



MEMORANDUM

Hermiston Buildable Lands Inventory – Methodology and Results

City of Hermiston

DATE January 26, 2021
TO City of Hermiston, OR
FROM Brandon Crawford, Clinton “CJ” Doxsee, & Darci Rudzinski, APG
CC Anne Debbaut, & Robert Mansolillo, DLCD
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INTRODUCTION

The purpose of this memorandum is to describe the methodology and data sources for the City of Hermiston Residential Buildable Lands Inventory (BLI) and the results of the inventory. This BLI is a component of the Hermiston Housing Capacity Analysis (HCA) project, and the results will inform the Residential Land Needs Analysis (RLNA) and the Measures to Accommodate Needed Housing. The Hermiston HCA 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 Hermiston Urban Growth Boundary (UGB), shown in Figure 1.

The BLI is conducted in several steps, as follows.

- **Step 1: Identify Constraints.** Constraints include wetlands, water bodies, and steep slopes. While floodplains are usually included in the analysis, staff has noted that no floodplains are located in the City’s residential areas.
- **Step 2: Classification of Land.** APG has classified every tax lot within the Hermiston UGB based on residential comprehensive plan designation or zoning. 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 Hermiston UGB 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.** Tax lots with a vacant or partially vacant 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.
- **Step 5: Determine Development Capacity.** 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 comprehensive plan and zoning regulations.

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

LEGAL FRAMEWORK

STATE RULES AND STATUTES

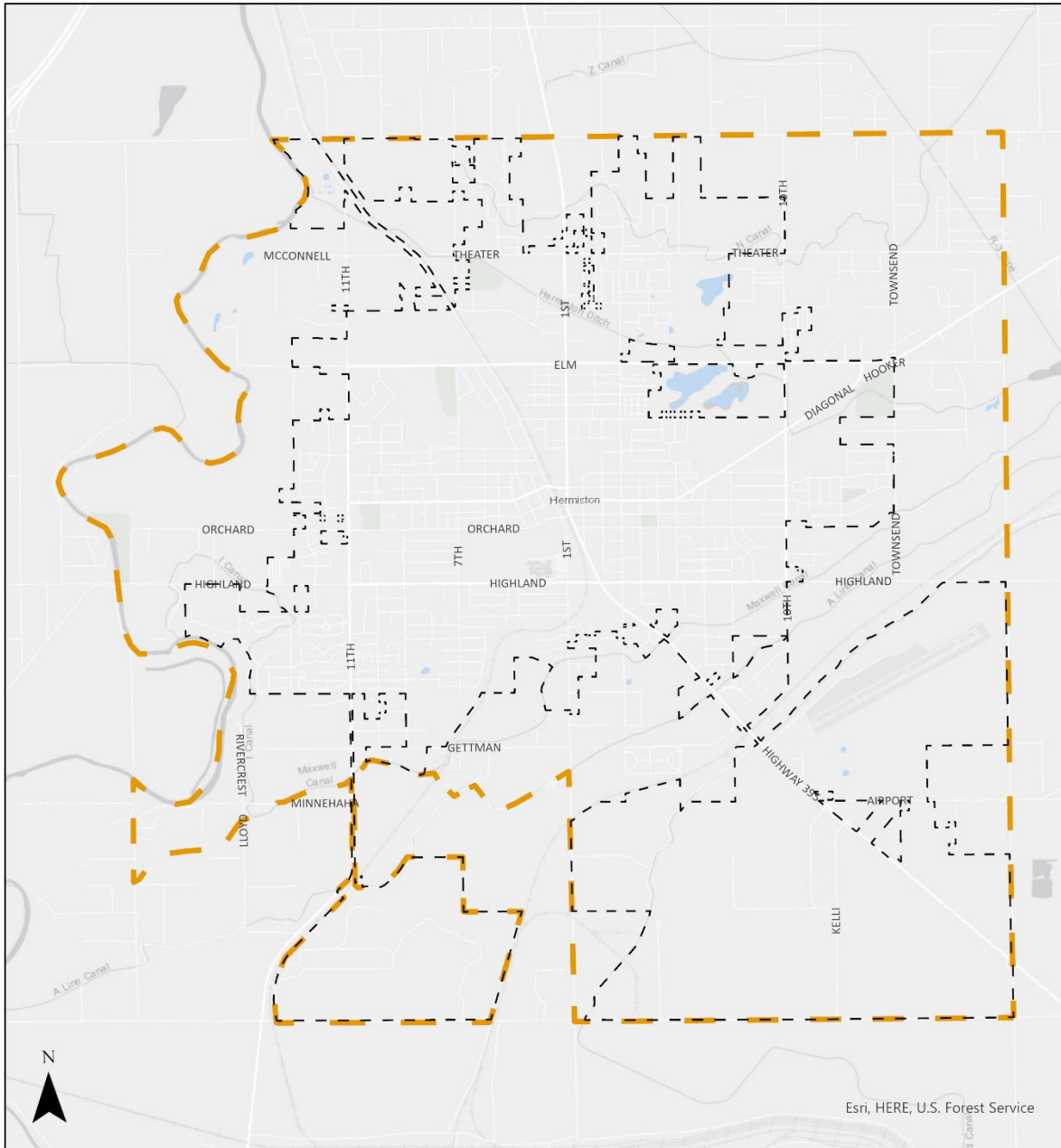
This memorandum draws on requirements related to analyzing buildable lands for UGB expansions in jurisdictions throughout Oregon. Relevant to this analysis are provisions under OAR 660 Division 24, Urban Growth Boundaries (660-024-0050 Land Inventory and Response to Deficiency); and Division 38 (Simplified Urban Growth Boundary Method).

