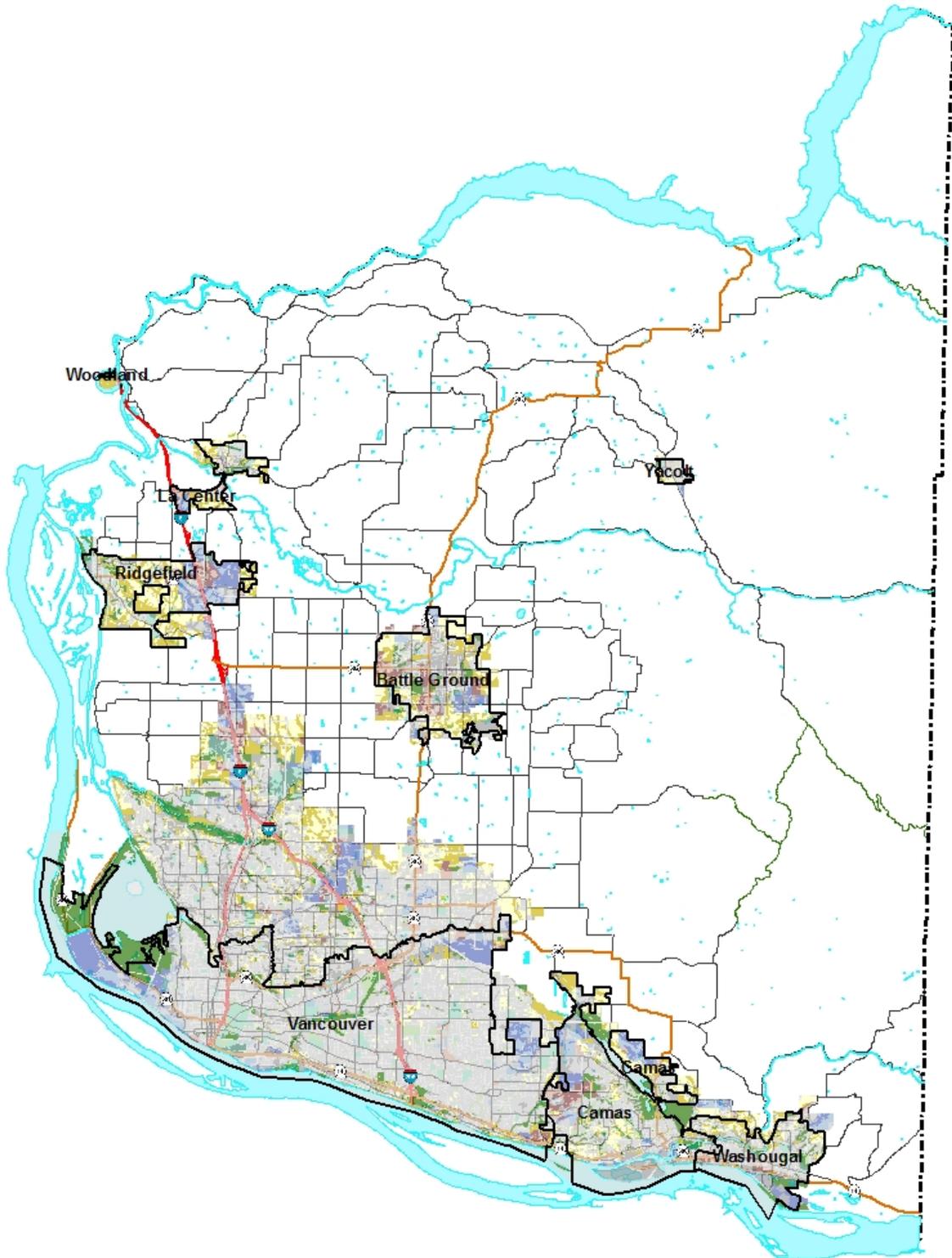


BUILDABLE LANDS REPORT, June 2015



proud past, promising future

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EXECUTIVE SUMMARY

The Growth Management Act (GMA) requires the county and its cities to provide sufficient land to accommodate specific population and employment targets. This is the third buildable lands report since 1990. It presents a series of basic, quantifiable indicators in Clark County and tracks how they are changing each year.

Clark County coordinated with its cities to compile data that shows the progress of each community's comprehensive plan toward the goals of sprawl reduction and concentrated urban growth identified in the Growth Management Act. Each community collects development data, which is forwarded to the county and added to a central database located at this webpage: http://www.clark.wa.gov/planning/comp_plan/monitoring.html#capacity

The primary sources of data are new commercial, industrial and residential building permits from July 1, 2006 through December 31, 2014. Clark County's Geographic Information System (GIS) was used to associate new building permits issued with city and urban growth area boundaries, Vacant Buildable Land Model (VBLM), employment, assessor information, and constrained land.

Following are the major observations presented in this report:

- Residential development within urban growth areas of Clark County consumed 1,245 acres with a density of 4.7 dwelling units per acre. Based on the VBLM, there are 7,513 net buildable acres that can accommodate 51,436 households. At 2.66 persons per household urban growth areas can accommodate 136,820 persons.
- There were 1,387 building permits issued in the rural area on 7,799 acres. Given the underlying zoning, the total vacant and development potential in the rural area is 9,390 lots. Assuming 2.66 persons per household, there is potential for additional rural capacity of 24,977 persons. Overall, the county can accommodate 161,797 persons.
- Review of development indicates that 43% of all residential development occurred on land with some environmental constraint. More importantly, this percent does not imply that development is occurring on lands with critical areas, because in general environmentally constrained lands are not being developed.
- Building permit review and evaluation has indicated that commercial and industrial development in the UGAs during the period consumed 3,372 acres of land. Commercial uses consumed 2,704 acres and industrial uses consumed 668 acres. Based on the 2015 VBLM inventory there are 2,057 net buildable commercial acres and 3,982 net buildable industrial acres.

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Introduction

The Growth Management Act (GMA) requires the county and its cities to provide sufficient land to accommodate specific population and employment targets. This report responds to and satisfies the review and evaluation requirements of the Washington State Growth Management Act (GMA) in RCW 36.70A.215, commonly referred to as the “buildable lands” statute. The report was prepared by county staff and the cities using the Clark County Community Framework process, the county’s adopted multi-jurisdictional process for GMA issues.

The Comprehensive Plan indicates the Buildable Lands Program, at a minimum should answer the following questions:

- What is the actual density and type of housing that has been constructed in UGA’s since the last comprehensive plan was adopted? Are urban densities being achieved within UGA’s? If not, what measures could be taken, other than adjusting UGA’s, to comply with the GMA?
- How much land was actually developed for residential use and at what density since the comprehensive plan was adopted? Based on this and other relevant information, how much land would be needed for residential development during the remainder of the 20-year comprehensive planning period?
- To what extent have capital facilities, critical areas, and rural development affected the supply of land suitable for development over the comprehensive plan’s 20-year timeframe?
- Is there enough suitable land in Clark County and each city to accommodate county-wide population growth for the 20-year planning period?
- Does the evaluation demonstrate any inconsistencies between the actual level of residential, commercial, and industrial development that occurred during the review period compared to the vision contained in the county-wide planning policies and comprehensive plans and the goals and requirements of the GMA?
- What measures can be taken that are reasonably likely to increase consistency during the subsequent eight-year period, if the comparison above shows inconsistency?

Process

Clark County, in consultation with each city, has been working cooperatively to address the requirements of Section 215. In 2005, Community Planning received a grant from Washington State Department of Commerce formerly known as Community Trade and Economic Development (CTED). That grant provided a valuable opportunity to unify buildable lands data into one system and make collection and analysis easier for individual cities and the county. Through that process, a methodology was developed for collecting the buildable land data in the link below (see Data Transfer Protocols and Monitoring of Growth Management Trends).

http://www.clark.wa.gov/planning/comp_plan/monitoring.html#capacity

The data collection methods and procedures were developed through the Clark County Growth Management Act (GMA) Technical Advisory Committee (TAC). An Amendment to the countywide planning policies was adopted by reference as Ordinance 2000-12-16 by the Board of County Commissioners.

The Ordinance amended language in the Community Framework Plan to comply with the requirements of RCW 36.70A.215. The Growth Management Act requires Clark County to compile data that shows the process of each community's comprehensive plan toward the goals of the Growth Management Act. Each community collects development data, which is forwarded to the county and added to a central database. The web site draws data from that database. It allows citizens, interest groups, elected officials and advisory boards the most comprehensive source of development data.

