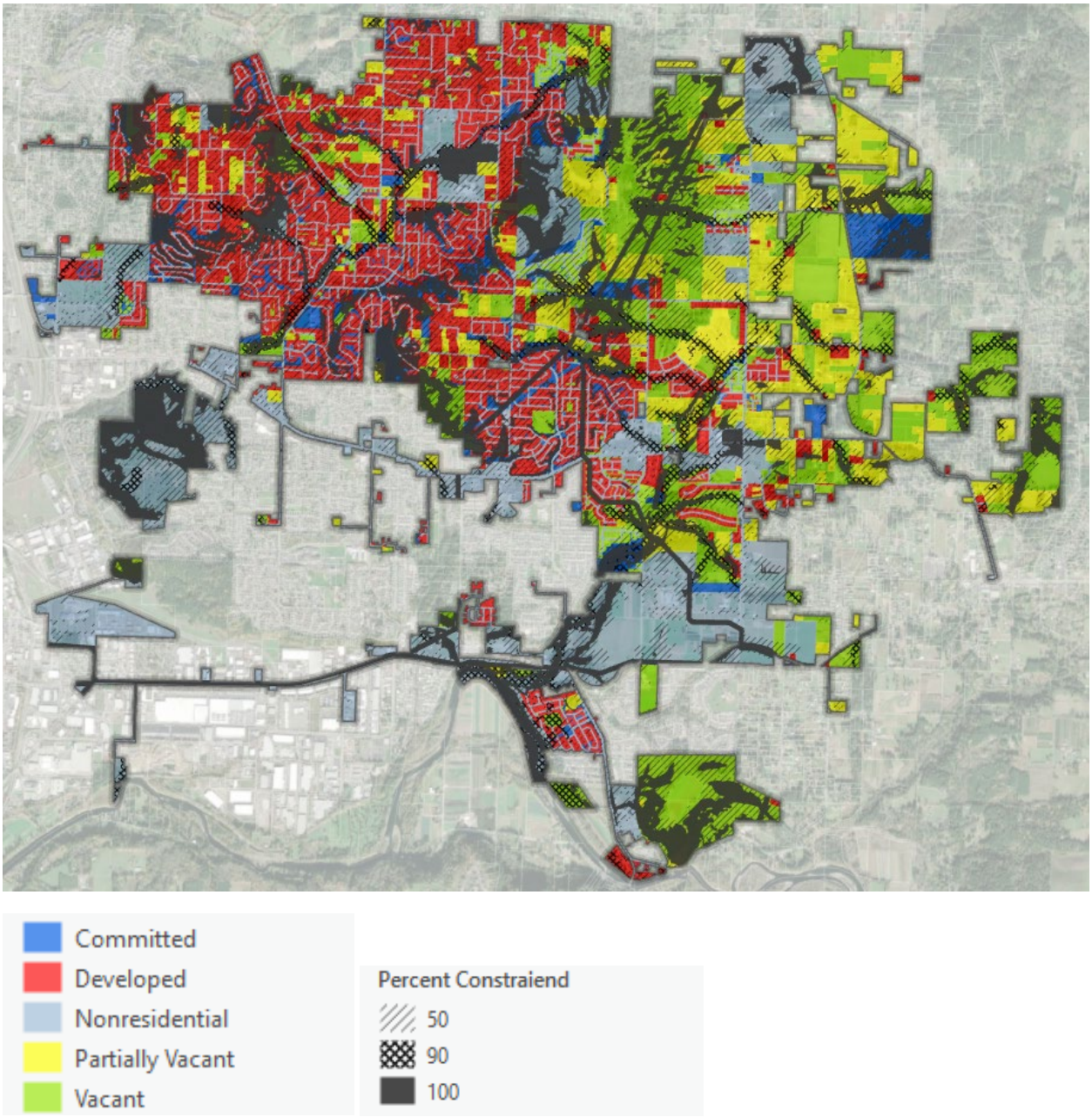
- **Vacant** – Vacant taxlots have no existing development, as identified by assessor data or aerial photography. The acreage of these taxlots is that is not impacted by one or more of the constraints categories identified in Step 1 is assumed to be fully developable.
- **Developed** – These taxlots are assumed to be fully developed and undergo an additional redevelopment screen.
- **Partially Vacant** – These taxlots are greater than 1/2 acre in size contain both developed area (generally an existing home) and vacant area. One quarter-acre is deducted from the unconstrained acreage of the taxlot to account for the existing home and any remaining unconstrained acreage is considered available for future development.
- **Committed** – These properties include parcels in common ownership (i.e., a homeowners' association), 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.