This regulatory framework provides the following guidance for assessment of buildable lands:

- Physical constraints on the developability of land include floodways and water bodies; land with greater than 25% slopes; and lands subject to Goal 5 (Natural Resources, Scenic and Historic Areas, and Open Spaces), Goal 6 (Air, Water, and Land Resources Quality), or Goal 7 (Areas Subject to Natural Disasters and Hazards).
- 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. Publicly owned land is not generally considered available for development.
- State law stipulates that land is generally considered suitable and available unless it:
 - a) is severely constrained by natural hazards as determined under Statewide Planning Goal 7
 - b) is subject to natural resource protection measures determined under Statewide Planning Goals 5, 6, or 15-19 (Willamette River Greenway and coastal Goals)
 - c) has slopes of 25% or greater
 - d) is within the 100-year flood plain, or
 - e) cannot be provided with public facilities.

Figure 1 shows the project study area, which includes all land within the Hermiston UGB. Figure 2 shows Hermiston zoning for land inside city limits and the Comprehensive Plan designations for areas outside city limits, but within the UGB.

FIGURE 1. STUDY AREA



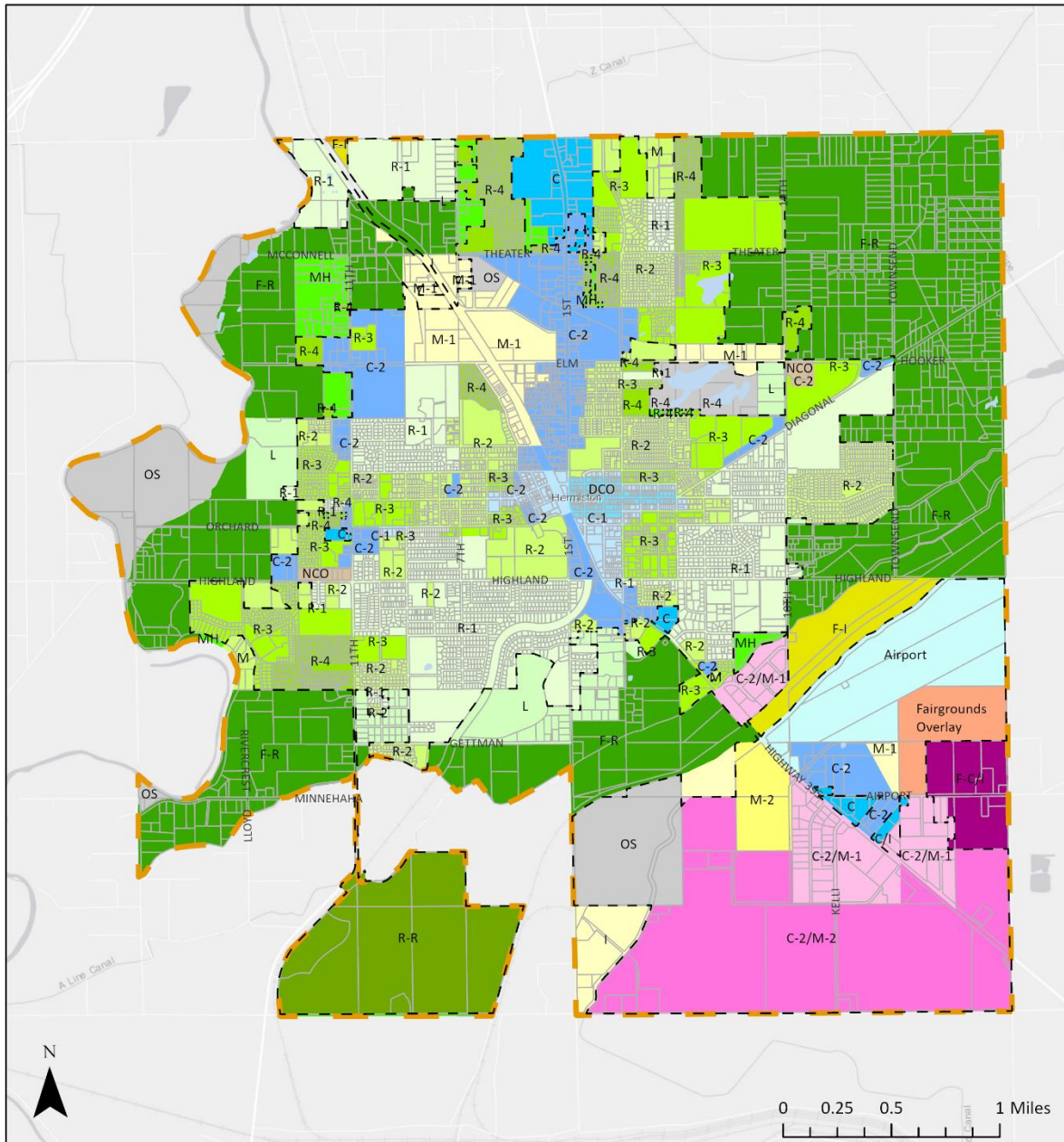
Hermiston BLI: Study Area



Date: 10/20/2020

Source: Angelo Planning Group
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FIGURE 2. HERMISTON ZONING DESIGNATIONS