Methodology

Following the first Buildable Lands report, the county met with each building official and city staffs to refine how data was to be compiled in the future. Each month, staff in each jurisdiction (except Yacolt) forwards an electronic spreadsheet to the county with updated development data such as permit types, parcel numbers, numbers of units, etc. Staff performs a quality assurance check to ensure data has permit number, permit type, parcel number, number of units, building square feet for non-commercial permits, and issue dates. They look for duplicates and check for errors with parcel numbers, addresses, number of units and square feet.

If data is missing or incorrect, staff contacts the respective jurisdiction. Staff also adds missing parcel numbers by using the parcel match option in Clark View.

Information Technology extracts permit data for Clark County and Yacolt, and transfers the files to a server. The server completes the following steps: normalize and read data, translate data, import data, obtain GIS data, generate reports in PDF format, and generates an exception report. The exception report contains permits that are not recognized by the server. If the error rate is greater than one to three percent per jurisdiction for the total number of permits, the county contacts the jurisdiction to correct the discrepancy. County staff also performs a visual check to confirm that the data has merged into the database correctly. The county runs another program that creates a report and a PDF file that is automatically placed on the web.

The primary sources of data were from new commercial, industrial and residential building

permits issued from July 1, 2006 through December 31, 2014. Clark County's Geographic Information System (GIS) was used to link parent parcel serial numbers taken from new building permits issued to identify parcels within city and urban growth area boundaries, acreage and critical lands coverage.

Baseline Assumptions

The 2007 Comprehensive Plan planning assumptions have to do with growth rates, population, and persons per household, and are listed below:

- No more than 75 percent of any product type of detached/attached housing
- Average residential densities in urban areas would be 8 units per net acre for Vancouver, 6 for Battle Ground, Ridgefield, Camas, Washougal, 4 units per net acre for La Center, and no minimum for the town of Yacolt
- Infrastructure factor of 27.7 percent for residential development and 25 percent for industrial and commercial development
- 2.59 persons per household
- 20 employees per commercial acre; 9 employees per industrial acre
- A total population of 584,310 by 2024, from an annual growth rate of 2.0 percent, with 2.2 percent assumed in 2004-2010 for capital facilities planning purposes

COUNTYWIDE TRENDS, 2007-2014

Housing and Job Totals

Background and Relevance

Tracking the number of people who live and work in the community is a fundamental measure of how fast the community is growing and what additional land may be needed to accommodate future growth. A goal of growth management is to encourage the development of housing in proximity to job growth. The strategy of balancing housing and job growth is intended to reduce the need for long commutes, and to keep living and working communities easily accessible to each other. However, when housing growth occurs it often takes several years for sufficient job growth to occur in the area and vice-versa. Reduced vehicle trips result in less demand on the existing street infrastructure.

Under the GMA, Clark County and its cities are required to plan for a total population projection as provided by the state Office of Financial Management. Clark County's population forecast for the 20-year planning period ending 2035 is 578,391 in 2035. Since 2007, the County's population has increased by 34,139 persons or by 1.13 percent annually.

Data Collection

Official population estimates as of January 1st for all cities and counties are produced annually by Clark County GIS. Employment estimates were provided by the local office of the Washington Department of Employment Security (ESD). Employment data includes workers

covered by state employment insurance, not including self-employed workers. On the following page, table 1 shows the estimated population trends of urban growth areas in Clark County from 2007 to 2014. Table 2 illustrates Clark County household and job patterns from 2007 to 2014.

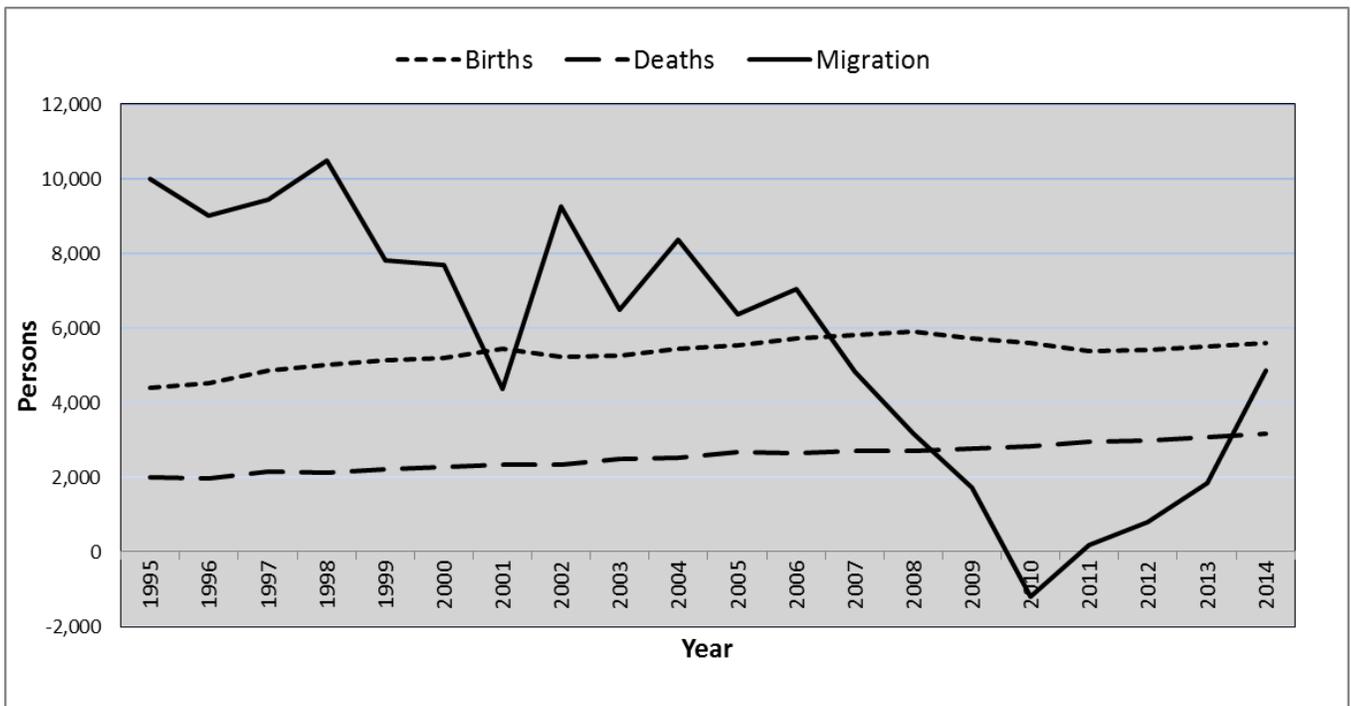
Table 1
Annual Population Estimates for Clark County, 2007-2014

Urban Growth Areas	2007	2008	2009	2010	2011	2012	2013	2014	2007-2014 Growth Rate
Battle Ground	18,654	18,867	19,297	19,479	19,851	20,052	20,163	20,871	1.60%
Camas	20,015	20,311	20,626	21,073	21,588	21,911	22,049	22,843	1.89%
LaCenter	3,017	3,069	3,010	3,050	3,220	3,135	3,163	3,209	0.88%
Ridgefield	5,015	5,112	5,175	5,402	5,608	5,741	6,150	6,575	3.87%
Vancouver	293,973	296,859	300,055	300,525	302,108	304,262	307,767	315,460	1.01%
Washougal	14,003	14,722	14,862	15,007	15,328	15,249	15,502	15,932	1.84%
Woodland	88	88	89	88	92	91	88	89	0.19%
Yacolt	1,535	1,578	1,613	1,636	1,645	1,644	1,653	1,661	1.13%
Rural County	58,408	58,840	59,642	59,689	60,049	60,280	60,112	62,205	0.90%
Total	414,708	419,445	424,368	425,949	429,490	432,365	436,647	448,847	1.13%

SOURCE: Clark County Department of GIS

NOTE: A portion of the City of Woodland is in Clark County.

Chart 1
Components of Population Change 1995-2014



SOURCE: Washington State Office of Financial Management, <http://www.ofm.wa.gov/>

Table 2
Clark County Household & Jobs, 2007-2014

Year	Households	Jobs	Jobs Per Household
2007	162,715	137,500	0.85
2008	164,796	137,300	0.83
2009	165,755	131,800	0.80
2010	166,989	130,400	0.78
2011	168,148	131,600	0.78
2012	169,467	134,400	0.79
2013	172,715	138,500	0.80
2014	173,827	144,300	0.83
Annual Average Percent change	0.94%	0.69%	

SOURCE: Clark County GIS and ESD.

Observations

- Population growth has three components: births, deaths and migration. Migration is the most volatile and has not recovered to pre-recession levels.
- Births and deaths have remained relatively constant over the last 20 years however deaths have been trending slightly higher due to the aging population
- During this period, 6,800 new jobs and 11,112 new households were added to Clark County.