REDEVELOPMENT SCREEN FOR DEVELOPED TAXLOTS

The economic screen for determining which tax lots could potentially be candidates for redevelopment is based on a ratio of total real market value (land and improvements) divided by area of the tax lot (square feet). If this "strike price" is less than the threshold price, the tax lot is assumed eligible for redevelopment. The rationale for the thresholds is that developers have a profit motive. For the purposes of this BLI, it is assumed that developers may want to redevelop a property if the potential profit justifies property acquisition costs.

A strike price of $12/sf was used, consistent with Metro's "suburban" category in its regional BLI. Several taxlots were identified for the $12/sf strike price redevelopment screen – these were generally low-intensity industrial uses or single family homes on land zoned for mixed use/ multifamily development, and were added to the vacant land inventory

FIGURE 7. DEVELOPMENT STATUS AND CONSTRAINTS



STEP 4 - DETERMINE DEVELOPMENT CAPACITY

The capacity of developable residential land is estimated based on zoning designations and provisions of the LDC. Assumptions for each zone are listed in the following table. The key attributes of each zone are its density and overall residential percentage (the City of Happy Valley has many mixed-use zones intended to provide land for both residential and nonresidential uses).

Additionally, 25% of unconstrained land is assumed to be needed for infrastructure (20% for rights-of-way as identified in Table 16.63.020-1 plus an assumed 5% for stormwater facilities)

TABLE 2. ZONING ASSUMPTIONS

Zone	Resi-dential %	Min. Lot Size	Assumed Density	Notes
R40	100%	40,000	1.1	
R20	100%	20,000	2.2	
R15	100%	15,000	2.9	
R10	100%	10,000	4.4	
R8.5	100%	8,500	5.1	
R7	100%	7,000	6.2	
R5	100%	5,000	8	Max density for detached is 8.7, assume slightly less
SFA	90%	2,000	13	Neighborhood Commercial uses allowed. No new single family detached allowed. Assumed 13 du/ac and some land for non-residential uses.
VR5/7	100%		7	Village standard lot
MUR-S	80%	5,000 (SFD)	9	Min density is 6. Max density is 8.7 for single family detached. Duplexes/triplexes allowed. Allows "neighborhood commercial" but is mostly residential.
MUR-A	80%	-	13	Differs from SFA in building height for vertical mixing.
VTH	100%		15	Only covers one parcel (Ashley Meadows park). Not developable.
MUR-M1	80%		20	
MUR-M2	80%		34	
MUR-M3	80%		45	
MUR-X	75%		34	Min/max density not listed. Purpose statement is mostly residential.
PMU	50%		20	Rock Creek Planned Mixed Use. Similar to MUE.
MUE	50%		20	Mixed Use Employment - workforce multifamily housing.
RC, RA2, RRFF5	100%		1	Rural land, assume 1 unit/acre.

Constrained land in most of the categories from Step 2 (with the exception of Utility Corridors) is eligible for a 2 unit/acre density transfer, with a maximum of 175% of the density otherwise allowed on a given taxlot.

TAKEAWAYS

This preliminary analysis is summarized in the table below.

- The topography and natural features within the City of Happy Valley have a significant impact on the development capacity of the city's residential land. This inventory has attempted to approximate the city's steep slopes and natural resources overlays, as well as their density transfer provisions, however refinement of these resource areas and use of density transfer occurs through a much more detailed process during development review.
- The overall capacity of residential land (excluding rural zones) is roughly 3,700 units. A large amount of this capacity is located in the city's Mixed Use zones, particularly in the MUR-M2 zone (987 units). SFA and MUR-S (the city's attached housing zones) are the designations with the next highest capacities.