Hermiston BLI: Comprehensive Plan and Zoning Designations

I City Limits	Airport	C-2/M-2	NCO	R-4	Comprehensive Plan	F-R	OS
UGB	C-1	DCO	OS	R-R	C	I	R-R
Taxlot	C-2	Fairgrounds	R-1	R-2	C/I	L	
Waterbody	C-2/M-1	M-1	R-3	R-3	F-1	M	
		M-2				MH	

Date: 10/20/2020
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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, environmentally sensitive areas such as habitat, 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 resource constraints are assumed to be entirely unbuildable and removed fully.

- Steep Slopes > 25% (Data source: Oregon Department of Geology and Mineral Industries - DOGAMI)
- Wetlands, including artificial wetlands and those identified from the City’s Draft Local Wetland Inventory (LWI)¹
- Streams and canals, with a 25-foot buffer applied

Note that any given piece of land can have multiple, overlapping constraints. Examples of this includes areas that are designated wetland and also have a stream buffer area. These constrained areas are combined and then overlaid with City tax lots to estimate the amount of land in each parcel where development is limited. Constraints are shown on Figure 3.

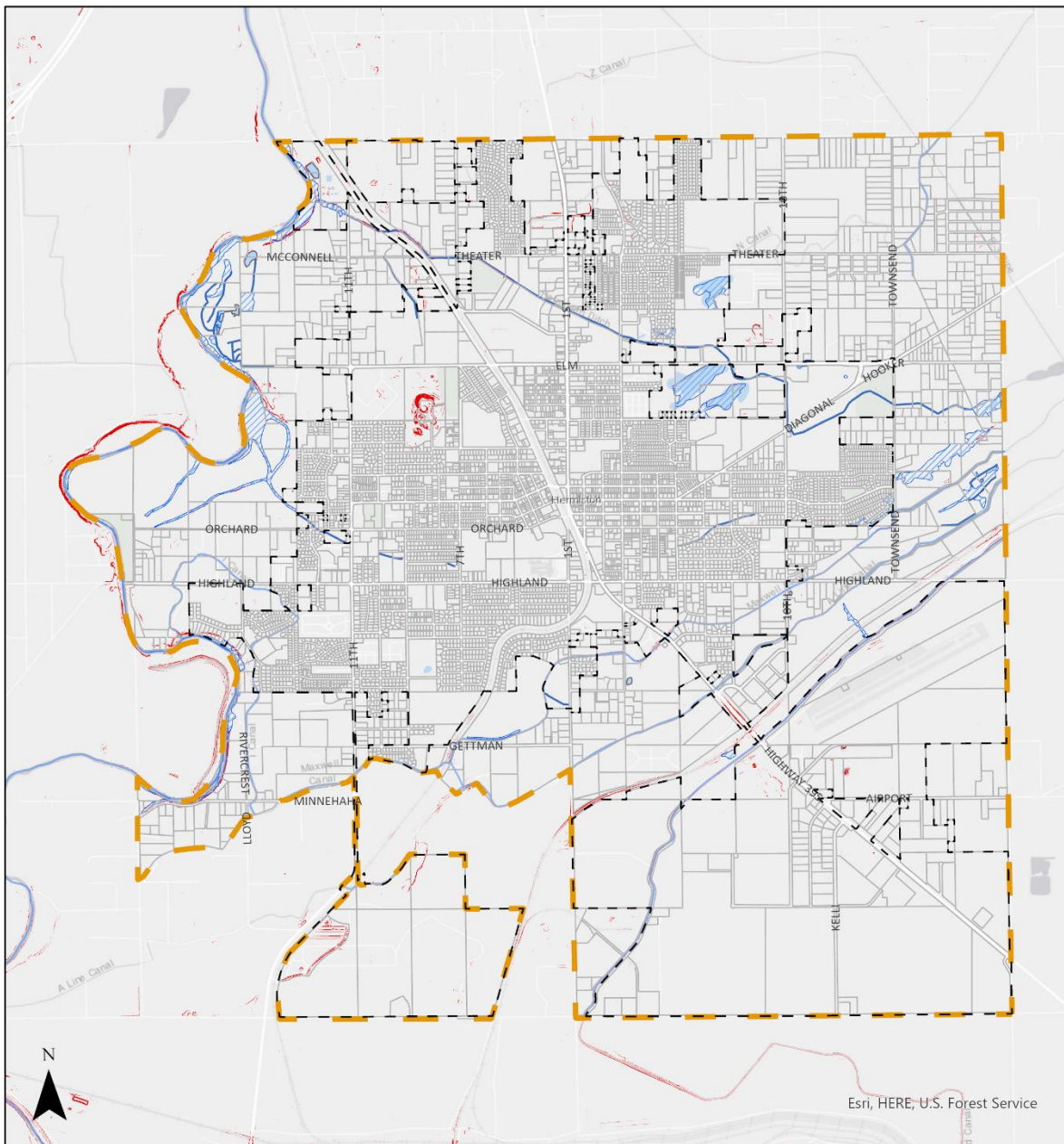
Table 1 summarizes the acreage for each constraint. Note that land can be subject to more than one constraint, as explained earlier.