Employment

The GMA does not mandate a source that must be considered in planning for future employment. However, in this report the county uses ESD to make comparisons between employment and employment densities. In 2007, commercial and industrial employment assumptions were 20 and 9 jobs per acre, respectively, to plan for future employment.

Observations

- From 2007 to 2014, Clark County added 11,112 new households, an annual average change of 0.94%; for the same period job growth was 0.69%.
- National recession starting in 2008 reversed a period of fast economic growth and low unemployment, resulting in significant layoffs and unemployment rates increasing to 11% by February 2013 in Clark County.

GROWTH TARGETS AND CAPACITY

In 1992, Clark County began the VBLM analysis to determine the potential capacity of urban growth areas to accommodate projected growth for the next 20 years to the year 2012. County staff met with interested parties from the development and environmental community to collectively examine criteria to be used to compute the supply of land available for development within each urban growth boundary. From the process, a methodology was developed using Clark County’s Department of Geographic Information System (GIS) as the primary data source.

The evaluation component of the RCW 36.70A.215 Review and Evaluation Program, at a minimum, shall: “Determine whether there is sufficient suitable land to accommodate the countywide population projection established for the county pursuant to RCW 43.62.035 and the subsequent population allocations within the county and between the county and its cities and the requirements of RCW 36.70A.110.”

The amount of land needed to accommodate projected growth through the 2035 planning horizon is the subject of this section. The amount of buildable land needed will be instrumental in the update of the comprehensive plan and provides a framework for addressing the land supply needs of a new 20-year planning horizon.

Tables 3 below and Table 4 on the following page indicate the amount of residential land needed to accommodate the projected population based on (1) the 2015 Comprehensive Growth Management Plan baseline assumptions; and (2) the densities observed since 2006. Each table provides the 2015 population (January 1st), the remaining population for planning horizon 2035, and the residential units and acres needed.

**Table 3
2035 Urban Growth Residential Land Need**

Jurisdiction	2015 Population	Remaining Population for planning horizon 2035	Residential units needed	Assumed units per net	Residential acres needed	Deficit	Surplus	2015 Vacant Buildable Land Inventory
Battle Ground	20,871	15,972	5,169	6	862		208	1,070
Camas	22,843	11,255	3,868	6	645		248	892
La Center	3,209	3,233	1,089	4	272		101	373
Ridgefield	6,575	13,087	4,377	6	729		280	1,009
Vancouver	315,460	52,786	21,723	8	2,715		907	3,622
Washougal	15,932	6,023	2,247	6	375		102	477
Woodland	89	229	83	4	21		5	25
Yacolt	1,661	303	88	4	22		22	44
Total	386,640	102,890	38,643		5,640			7,513

Source: Clark County Community Planning. Note: Land needs are based on the VBLM2015 model using net acres.

**Table 4
2035 Urban Growth Residential Land Need Based on Observed Density**

Jurisdiction	2015 Population	Remaining Population for planning horizon 2035	Residential units needed	Observed units per acre	Residential acres needed	Deficit	Surplus	2015 Vacant Buildable Land Inventory
Battle Ground	20,871	15,972	5,169	4.2	1,231	-161		1,070
Camas	22,843	11,255	3,868	3.8	1,018	-125		892
La Center	3,209	3,233	1,089	1.9	573	-200		373
Ridgefield	6,575	13,087	4,377	5.2	842		168	1,009
Vancouver	315,460	52,786	21,723	7	3,103		519	3,622
Washougal	15,932	6,023	2,247	6.6	341		136	477
Woodland	89	229	83	4	21		5	25
Yacolt	1,661	303	88	3.4	26		18	44
Total	386,640	102,890	38,643		7,154			7,513

Source: Clark County Community Planning. Note: Land needs are based on the VBLM 2015 model using net acres. Observed densities are based on actual development in urban areas. City densities are within city limits, except for Vancouver which uses full UGA density. Residential units needed is based on person per household from the 2013 ACS data. Additional population not included in the vacant land model is 15,224 persons; bringing the 2035 estimate to 118,114.

Summary

- The observed unit per acre does not include existing platted, yet vacant lots or potential densities based upon maximum lot sizes and current zoning of vacant or underutilized land. The model relies on building permit data, not platted development data. A conclusion under GMA that a jurisdiction has a surplus or deficit in lands available within a jurisdiction to accommodate a planned population within a defined planning period, can only be concluded through a thorough analysis of the underlying zoning, site constraints, site infrastructure and platting patterns.
- Based on the 2015 VBLM there are 7,513 net buildable acres. At a potential of 7 dwelling units per acre and 2.66 persons per household, this land area will accommodate 136,820 persons. The Urban Growth estimate is 118,114 persons, and the January 1, 2015 Clark County population estimate is 448,845. Therefore, the 2015 VBLM has capacity to accommodate the anticipated Urban Growth population estimate.
- Based on the 2015 VBLM, there are 2,057 net buildable commercial acres and 3,982 net buildable industrial acres. Thus, there is potential job capacity of 76,978 plus the public sector jobs that are not included in the vacant and buildable lands model, and including 16,775 jobs that will occur from redevelopment totaling 101,153 potential jobs.
- Based on the existing zoning, the total vacant and development potential in the rural area is approximately 9,390 lots. Assuming 2.66 persons per household, there is capacity to add 24,977 persons in the rural areas.
- See Appendix D for the City of Ridgefield’s planning consultants reply, Elizabeth Decker, on the observed density surplus.

In conclusion, based on observed density and the 2015 VBLM, Battle Ground, Camas and La Center show small deficits. If residential development continues to develop at the observed densities, then this deficit might become true by 2035. It is important to note that the observed densities occurred at a period of a deep recession having a significant impact to development occurring in the housing sector. However, Battle Ground, Camas, La Center, Ridgefield, Vancouver, Washougal and Clark County have adopted local development regulations that may reflect higher density development within the planning horizon.

Commercial and Industrial Needs Analysis

In 2014, the Board of County Commissioners chose to plan for a total of 91,200 net new jobs. The County has an estimated capacity of 101,153 jobs as follows: The 2015 VBLM, indicates a capacity of 76, 978 jobs. The cities of Battle Ground, La Center, and Ridgefield, have indicated they have additional capacity to accommodate 16, 755 jobs. Publicly owned land is not included in the model, therefore we assume that the 7,400 new public sector jobs estimated by ESD will occur on existing publicly owned facilities.

Residential Capacity Analysis

Tables 5-7 on the following pages provide the vacant buildable lands per urban growth area in the residential, commercial and industrial areas based on the 2015 VBLM. Countywide there are 7,513 net buildable residential acres with a capacity of 136,820 residents. See Appendix C for the Vacant Buildable Lands Model planning assumptions.

**Table 5
Residential Capacity Analysis, 2015**

Jurisdiction	Gross Acres	Net Acres	House holds	Population Capacity	Average Density per Net Acre
Battle Ground					
City	1,620.6	737.8	4,427	11,774	6
UGA	750.9	332.0	1,992	5,299	6
Total	2,371.5	1,069.8	6,419	17,073	6
Camas					
City	1,561.3	700.2	4,201	11,174	6
UGA	432.2	192.2	1,153	3,067	6
Total	1,993.5	892.3	5,354	14,242	6
La Center					
City	574.4	251.4	1,006	2,675	4
UGA	314.1	121.8	487	1,296	4
Total	888.5	373.2	1,493	3,971	4
Ridgefield					
City	1,583.2	654.0	3,924	10,438	6
UGA	858.2	355.2	2,131	5,669	6
Total	2,441.3	1,009.2	6,055	16,108	6
Vancouver					
City	1,208.4	567.1	4,536	12,067	8
UGA	6,764.4	3,055.4	24,443	65,019	8
Total	7,972.8	3,622.5	28,980	77,086	8
Washougal					
City	578.6	255.2	1,531	4,074	6
UGA	499.2	221.4	1,328	3,533	6
Total	1,077.8	476.6	2,860	7,606	6
Yacolt					
City	65.1	36.4	146	388	4
UGA	16.4	7.3	29	77	4
Total	81.6	43.7	175	465	4
Woodland					
City	5.8	2.0	8	21	4
UGA	88.9	23.3	93	247	4
Total	94.8	25.2	101	269	4
URBAN TOTAL	16,921.7	7,512.6	51,436	136,820	7
Urban Growth Estimate				118,114	

Source: Clark County Community Planning and VBLM 2015

Note: Residential market factor is included in the land capacity target.