TABLE 3. CAPACITY OF BUILDABLE LANDS

	Number of Tax Lots (Vacant or Partially Vacant)	Total Acres	Developable Acres	New Units	New Units + Density Transfer	Capped to 175% of Tax lot Max
Very Low Density	**423**	**743.6**	**214.5**	**374**	**782**	**530**
R-15	115	168.5	80.5	191	255	241
R-20	256	480.7	114.2	179	452	283
R-40	52	94.4	19.9	4	75	6
Low Density	**452**	**388.5**	**148.4**	**515**	**655**	**634**
R-10	261	239.7	95.9	298	367	359
R-7	74	109.5	35.1	182	237	233
R-8.5	117	39.2	17.4	35	51	42
Medium Density SF	**260**	**220.1**	**96.1**	**602**	**642**	**639**
MUR-S	222	156.6	73.2	434	470	467
R-5	38	63.5	22.9	168	172	172
High Density SF	**112**	**124.8**	**44.8**	**463**	**496**	**490**
MUR-A	55	31.8	7.0	52	68	62
SFA	56	92.9	37.8	411	428	428
VTH	1	0.1	0.0	0	0	0
Mixed Use / Multifamily	**75**	**178.3**	**69.5**	**1,380**	**1,433**	**1,433**
MUE	7	67.4	22.2	218	243	243
PMU	2	14.0	4.7	46	50	50
MUR-M1	6	9.7	2.0	29	34	34
MUR-M2	56	78.8	36.6	973	987	987
MUR-M3	2	3.3	1.3	46	48	48

	Number of Tax Lots (Vacant or Partially Vacant)	Total Acres	Developable Acres	New Units	New Units + Density Transfer	Capped to 175% of Tax lot Max
MUR-X	2	5.1	2.7	68	71	71
Total	**1,322**	**1,655.3**	**573.4**	**3,334**	**4,008**	**3,726**

METROPOLITAN HOUSING RULE

OAR 660 Division 7 lays out specific rules for jurisdictions within the Portland Metropolitan area relevant to this BLI, as follows.

New Construction Mix: Most metro jurisdictions must designate sufficient buildable land to provide the opportunity for at least 50 percent of new residential units to be attached single-family housing or multi-family housing.[3] The Housing Needs Analysis effort, of which this BLI is a part, will provide a more detailed analysis of unit types, affordability ranges, tenure, and other issues. However, using the assumption that the city's Very Low Density, Low Density, and Medium Density residential zones provide detached single-family units, and the High Density SF and Mixed Use/Multifamily zones provide single-family attached and multi-family housing, we see a mix of 51% attached/multi-family within the City of Happy Valley (1,923 High Density/Mixed Use/Multifamily units divided by the total 3,726 units). Land with rural zones is addressed in the next section. This demonstrates compliance with the Metro Housing Rule. This assessment is considered to be relatively conservative, given that some attached units may be located in low and medium density zones in the future, particularly given requirements under recently adopted House Bill 2001 for middle housing types (duplexes, triplexes, quadplexes, townhomes and cottage cluster housing) to be allowed in those zones.

Minimum Residential Density Allocation for New Construction: The Cities of Cornelius, Durham, Fairview, Happy Valley and Sherwood must provide for an overall zoned density of six or more dwelling units per net buildable acre.[4] As noted in Table 3, there is a total of 573.4 net developable acres in the city's residential zones, with a capacity of 3,726 units. This averages 6.5 dwelling units per net acre in the city's residential zones. Land with rural zones is addressed in the next section.

RURAL LAND

Results from rural zones within the City of Happy Valley are reported in the following table. They are listed in terms of acres rather than housing units, simply because housing development in these areas will depend on urban infrastructure and urban zoning designations being applied in the future through planning efforts such as the Pleasant Valley/North Carver Comprehensive Plan.

	Number of Tax Lots (Vacant or Partially Vacant)	Total Acres	Developable Acres

[3] OAR 660-007-0030
[4] OAR 660-007-0035

Rural Zones	**230**	**1201.3**	**524.1**
RA2	4	22.5	11.7
EFU	11	173.9	91.2
FF10	14	227.2	52.2
FU10	12	49.6	16.2
RRFF5	189	728.1	352.9

PLEASANT VALLEY/NORTH CARVER COMPREHENSIVE PLAN

A portion of the City of Happy Valley's rural zones are part of the Pleasant Valley/North Carver Comprehensive Plan, which is still in draft form and has an uncertain adoption timeline. That separate process identified unit capacities for proposed zoning designations in the plan area, as shown in Figure 8. Major findings from the Pleasant Valley/North Carver BLI are shown in Table 4.

TABLE 4 PLEASANT VALLEY/NORTH CARVER BLI

Total acres:	2,092 acres
Net buildable residential acres:	988 acres
Maximum dwelling units:	7,414 dwellings
Net residential density:	7.5 dwelling units per net residential acre
Net residential density with Density Transfer:	8.5 dwelling units per net residential acre
Comparison - East Happy Valley Comprehensive Plan:	9.2 dwelling units per net residential acre
Single family detached units:	4,295 dwelling units (51%)
Multi-family attached units:	4,139 dwelling units (49%)

FIGURE 8. PLEASANT VALLEY/NORTH CARVER AREA