TABLE 1: ENVIRONMENTAL CONSTRAINT SUMMARY

Constraint	Total (acres)
Total	346.7
Steep Slopes	52.5
Wetlands	134.9
Streams and Canals	159.3

¹ The Hermiston LWI is currently under review by the Department of State Lands and pending approval.

FIGURE 3. CONSTRAINTS MAP



Hermiston BLI: Constraints

0 0.25 0.5 1 Miles

City Limits	Artificial Wetland	Canal (25 ft buffer)
UGB	Wetland (LWI)	Stream (25 ft buffer)
Taxlot	Steep Slopes (>25%)	Waterbody

Date: 10/10/2020
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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:
 - o Single-Family (R-1)
 - o Duplex (R-2)
 - o Multi-Family (R-3)
 - o Multi-Structure (R-4)
 - o Recreational Residential (R-R)
- Lands with a Comprehensive Plan designations that allow housing were considered for outside city limits and inside the UGB. These include:
 - o Low-Density (L)
 - o Medium-Density (M)
 - o Medium-Density/Mobile-Home (MH)
 - o Future-Residential (F-R)

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.

Table 2 summarizes the amount of residentially zoned or designated land that is constrained. There is a total of 5,239 acres of residential land within the City’s UGB. As shown, Future Residential (F-R) represents a significant portion of all residential land within the UGB at approximately 2,236 acres (approximately 43% of residential land). Single-Family (R-1) and Multi-Family (R-3) make up most of the residential land within Hermiston city limits. There are approximately 920 acres of R-1 zoned land and 544 acres of R-3 zoned land; this equates to approximately 18% and 10% of total residential land in the UGB, respectively.

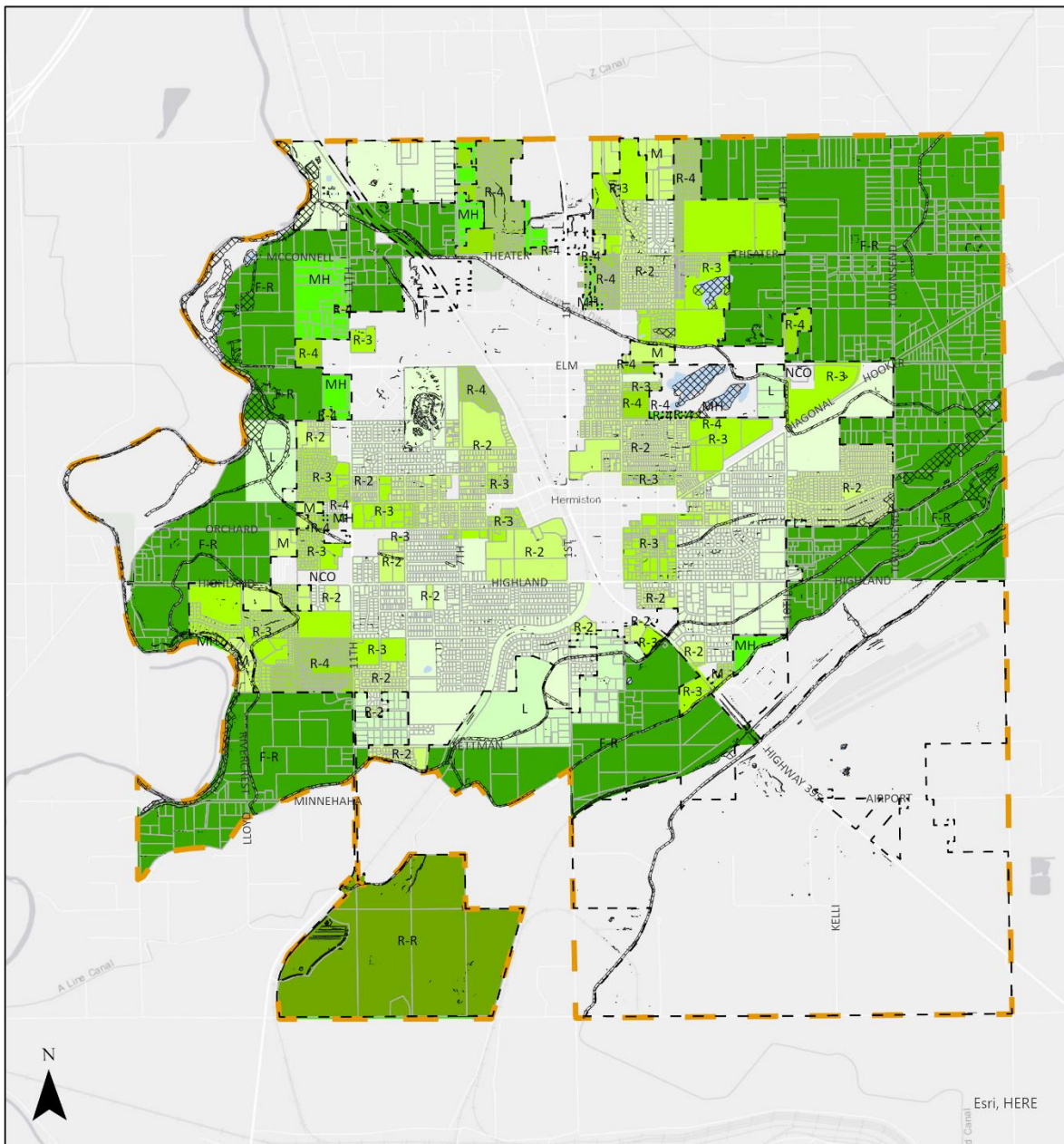
Only small portions of residentially zoned or designated land have some form of constraint. The constrained acreage in these areas comprise of a small proportion of their respective total area. Constrained acreage is relatively proportional to the total area of the residential zone or designation. Overall, approximately 3-4% of residential land has some form of constraint. The Low Density Residential (L) designation has the highest amount of constrained land; approximately 7% of L designated land has some form of constraint. Some zones and designations have close to 0% of their areas constrained. They include the Multi-Structure (R-4) zone, and the Medium-Density/Mobile Home (MH) and Recreational Residential (R-R) comprehensive plan designations.