**Table 6
Rural Capacity Analysis, 2014**

Comprehensive Plan Designation	Conforming Vacant Lots			Undersized Vacant Lots (no minimum lot size)	Total Potential Vacant Lots	Rural Capacity
	Current	Potential Dividable	Total			
R-5	1,203	2,648	3,851	1,470	5,321	14,154
R-10	146	536	682	475	1,157	3,078
R-20	19	33	52	70	122	325
FR-40	34	90	124	643	767	2,040
FR-80	21	609	630	307	937	2,492
AG-20	156	432	588	498	1,086	2,889
Total Rural	1,579	4,348	5,927	3,463	9,390	24,977

Source: Clark County GIS

**Table 7
Commercial and Industrial Capacity Analysis**

Jurisdiction	COMMERCIAL			INDUSTRIAL			Total Jobs
	Gross Acres	Net Acres	Jobs	Gross Acres	Net Acres	Jobs	
Battle Ground							
City	591.4	372.5	7,449	335.3	177.3	1,596	9,045
UGA	59.0	39.5	790	28.8	10.9	98	888
Total	650.4	411.9	8,239	364.1	188.3	1,694	9,933
Camas							
City	514.3	337.2	6,744	846.1	456.9	4,112	10,856
UGA	0.0	0.0	0	76.7	36.2	326	326
Total	514.3	337.2	6,744	922.8	493.1	4,438	11,182
La Center							
City	63.6	44.2	884	83.3	48.2	434	1,318
UGA	0.0	0.0	0	1.1	0.7	6	6
Total	63.6	44.2	884	84.4	48.8	440	1,324
Ridgefield							
City	270.1	179.3	3,587	942.0	506.2	4,556	8,143
UGA	17.8	12.2	245	65.5	35.6	321	565
Total	287.9	191.6	3,831	1,007.4	541.8	4,877	8,708
Vancouver							
City	519.9	369.1	7,383	2,706.5	1,391.1	12,520	19,903
UGA	868.3	604.2	12,083	1,861.1	1,022.4	9,202	21,285
Total	1,388.3	973.3	19,466	4,567.7	2,413.5	21,722	41,188
Washougal							
City	83.8	56.3	1,126	167.8	62.9	566	1,693
UGA	45.5	31.8	635	343.0	205.2	1,847	2,482
Total	129.3	88.1	1,762	510.8	268.1	2,413	4,175
Yacolt							
City	14.1	10.6	211	9.7	6.5	59	270
UGA	0.0	0.0	0	39.6	21.9	198	198
Total	14.1	10.6	211	49.2	28.5	256	468
Woodland							
City	0.0	0.0	0	0.0	0.0	0	0
UGA	0.0	0.0	0	0.0	0.0	0	0
Total	0.0	0.0	0	0.0	0.0	0	0
Urban Job Total	3,047.8	2,056.9	41,138	7,506.4	3,982.2	35,840	76,978
Public Sector							7,400
Redevelopment							16,775
Employment Growth Target							101,153

Source: Clark County Community Planning and VBLM 2015. Note: In February 2014, Clark County received an application for the establishment of an Industrial Land Bank on 601 acres with a potential of 5,400 jobs.

DEVELOPMENT TRENDS, 2006-2014

Residential

Monitoring building permits provides a measure of the level of construction activity and the rate at which residential land is being developed. Table 8 on the following page shows the number of new single-family and multi-family building permits issued, and the single-family and multi-family split from July 1, 2006 to December 31, 2014 for each of the Urban Growth Areas. Single family includes single-family residential, accessory dwelling units (ADU), and mobile homes (on individual lots). Multi-family includes multi-family residential, duplexes, and new mobile home parks. For the residential split, Countywide Planning Policy 1.1.12 in the 2007 Clark County Comprehensive Plan specifies that no more than 75 percent of new dwelling units to be a specific product type (i.e. single-family housing). See Appendix C for an annual breakdown of each jurisdiction's building permits.

Table 8
Single- and Multi-Family Building Permits, 2006-2014

Jurisdiction		Single-Family			Multi-Family			Total		
		Units	%SF	Acres	Units	%MF	Acres	Units	Acres	Units/Acre
Battle Ground										
	City	506	64%	175.1	280	36%	11.8	786	187	4.2
	UGA	45	100%	62.2	0	0%	0	45	62	0.7
	Sub Total	551	66%	237.3	280	34%	11.8	831	249	3.3
Camas										
	City	803	72%	267.9	306	28%	20.7	1,109	289	3.8
	UGA	21	100%	9.3	0	0%	0	21	9	2.3
	Sub Total	824	73%	277.2	306	27%	20.7	1,130	298	3.8
La Center										
	City	66	100%	34	0	0%	0	66	34	1.9
	UGA	7	100%	13.2	0	0%	0	7	13	0.5
	Sub Total	72	100%	47.2	0	0%	0	73	47	1.5
Ridgefield										
	City	680	99%	130.3	4	1%	0.2	684	131	5.2
	UGA	5	100%	62	0	0%	0	5	62	0.1
	Sub Total	685	99%	192.3	4	1%	0.2	689	193	3.6
Vancouver										
	City	1,728	38%	271.5	2,838	62%	135	4,566	406	11.2
	UGA	4,534	79%	1006	1,220	21%	51.8	5,754	1,058	5.4
	Sub Total	6,262	61%	1277	4,058	39%	186.9	10,320	1,464	7
Washougal										
	City	547	77%	99	163	23%	7.9	710	107	6.6
	UGA	7	100%	40.4	0	0%	0	7	40	0.2
	Sub Total	554	77%	139.4	163	23%	7.9	717	147	4.9
Yacolt										
	City	51	100%	15	0	0%	0	51	15	3.4
	UGA	0	0%	0	0	0%	0	0	0	0
	Sub Total	51	100%	15	0	0%	0	51	15	3.4
Clark County Rural										
		1,383	100%	7785.8	5	0%	15.6	1,388	7,801	0.2
Total Cities										
		4,381	55%	992.7	3,591	45%	175.7	7,972	1,168	6.8
Total UGAs										
		4,619	79%	1193.1	1,220	21%	51.8	5,839	1,245	4.7
Grand Total										
		9,000	65%	2185.8	4,811	35%	227.5	13,811	2,413	5.7

Source: Clark County Community Planning,

Chart 2 and chart 3 below show single-family and multi-family development by City from 2006 to 2014.

Chart 2
New Single-Family Development Density by City, 2006-2014

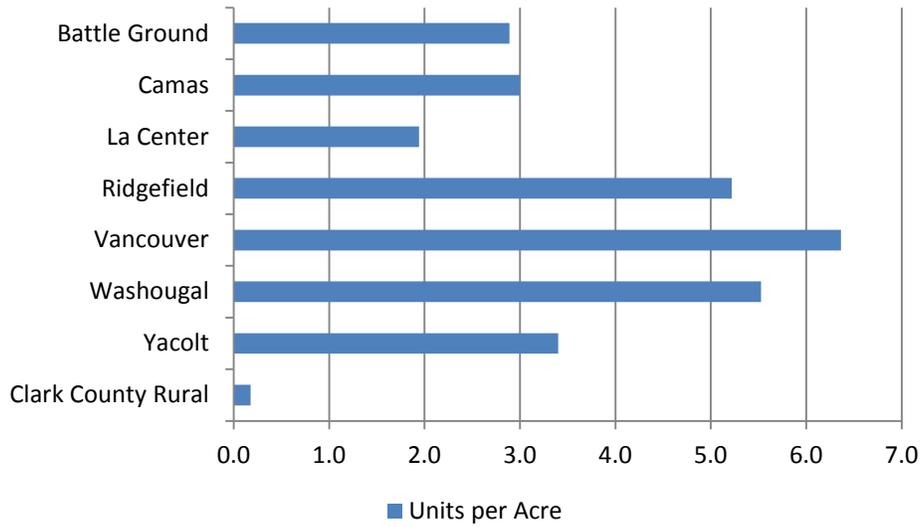
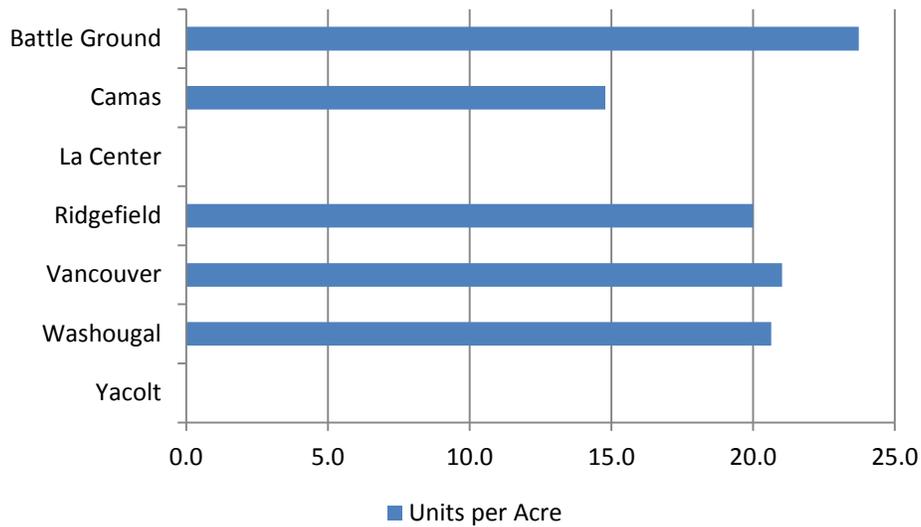


Chart 3
New Multi-Family Development Density by City, 2006-2014



Between 2006 and 2014:

- City of Vancouver achieved a density of 11.2 units per acre.
- City of Battle Ground's multi-family residential land developed at 23.7 dwelling units per acre.
- Overall, observed density on Single- & Multi-family residential dwelling units per acre is 5.7.
- The unincorporated portion of the Vancouver UGA achieved a 79% single-family and 21% multi-family residential split which exceeds the County-wide planning policy of no more than 75% of the new housing stock of a single product type.
- The VUGA reported average of 7.0 units per acre appears to have been reduced by a very small number of developments on existing large properties in the Urban Holding zone and other properties with extensive critical areas. Data indicates new single family lots are becoming smaller. The median size of new residential lots in urban density zones created since 2007 was 5,400 sq.ft. within the City of Vancouver, 5,900 sq.ft. within the unincorporated Vancouver UGA.

Non-residential

Data on commercial building permits issued from July 1, 2006 through December 31, 2014 was collected (Table 9). Tenant improvements were excluded unless the improvement resulted in an increase of building square footage. The parcel serial number from each building permit was linked to a GIS coverage to determine the parcel size, geography and critical area. Commercial building permits include commercial, industrial and multi-family development. Table 10 below reflects industrial building permits sorted by comprehensive plan designation for industrial uses. The Department Information and Technology provided information for both tables below that are shown as net acres. See Appendix B for Commercial and Industrial Building Permits by Year and Jurisdiction.

**Table 9
Commercial Building Permits by UGA**

UGA	Number of Permits	Acre	Critical Acres	Percent Critical
Battle Ground	63	224.8	168.1	75%
Camas	27	102.8	16.9	16%
La Center	2	4.5	0.3	7%
Ridgefield	6	33.5	12.6	38%
Vancouver	293	1,539.2	547.9	36%
Washougal	2	2.2	1.1	50%
Yacolt	1	1.1	0.0	0%
Total	394	1,908.0	747.0	39%
Rural	19	795.7	552.6	69%
County Total	413	2,703.6	1,299.6	48%

**Table 10
Industrial Building Permits by UGA**

UGA	Number of Permits	Acres	Critical Acres	Percent Critical
Battle Ground	2	2.2	1.4	66%
Ridgefield	4	26.1	10.7	41%
Vancouver	68	465.6	222.0	48%
Washougal	1	1.2	1.2	101%
Total	75	495.0	235.2	48%
Rural	4	173.4	130.1	75%
County Total	79	668.3	365.4	55%

Observations

- Based on commercial building permits issued, development occurred on 2,703.6 acres of commercially designated land and 668.3 acres of industrial designated land.

Employment Density Methodology

Information for employment below is based on new construction permits from July 1, 2006 to June 30, 2014. The building permit information was matched to parcels and employment locations to obtain acres and employment. In table 11, a total of 224 records matched between the new construction permits and the employment records. Commercial values include the following permit types: commercial, institutional, office and retail permit types. Industrial values include industrial permit types.

Table 11
Commercial and Industrial Employment Density

Urban Growth Area										
		Battle Ground	Camas	LaCenter	Ridgefield	Vancouver	Washougal	Yacolt	Rural	Grand Total
Commercial	Employees	882	127	22	223	15,523	0	0	195	16,972
	Acres	79	11	5	14	1,462	0	0	249	1,819
	Employees per Acre	11.1	11.7	4.7	16.3	10.6	0.0	0.0	0.8	9.3
Industrial	Employees	21	0	0	12	3,043	7	0	10	3,093
	Acres	1	0	0	2	273	1	0	7	284
	Employees per Acre	23.7	0.0	0.0	6.0	11.1	6.0	0.0	1.4	10.9

Source: Clark County GIS

Observations

A caveat of the observations below is that they are from a limited set of employment data.

- The planning assumptions applied in 2007 were based on employees per net acre; twenty (20) for commercial and nine (9) for industrial. The result is that the observed densities are lower than the 2007 planning assumptions.
- From 2006 to 2014, new permits show employees per net acre for commercial at 9.3 employees per acre and industrial at 10.9 employees per net acre.
- Clark County has seen employment gains from 2006 to 2014. It is likely that some businesses have added employees, which would not require new building permits and may account for the low employment density reported.

Development on Constrained Parcels

Background and Relevance

Tracking development on parcels with critical lands provides an indicator of impacts from growth to the environment and illustrates the general effectiveness of environmental protection measures. It is also an indicator of land demand. When there is a high demand for land, development tends to occur more frequently on areas that are more difficult to develop. Critical lands are identified in Clark County code Title 40 Unified Development.

Data Collection

Only the constrained portion of a parcel is identified in the VBLM. Table 12 illustrates the percent of vacant and underutilized constrained land that converted to built by UGA for residential, commercial and industrial land from 2007 to 2014. The critical layer is based on best available science, and includes a new slopes layer and the most recent habitat and species information. See Appendix C for a description of constrained acres.

Table 12
Vacant and Underutilized Land Converted to Built, 2007-2014

Urban Growth Area	Residential			Commercial			Industrial		
	Total Converted to Built (Acres)	Of Total Built-Converted w/Constraints (Acres)	Percent Built w/Constraints	Total Converted to Built (Acres)	Of Total Built-Converted w/Constraints (Acres)	Percent Built w/Constraints	Total Converted to Built (Acres)	Of Total Built-Converted w/Constraints (Acres)	Percent Built w/Constraints
Battle Ground	286	190	66.5%	105	74	70.3%	105	91	86.2%
Camas	366	228	62.4%	13	5	40.1%	124	82	66.0%
La Center	23	7	29.2%	5	4	82.7%	0	0	0.0%
Ridgefield	322	162	50.4%	16	10	62.3%	189	87	46.2%
Vancouver	1,577	526	33.3%	338	96	28.6%	626	237	37.8%
Washougal	152	65	42.7%	11	4	34.6%	83	46	55.0%
Woodland	0	0	0.0%	0	0	0.0%	0	0	0.0%
Yacolt	14	6	40.7%	1	0	0.0%	0	0	0.0%
Total UGAs	2,739	1,183	43.2%	489	193	39.6%	1,126	542	48.1%

Source: Community Planning and Clark County GIS

Observations

Between 2007 and 2014:

- 1,183 acres of residential development occurred on parcels with some constrained areas, or 43.2%.
- 193 acres of commercial development occurred on parcels with some constrained areas or 39.6%.
- 542 acres of industrial development occurred on parcels with some constrained areas or 48.1%

Infrastructure Analysis

Background and Relevance

Land used for infrastructure is not available for housing or employment development. It is important to know the amount of available land that will be needed to provide the necessary infrastructure for development. This indicator will help calculate the amount of land needed for growth.

Data Collection

The 2007 Comprehensive Growth Management Plan assumed infrastructure will consist of 27.7 percent for residential development and 25 percent for industrial and commercial development. The Vacant Buildable land model comparison report provides a breakdown of easements & infrastructure by residential, industrial, and commercial land. Table 13 below shows percentages of residential, commercial and industrial portions of vacant and underutilized land that converted to infrastructure from January 1, 2007 to December 31, 2014.

Table 13
Infrastructure Summary

Easement & Infrastructure	Residential Acres	Percent of Residential Converted to Infrastructure	Commercial Acres	Percent of Commercial Converted to Infrastructure	Industrial Acres	Percent of Industrial Converted to Infrastructure
Vacant & Underutilized Land (2007)	2,739.4		488.7		1,126.4	
Easements & Right of Way	213.8	7.8%	46.8	9.6%	66.4	5.9%
Schools	10.2	0.4%	0.0	0.0%	0.0	0.0%
Public Lands (Except Right of Way)	171.0	6.2%	29.4	6.0%	123.8	11.0%
Greenway (Public & Private)	339.0	12.4%	19.6	4.0%	51.9	4.6%
Easement & Infrastructure Total	733.9	26.8%	95.7	19.6%	242.2	21.5%

Source: Clark County Community Planning and Clark County GIS.