TABLE 2: GROSS ACREAGE IN RESIDENTIAL LAND INVENTORY

Zone/Comp Plan	Constrained (acres)	Unconstrained (acres)	Total (acres)
<i>Zoning</i>	<i>70.4</i>	<i>2,471.0</i>	<i>2,541.4</i>
R-1	39.8	880.0	919.8
R-2	6.3	447.5	453.8
R-3	18.3	526.1	544.4
R-4	1.2	242.0	243.2
R-R	4.9	375.3	380.2
<i>Comp Plan</i>	<i>121.3</i>	<i>2,576.3</i>	<i>2,697.6</i>
L	16.8	216.5	233.3
M	4.5	100.6	105.1
MH	0.2	121.6	121.8
F-R	99.8	2,137.0	2,236.8
R-R	0.0	0.6	0.6
Total	191.7	5,047.3	5,239.0

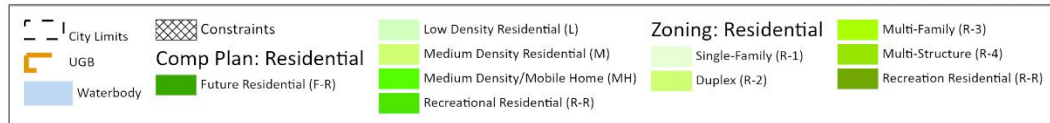
Residential land classifications with constraints overlaid are shown on Figure 4. Consistent with the table and figures above, a substantial portion of constrained appears in Future-Residential (F-R) areas outside city limits, particularly in the far-eastern and western portions of the UGB.

FIGURE 4. LAND CLASSIFICATION MAP



Hermiston BLI: Residential Areas

0 0.25 0.5 1 Miles



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STEP 3 - DEVELOPMENT STATUS

Each residential tax lot within the Hermiston UGB was given a “development status” of either vacant, partially vacant, committed, constrained, or developed. These designations are based on County tax assessor’s data, aerial photography, and staff input. Criteria for these categories are described below.

DEVELOPMENT STATUS FOR RESIDENTIAL TAX LOTS

- **Vacant** – Vacant tax lots have no existing development, as identified by assessor data or aerial photography. Vacant tax lots were identified as those with a tax assessor Real Market Value (RMV) Improvement value of less than \$10,000, and a minimum of 5,000 unconstrained square feet.
- **Partially Vacant properties** – These tax lots are greater than 1/2 acre (unconstrained) in size and have an existing single-family home.² One quarter-acre is deducted from the unconstrained acreage of the tax lot to account for the existing home and any remaining unconstrained acreage is considered available for future development.
- **Committed properties** – 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. The City provided “public ownership” data that was used to identify these tax lots.
- **Constrained** – These properties do not have capacity for additional development under current zoning regulations (even if the site is currently undeveloped). They were identified as having less than 2,000 square feet of unconstrained land.
- **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, partially vacant, constrained, or committed was assumed to be developed.

Table 3 summarizes the number of tax lots within each development status category by the respective zoning or comprehensive plan designation. As shown in the table, there is an estimated 1,305 vacant or partially vacant tax lots within the UGB (approximately 22% of residentially zoned or designated tax lots). Slightly less than half of that is located within city limits with an estimated 530 vacant or partially vacant lots. Only a small portion of land outside the city limits, but within the UGB, is either committed, constrained or developed; approximately 12.7% of all residentially designated lots fall under one of these categories. The remaining areas outside of city limits, but inside the UGB, are considered vacant or partially vacant.