Note: In 2012, the County acquired the Lechner industrial properties of 120.96. It was not included in this table as it is under remedial action through a consent decree under the Jurisdiction of Washington State Department of Ecology.

Observations

From January 1, 2007 to December 31, 2014, Residential easements and infrastructure consumed less than the assumed 27.7 percent of development. About 734 acres or 26.8 percent of residential vacant and underutilized land converted to infrastructure in all UGAs. For commercial, almost 96 acres or 19.6% converted to infrastructure. Industrial had 242 acres converted to infrastructure or 21.5%. There have been recent changes to Stormwater regulations that may lead to more land being set aside for the retention of stormwater. However, there is insufficient development data under the new regulations to warrant a change to the planning assumptions. This is an area we will continue to monitor and update, as necessary.

The data collected for this report is available online at http://www.clark.wa.gov/planning/comp_plan/monitoring.html#capacity or via CD-ROM from Clark County Community Planning.

APPENDIX A – Residential Building Permits by Year and Jurisdiction

The following residential tables are reported by year from July 1, 2006 to December 31, 2014 for each jurisdiction and assembled by Clark County Community Planning.

**Table 1
Rural Annual Residential Development**

Clark County	2006			2007			2008			2009			2010			2011			2012			2013			2014			Total 2006-2014		
Single Family	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre
Rural	198	1,268.2	0.2	286	1,501.2	0.2	150	872.8	0.2	105	644.5	0.2	109	520.8	0.2	85	412.3	0.2	112	681.2	0.2	168	894.8	0.2	171	989.9	0.2	1,384	7,785.8	0.2
Multi-Family																														
Rural	0			0			0			0			0			1	0.9		1	5.3		1	3.2		2	6.2		5	15.6	0.3
Total Rural	198			286	1,501.2	0.2	150	872.8	0.2	105	644.5	0.2	109	520.8	0.2	86	413.2	0.2	113	686.5	0.2	169	898.0	0.2	173	996.1	0.2	1,389	7,801.4	0.2

**Table 2
Battle Ground Annual Residential Development**

Battle Ground	2006			2007			2008			2009			2010			2011			2012			2013			2014			Total 2006-2014		
Single Family	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre
City	23	7.5	3.1	86	17.6	4.9	66	38.4	1.7	47	16.6	2.8	59	21.3	2.8	32	8.9	3.6	41	19.6	2.1	70	22.4	3.1	82	22.8	3.6	506	175.1	2.9
UGA	4	7.1	0.6	7	7.2	1.0	2	2.2	0.9	3	3.1	1.0	7	8.0	0.9	5	6.8	0.7	6	9.6	0.6	7	10.7	0.7	4	7.6	0.5	45	62.2	0.7
Multi-Family																														
City	0			20	1.4	14.6	4	0.4	10.5	80	4.3	18.5	0			24	0.8	30.3	30	1.0	30.3	122	4.0	30.7	0			280	11.8	23.7
Total UGA	27	14.7	1.8	113	26.1	4.3	72	40.9	1.8	130	23.9	5.4	66	29.3	2.3	61	16.5	3.7	77	30.2	2.6	199	37.1	5.4	86	30.4	2.8	831	249.1	3.3

**Table 3
Camas Annual Residential Development**

Camas	2006			2007			2008			2009			2010			2011			2012			2013			2014			Total 2006-2014		
Single Family	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre
City	59	24.8	2.4	91	86.2	1.1	58	10.5	5.5	65	17.3	3.8	127	37.7	3.4	60	12.7	4.7	68	15.8	4.3	116	30.0	3.9	159	32.8	4.8	803	267.6	3.0
UGA	0			0			0			1	1.1	1.0	0			3	1.0	2.9	3	0.5	6.5	5	0.7	7.7	9	6.1	1.5	21	9.3	2.3
Multi-Family																														
City	20	1.4	14.1	23	1.9	12.4	25	1.6	16.1	11	0.6	18.3	63	3.6		0			67	6.09	11.0	10	0.5	19.6	87	5.1	17.1	306	20.8	14.7
Total UGA	79	26.2	3.0	114	88.0	1.3	83	12.0	6.9	77	19.0	4.1	190	41.3	4.6	63	13.8	4.6	138	22.3	6.2	131	31.1	4.2	255	44.0	5.8	1130	297.7	3.8

**Table 4
La Center Annual Residential Development**

La Center	2006			2007			2008			2009			2010			2011			2012			2013			2014			Total 2006-2014		
Single Family	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre
City	2	5.3	0.4	14	5.5	2.6	6	1.3	4.7	4	0.6	6.6	12	1.94	6.2	6	6.2	1.0	5	1.0	5.2	11	11.2	1.0	6	1.06	5.7	66	34.0	1.9
UGA	0			1	1.5		0			0			0			2	7.5	0.3	2	2.0	1.0	1	1.2	0.9	1	1.0	1.0	7	13.2	0.5
Multi-Family																														
City	0			0			0			0			0			0			0			0			0			0		
Total UGA	2	5.3	0.4	15	7.0	2.2	6	1.3	4.7	4	0.6	6.6	12	1.9	6.2	8	13.7	0.6	7	3.0	2.3	12	12.3	1.0	7	2.1	3.4	73	47.2	1.5

APPENDIX B – Commercial & Industrial Building Permits by Year and Jurisdiction

The following commercial and industrial tables are reported by year for each jurisdiction from July 1, 2006 to December 31, 2014, and are from Clark County Information Technology.

Table 1
Battle Ground Annual Commercial and Industrial Permits

Battle Ground UGA	Year Issued	Number of Permits	Acres	Critical Acres	Percent Critical
Commercial	2006	7	15.3	13.3	87%
	2007	15	84.4	70.3	83%
	2008	17	40.9	28.6	70%
	2009	2	10.2	9.7	95%
	2010	6	23.9	20.4	85%
	2011	1	10.0	9.5	95%
	2012	2	1.5	1.3	86%
	2013	8	31.7	11.5	36%
2014	5	6.9	3.7	53%	
Commercial Total		63	224.8	168.1	75%
Industrial	2013	1	0.9	0.1	15%
	2014	1	1.3	1.3	100%
Industrial Total		2	2.2	1.4	66%

Table 2
Camas Annual Commercial Permits

Camas UGA	Year Issued	Number of Permits	Acres	Critical Acres	Percent Critical
Commercial	2007	3	3.2	0.2	5%
	2008	4	16.3	0.6	4%
	2009	2	22.8	1.9	8%
	2010	2	16.6	5.7	34%
	2011	6	22.8	0.2	1%
	2013	2	18.4	8.4	46%
	2014	8	2.7	0.0	0%
Commercial Total		27	102.8	16.9	16%

**Table 3
La Center Annual Commercial Permits**

La Center UGA	Year Issued	Number of Permits	Acres	Critical Acres	Percent Critical
Commercial	2007	1	4.2	0.3	8%
	2013	1	0.2	0.0	0%
Commercial Total		2	4.5	0.3	7%

**Table 4
Ridgefield Annual Commercial and Industrial Permits**

Ridgefield UGA	Year Issued	Number of Permits	Acres	Critical Acres	Percent Critical
Commercial	2006	3	14.0	11.0	79%
	2013	1	5.7	0.4	7%
	2014	2	13.8	1.1	8%
Commercial Total		6	33.5	12.6	38%
Industrial	2007	1	2.3	1.5	65%
	2008	3	23.8	9.2	39%
Industrial Total		4	26.1	10.7	41%

**Table 5
Vancouver Annual Commercial and Industrial Permits**

Vancouver UGA	Year Issued	Number of Permits	Acres	Critical Acres	Percent Critical
Commercial	2006	34	67.9	24.1	36%
	2007	53	338.0	101.6	30%
	2008	49	230.0	81.3	35%
	2009	25	226.5	59.4	26%
	2010	32	99.1	14.0	14%
	2011	27	142.2	110.5	78%
	2012	24	57.9	5.7	10%
	2013	15	119.4	11.6	10%
	2014	34	258.2	139.7	54%
Commercial Total		293	1,539.2	547.9	36%
Industrial	2006	7	15.0	0.2	1%
	2007	15	41.2	17.6	43%
	2008	13	215.7	91.5	42%
	2009	7	50.5	17.1	34%
	2010	3	5.1	0.0	0%
	2011	6	43.9	25.7	59%
	2012	8	43.8	27.9	64%
	2013	4	38.7	38.5	100%
	2014	5	11.8	3.5	30%
Industrial Total		68	465.6	222.0	48%

**Table 6
Washougal Annual Commercial and Industrial Permits**

Washougal UGA	Year Issued	Number of Permits	Acres	Critical Acres	Percent Critical
Commercial	2010	1	1.1	1.1	100%
	2014	1	1.1	0.0	0%
Commercial Total		2	2.2	1.1	50%
Industrial	2014	1	1.2	1.2	100%
Industrial Total		1	1.2	1.2	100%

**Table 7
Yacolt Annual Commercial Permits**

Yacolt UGA	Year Issued	Number of Permits	Acres	Critical Acres	Percent Critical
Commercial	2012	1	1.1	0.0	0%
Commercial Total		1	1.1	0.0	0%

**Table 8
Rural Clark County Commercial and Industrial Permits**

Rural Clark County	Year Issued	Number of Permits	Acres	Critical Acres	Percent Critical
Commercial	2006	3	6.0	3.7	62%
	2007	3	212.5	170.1	80%
	2009	3	46.4	32.2	69%
	2010	2	9.5	5.5	58%
	2011	3	316.5	192.6	61%
	2013	4	202.3	148.5	73%
	2014	1	2.5	0.0	0%
Commercial Total		19	795.7	552.6	69%
Industrial	2007	1	7.3	7.1	97%
	2009	2	15.0	4.9	33%
	2011	1	151.1	118.2	78%
Industrial Total		4	173.4	130.1	75%

APPENDIX C – VACANT BUILDABLE LANDS MODEL

The Vacant Buildable Lands Model (VBLM) is a planning tool developed to analyze residential, commercial, and industrial lands within urban growth areas. The model serves as a tool for evaluating urban area alternatives during Clark County 20-year Comprehensive Growth Management Plan updates and for monitoring growth patterns during interim periods. The VBLM analyzes potential residential and employment capacity of each urban growth area within the county based on vacant and underutilized land classifications. This potential capacity is used to determine the amount of urban land needed to accommodate projected population and job growth for the next 20 years during plan updates and to analyze land consumption or conversion rates on an annual basis for plan monitoring purposes.

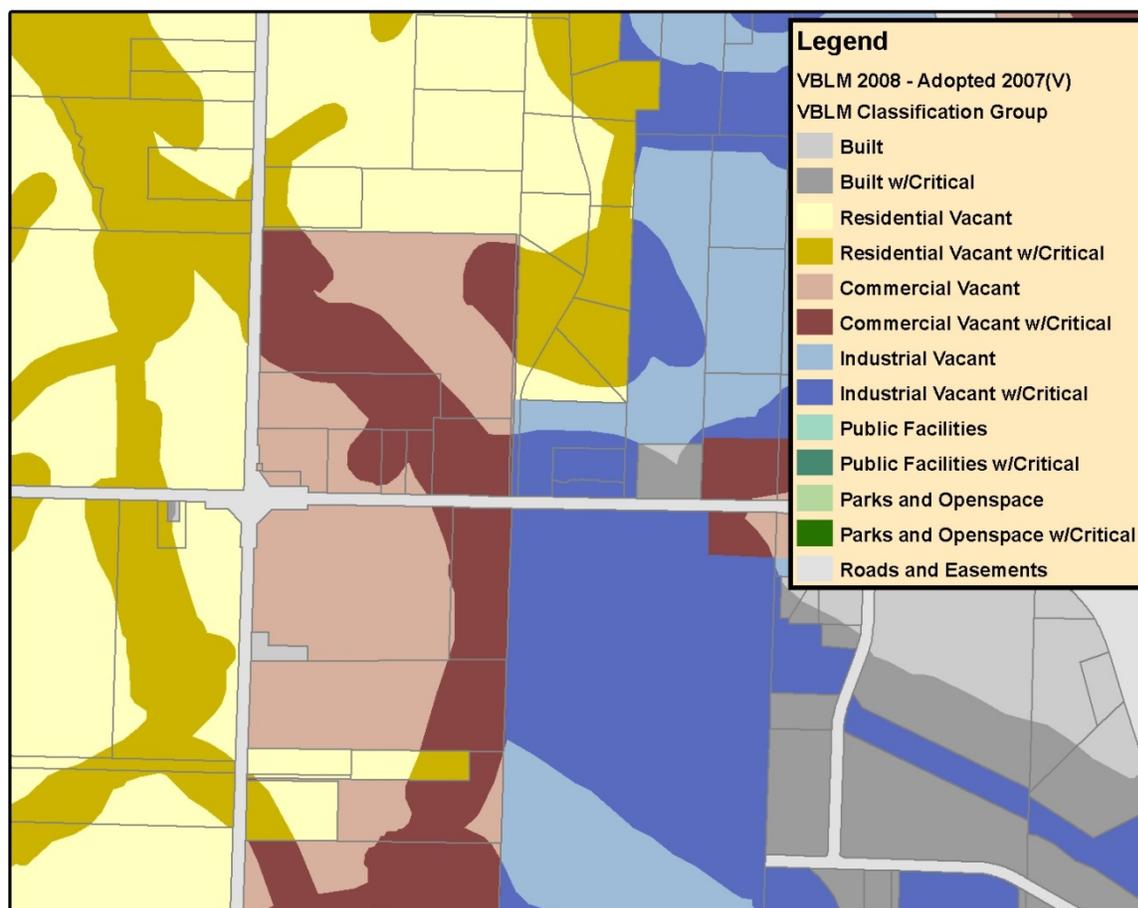
In 1992, Clark County began evaluating vacant lands as part of the initial 20-year growth management plan. At that time, County staff met with interested parties from development and environmental communities to examine criteria and establish a methodology for computing potential land supply available for development. A methodology relying on the Clark County Assessor's database and Geographic Information System (GIS) as primary data sources was developed. As a result the VBLM is a GIS based model built on geoprocessing scripts.

In the spring of 2000, the Board of Clark County Commissioners appointed a technical advisory committee consisting of local government agencies, Responsible Growth Forum members, and Friends of Clark County to revisit this process. They reviewed definitions for each classification of land and planning assumptions for determining potential housing units and employment.

Another comprehensive review of the VBLM criteria and assumptions was undertaken in 2006 as part of the growth management plan update. This review compared the 1996 prediction to the 2006 model. This review demonstrated that for the most part the model was a good predictor of what land would develop. However, changes were made to the model based on results of this review. Important changes to the model include:

- Underutilized land determination for all models was changed to a building value per acre criteria.
- The industrial model and commercial model now have consistent classifications. The industrial model was revised to match the commercial process.
- Environmental constraints methodology changed from applying assumptions to parcels based on percentage of critical land to simply identifying constrained and non constrained land by parcel and applying higher deductions to constrained lands.

Example Map of Constrained Lands



Benefits of the current improvements are more consistency and easier monitoring of the model. Better accounting for private open space, constrained lands, and exempt port properties. And calculations for underutilized lands are more dynamic.

Model Classifications

The model classifies lands into three urban land use categories--residential, commercial, and industrial. Lands are grouped into land use codes based on comprehensive plan designations for model purposes. Lands designated as parks & open space, public facility, mining lands, or airport within the urban growth areas are excluded from available land calculations. Additionally, all rural and urban reserve designated lands are excluded from the model. Table 1 lists a breakdown of the land use classes.

Table 1: Land Use Classes

LU	Comprehensive Plan Classification	VBLM Model
1	Urban Low Density Residential	Residential – Urban Low
1	Single-Family_Low	Residential – Urban Low
1	Single-Family_Medium	Residential – Urban Low
1	Single-Family_High	Residential – Urban Low
2	Urban Medium Density Residential	Residential – Urban High
2	Urban High Density Residential	Residential – Urban High
2	Multi-Family_Low	Residential – Urban High
2	Multi-Family_High	Residential – Urban High
3	Neighborhood Commercial	Commercial
3	Community Commercial	Commercial
3	General Commercial	Commercial
3	City Center	Commercial
3	Regional Center	Commercial
3	Downtown	Commercial
3	Commercial	Commercial
4	Mixed Use	Commercial
4	Town Center	Commercial
5	Office Park/Business Park	Commercial
5	Light industrial/Business park	Commercial
5	Employment Campus	Commercial
6	Light Industrial	Industrial
6	Heavy Industrial	Industrial
6	Railroad Industrial	Industrial
6	Industrial	Industrial
33	Mixed use - Residential	Residential
34	Mixed use - Employment	Commercial

The model classifies each urban parcel as built, vacant, or underutilized by the three major land uses. Additionally lands with potential environmental concerns and/or geologic hazards as consistent with the applicable section of the Clark County and other municipal codes are classified as constrained (critical lands) lands. Constrained lands are identified by parcel in the model.