² This analysis used property class codes provided in County tax assessor GIS data to assist with identifying and categorizing partially vacant properties. Property class codes are the basis of the classification system used by the County to categorize current uses. Each lot or parcel is classified in accordance with ORS 308.215 and is based upon the highest and best use of the property. Lots or parcels that are coded as residential (100’s), tract (400’s), and farmland (500’s) that met the definition of partially vacant properties are categorized as such.

TABLE 3. TAX LOT DEVELOPMENT STATUS BY ZONE AND COMPREHENSIVE PLAN³

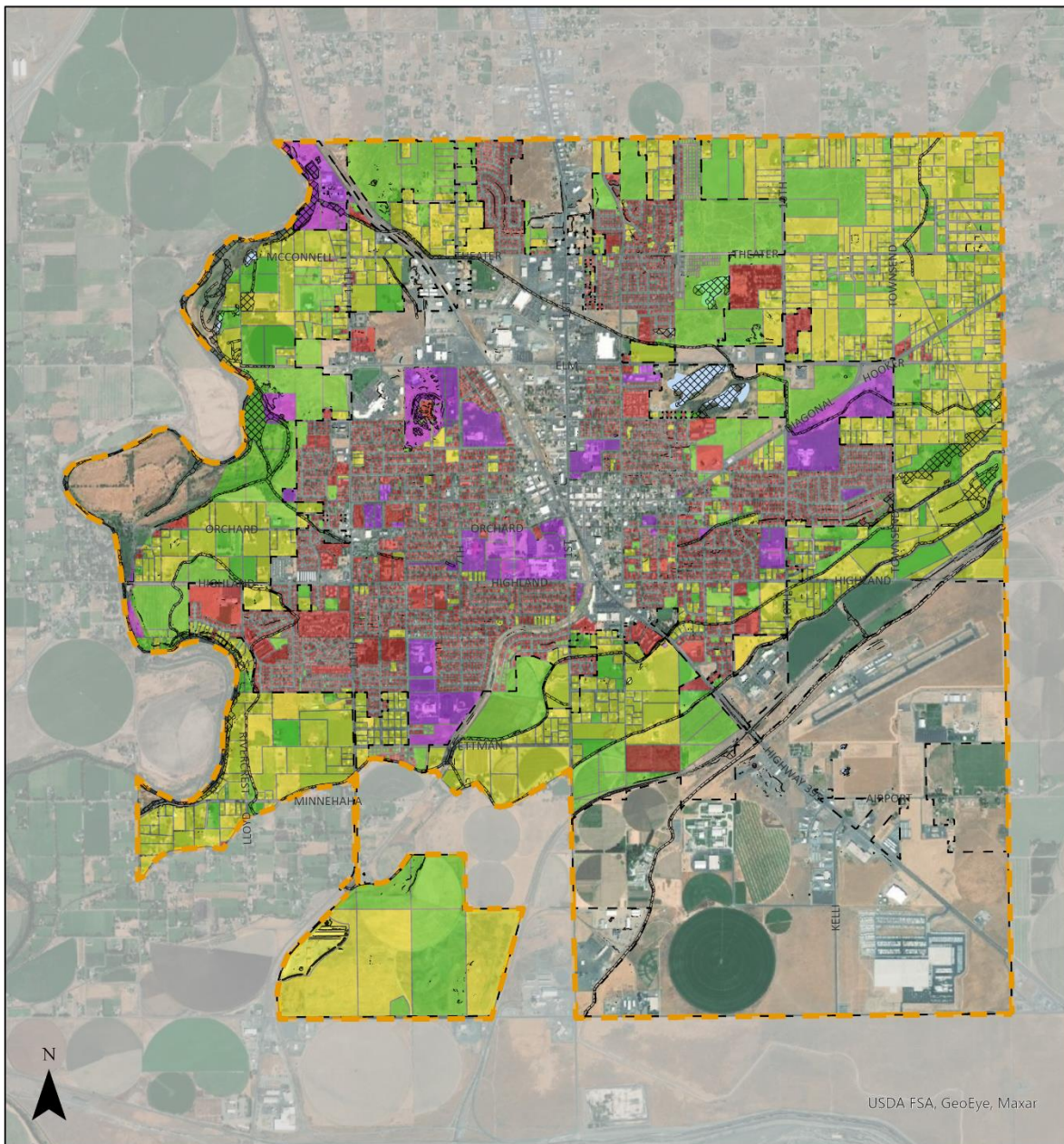
Zoning/ Comp Plan	Vacant	Partially Vacant	Committed	Constrained	Developed	Grand Total
<i>Zoning</i>	<i>402</i>	<i>128</i>	<i>73</i>	<i>78</i>	<i>4,190</i>	<i>4,871</i>
R-1	79	84	27	14	1,433	1,637
R-2	80	20	26	23	1,411	1,560
R-3	125	15	16	32	711	899
R-4	113	6	4	8	633	764
R-R	5	3	0	1	2	11
<i>Comp Plan</i>	<i>163</i>	<i>612</i>	<i>11</i>	<i>22</i>	<i>80</i>	<i>888</i>
L	13	71	3	3	5	95
M	9	27	0	4	5	43
MH	22	32	0	2	19	74
F-R	118	481	8	11	48	666
R-R	1	1	0	2	3	7
Grand Total	565	740	84	100	4,270	5,759

Figure 5 illustrates the location and development status of tax lots within the City’s UGB. As shown, most of the central area of the City is developed. New residential development opportunities in the central area are generally limited to partially vacant tax lots; lots that are considered large enough to accommodate additional housing on them.

Most of the vacant or partially vacant tax lots are found around the inside perimeter of the UGB. This includes the northwestern and northeastern quadrants of the study area that have a variety of lot sizes ranging from less than one acre up to 44 acres. A significant portion of the City’s partially vacant lots are in the northeast, mostly on larger rural farm or tract properties. The southwestern quadrant includes a variety of lot sizes as well, but also contains some of the largest vacant or partially vacant land within the UGB (up to nearly 80 acres in size).

³ Some tax lots are split between two residential zones. Because density assumptions and housing capacity figures differ between zones, differently zoned portions of the same lot are treated separately for the purposes of this analysis. As a result, some of the split-zoned lots are effectively counted as two lots, and therefore the count of lots may be slightly inflated compared to the actual number of lots in the study area.

FIGURE 5. DEVELOPMENT STATUS



Hermiston BLI: Development Status

0 0.25 0.5 1 Miles

City Limits	Waterbody	Development Status	Developed
UGB		Committed	Partially Vacant
Constraints		Constrained	Vacant

Date: 11/06/2020
Source: Angelo Planning Group
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STEP 4 - DETERMINE DEVELOPMENT CAPACITY

The capacity of developable residential land is estimated based on the City’s Comprehensive Plan designations and zoning provisions of the Hermiston Development Code. Buildable land is the unconstrained acreage minus the assumed future right-of-way (ROW) dedication to accommodate dwelling units (e.g. streets). 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:

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

Zone/Comp Plan Designation	Minimum Lot Size(s) (square feet)	Density Assumption (Dwelling Units/Acre)
Zone		
Single-Family (R-1)	SFR – 8,000	5 DU/acre
Duplex (R-2)	SFR – 6,500; Duplex – 8,000	6 DU/acre
Multi-Family (R-3)	SFR – 5,000; Duplex – 6,500; MF – 7,500	8 DU/acre
Multi-Structure (R-4)	Same as R-3 and allows manufactured housing ⁴	10 DU/acre
Rural Recreation (R-R)	Same as R-3 and allows attached SFR – 1,800	12 DU/acre
Comprehensive Plan		
Low-Density (L)	SFR – 9,000 (corresponds with R-1 & R-2 for housing types)	5 DU/acre
Medium Density (M)	SFR – 6,000 (corresponds with R-3 for housing types)	7 DU/acre
Medium Density/ Mobile Home (MH)	SRR – 6,000 (corresponds with R-4 for housing types)	9 DU/acre
Future Residential (FR)	Not yet designated for density, therefore average	7 DU/acre
Rural Recreation (R-R)	Same as R-3 and allows attached SFR – 1,800	12 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. This approach assumes that every vacant or partially vacant parcel can accommodate at least one unit. The

⁴ This zone allows mobile-home parks. Detached manufactured homes are allowed outright in all residential zones.

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	Partially Vacant	Grand Total
<i>Zoning</i>	465.2	277.8	743.0
R-1	97.6	69.1	166.7
R-2	27.2	8.9	36.1
R-3	185.7	6.1	191.8
R-4	33.2	10.1	43.4
R-R	121.5	183.6	305.1
<i>Comp Plan</i>	607.3	1,212.6	1,819.9
L	94.4	64.2	158.6
M	8.9	59.6	68.5
MH	43.1	41.6	84.7
F-R	460.7	1,047.1	1,507.9
R-R	0.1		0.1
Grand Total	1,072.4	1,490.5	2,562.9

TABLE 6: HOUSING UNIT CAPACITY ESTIMATE AND DENSITY ASSUMPTIONS⁵

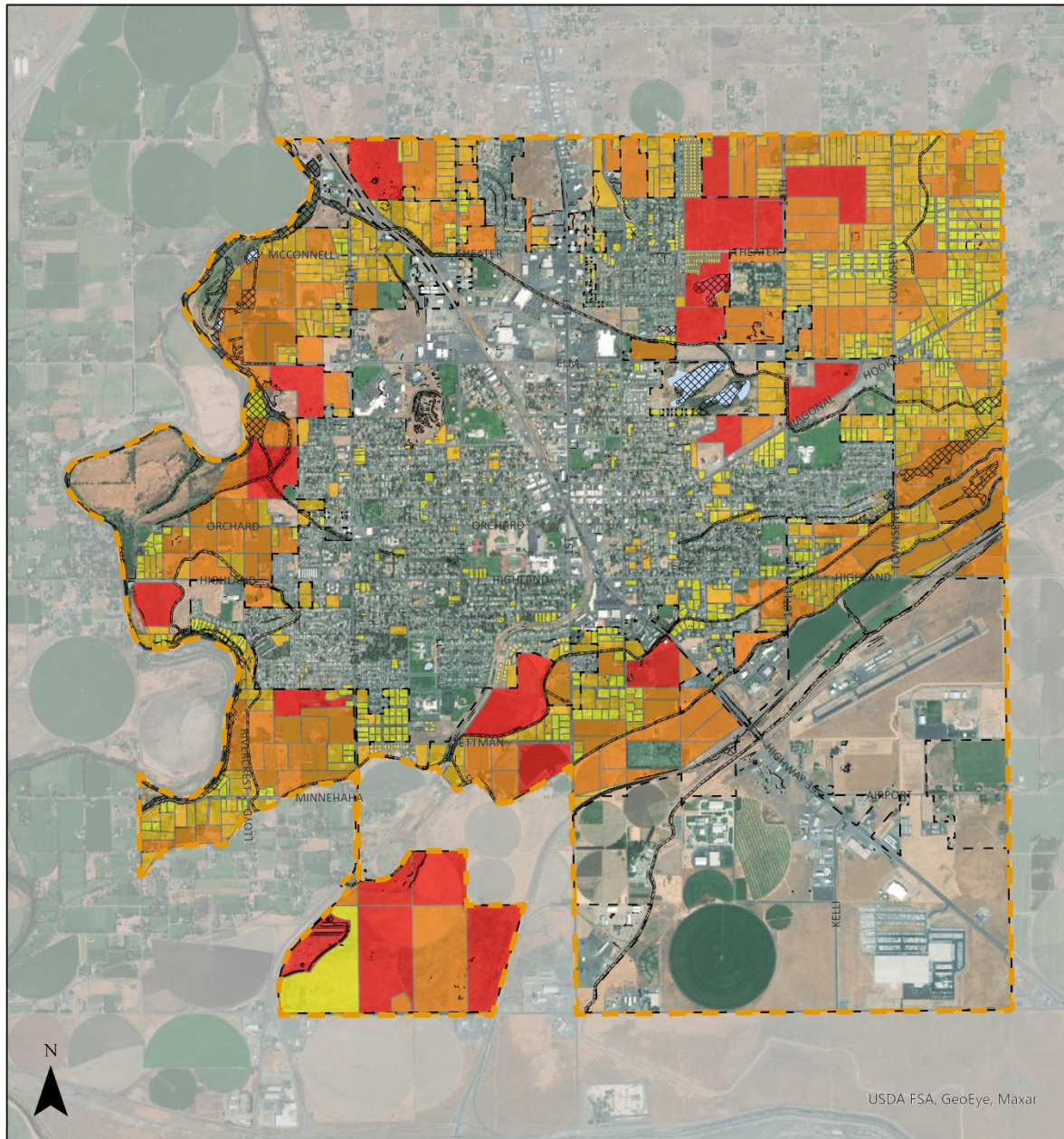
Residential Area	Assumed Density	Vacant	Partially Vacant	Grand Total
<i>Zoning</i>		3,241	2,657	5,898
R-1	5 du/acre	442	306	748
R-2	6 du/acre	152	43	195
R-3	8 du/acre	1,614	42	1,656
R-4	10 du/acre	261	66	327
R-R	12 du/acre	772	2,200	2,972
<i>Comp Plan</i>		4,024	8,153	12,177
L	5 du/acre	422	289	711
M	7 du/acre	58	402	460
MH	9 du/acre	376	359	735
F-R	7 du/acre	3,167	7,103	10,270
R-R	12 du/acre	1	0	1
Grand Total		7,265	10,810	18,075

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.

While the estimated housing densities for each zone are allowed based on the City’s development code standards (i.e. minimum lot size), staff and Advisory Committee members indicated these densities do not reflect historic and current residential development patterns. Staff provided information on recent housing developments and subdivisions as evidence that the City is experiencing development densities slightly below the projected capacity assumptions. Consequently, staff suggested exploring how a 10-15% reduction in projected densities would affect housing capacity results. **A reduction of 10% results in an estimated capacity of 15,942 units, and a 15% reduction translates to capacity for 15,048 units.**⁶ This range of density reductions translates to a decrease of 2,133 units (10%) to 3,027 units (15%) from the original capacity assumption of 18,075. In sum, these housing capacity estimations may be interpreted as possible density and capacity (18,075 units) versus observed density and capacity trends (15,048 - 15,942 units).

⁶ This range of density and capacity reduction scenarios is applied on a per-tax lot basis, rather than calculating a 10%-15% reduction to the sum of the estimated capacity for the entire City. This provides a more refined analysis that is reflective of how density calculations are actually applied for residential development.

FIGURE 6: ESTIMATED HOUSING UNIT CAPACITY



Hermiston BLI: Housing Capacity

City Limits	Housing Capacity	≤100
UGB	≤5	≥800
Waterbody	≤25	

0 0.25 0.5 1 Miles

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