Constrained lands include:

- 100 year floodplain or flood fringe
- Wetlands inventory (NWI, high quality, permitted, modeled) with 100 foot buffer
- Slopes greater than 15 percent (>25% for City of Vancouver)
- Land slide area that has active or historically unstable slopes
- Designated shorelines

- Hydric soils with 50 foot buffer
- Habitat areas with 100 foot buffer
- Species areas with 300 foot buffer
- Riparian stream buffers by stream type (Table 2)

Table 2: Riparian Buffers

Stream Type	Countywide	Vancouver Exception
Type S (Shoreline)	250 Feet	175 Feet
Type F (Fish Bearing)	200 Feet	175 Feet
Type NP (Non-fish bearing, perennial)	100 Feet	150 Feet
Type NP (Non-fish bearing, seasonal)	75 Feet	100 Feet

Residential Model

Important residential classifications include vacant, vacant critical, underutilized, and underutilized critical. These classes are used to determine gross acres available for development. Vacant exempt, vacant lots less than 5,000 square feet and all other classes are excluded from available land calculations. Table 3 lists all residential classes.

Table 3: Residential Classifications

RESCLASS	Description
0	Not Residential
1	Built
2	Unknown
3	Vacant
4	Underutilized
5	Roads and Easements
6	Mansions and Condos
12	Built Exempt
13	Vacant Exempt
14	Vacant Critical
18	Underutilized Critical
19	Less than 5,000 square feet
20	Private Open Space
21	Parks and Open Space

Criteria for classifying residential lands are as follows:

- Residential Vacant Criteria
 - Building value less than \$13,000

- Not tax exempt
 - Not an easement or right of way
 - Not a state assessed or institutional parcel
 - Not a mobile home park
 - Parcel greater than 5,000 square feet
- Underutilized
 - Same as Vacant except building value criteria is replaced with a building value per acre criteria.
 - Building value per acre of land is below the 10th percentile of building value per acre for all residential parcels within all UGAs. The 10th percentile is calculated by the model for each year and for each UGA alternative.
 - Parcel size greater than 1 acre
 - Mansions and Condos
 - Parcel size greater than 1 acre
 - Building value per acre greater than the 10th percentile.
 - Residential Exempt
 - Properties with tax exempt status
 - Easements and right of ways
 - Constrained (Critical lands)
 - All classifications may be subdivided into constrained vs. not constrained. Constrained lands are described above.

Commercial and Industrial Models

Commercial and industrial lands are classified using consistent criteria with one exception; industrial classes include exempt port properties in the current model.

Important commercial classes for determining gross acres available for development include vacant, vacant critical, underutilized, and underutilized critical. Vacant exempt and vacant lots less than 5,000 square feet are excluded from available land calculations. Table 4 lists all commercial classes.

Table 4: Commercial Classifications

COMCLASS	Description
0	Not Commercial
1	Built
2	Vacant
3	Underutilized
5	Vacant Lot less than 5,000 sq feet
7	Vacant Critical
9	Underutilized Critical
10	Vacant Exempt

Important industrial classes for determining gross acres available for development include vacant, vacant critical, exempt vacant port property, exempt vacant port property critical, underutilized, underutilized critical, exempt underutilized port property, and exempt underutilized port property critical. All exempt not port properties are excluded in the available land calculations. Table 5 lists all industrial classes.

Table 5: Industrial Classifications

INCLASS	Description
0	Not Industrial
1	Vacant
2	Underutilized
3	Vacant Critical
4	Underutilized Critical
6	Built
7	Exempt Vacant Port Property
8	Exempt Vacant Not Port
9	Exempt Vacant Port Property Critical
10	Exempt Underutilized Port
11	Exempt Underutilized Port Critical
12	Exempt Underutilized Not Port
15	Easements

Commercial and industrial models classify vacant and underutilized land as follows:

- Vacant land
 - Building value less than \$67,500
 - Not “Assessed With”- Some parcels are assessed with other parcels. These parcels are often parking lots, or multiple parcels comprising a single development. All assessed with parcels are considered built.
 - Not Exempt.
 - Port property is exempt, and is included as a separate classification in the Industrial land model.

- Not an Easement or right of way
 - Parcel greater than 5,000 square feet
 - Not a state assessed or institutional parcel
- Underutilized Lands
 - Same as vacant except building value criteria is replaced with a building value per acre criteria of less than \$50,000.
 - Constrained (Critical lands)
 - All classifications may be subdivided into constrained vs. not constrained. Commercial and industrial constrained lands are defined the same as residential constrained lands and are listed above.
 - Exempt Port Properties in the Industrial Model
 - Includes lands that are under port ownership and available for development. Buildable exempt port properties are included in available land calculations.
 - Port properties can be classified as vacant, underutilized, or constrained.

The model produces a summary of gross residential, commercial, and industrial acres available for development. Gross acres are defined as the total raw land available for development prior to any deductions for infrastructure, constrained lands, and not to convert factors.

Planning Assumptions

The next step in the buildable lands process is applying planning assumptions to the inventory of vacant and underutilized gross acres in order to arrive at a net available land supply. These assumptions account for infrastructure, reduced development on constrained land, and never to convert factors. Use factors along with employment and housing units per acre densities are applied to derived net acres to predict future capacities.

Residential Model Planning Assumptions:

- 27.7% deduction to account for both on and off-site infrastructure needs. 20% infrastructure deduction for mixed use lands.
- Never to convert factor
 - 10% for vacant land
 - 30% for underutilized
- 50% of available constrained (critical) land will not convert
- 60% of mixed use land will develop as residential, 85% residential for Battle Ground mixed use - residential and 25% residential for mixed use - employment.

Commercial and Industrial Model Planning Assumptions

- 25% infrastructure factor applied for both commercial and industrial lands.
- 20% of available constrained (critical) commercial and mixed use land will not convert
- 50% of available constrained (critical) industrial land will not convert
- 40% of mixed use land will develop as commercial, 15% commercial for Battle Ground mixed use - residential and 75% commercial for mixed use - employment.

Employees and unit per acre density assumptions are applied to net developable acres to predict future employment and housing unit capacities. Densities are set by the Current Planning staff based on observed development and comprehensive plan assumptions for each UGA.

Applied residential densities vary by UGA. Table 6 lists the units per acre by UGA.

Table 6: Residential units per Acre

Urban Growth Area	Applied Housing Units per Net Developable Acre
Battle Ground	6
Camas	6
La Center	4
Ridgefield	6
Vancouver	8
Washougal	6
Woodland	6
Yacolt	4

Applied employment densities vary by land use as well. Commercial classes which includes commercial, business park, and mixed use categories apply 20 employees per acre while industrial classes apply 9 employees per acre.

Applying residential and employment planning assumptions to the VLM results produce housing units and employment carrying capacity estimates for urban growth areas. These estimates help monitor growth on an annual basis and is part of the criteria used for setting UGA boundaries during growth management plan updates.

Current model layers and reports are available for viewing in Clark County's GIS Maps Online web application at:

<http://gis.clark.wa.gov/vblm/>

Underutilized land classes are grouped with vacant classes by land use in Maps Online and on other map products. Table 7 lists the group classes used for mapping.

Table 7: Group Classes

GRPCLASS	Description
1	Built
2	Built w/Critical
3	Residential Vacant
4	Residential Vacant w/Critical
5	Commercial Vacant
6	Commercial Vacant w/Critical
7	Industrial Vacant
8	Industrial Vacant w/Critical
9	Public Facilities
10	Public Facilities w/Critical
11	Parks and Open Space
12	Parks and Open Space w/Critical
13	Roads and Easements

For more information on the model inputs, structure and outputs, please contact Clark County Community Planning at (360) 397-2280 or Clark County Geographic Information System (GIS) at (360) 397-2002.

APPENDIX D – ASSESSMENT OF REASONABLE MEASURES

Clark County and the incorporated cities within the county have completed review under RCW 36.70A.215 which includes comparisons between development that has occurred and the original planning assumptions and targets.

In summary, several of the cities have addressed their reasonable measures by adopting local development regulations. However, these changes in regulations may not immediately reflect higher density development within the time reviewed (2006-2014). The market and economy might regulate development and density, which may delay development with higher densities. These adopted measures will likely be reflected in the next buildable lands evaluation report. If cities do not increase their densities, then county-wide planning policies will need to be amended possibly before the next Buildable Lands Report is completed.

The following actions were previously identified as necessary revisions to local development regulations. These revisions were to be incorporated into the update process and adopted in an ordinance or resolution to ensure compliance with the GMA. These measures reflect changes in regulation that would gradually allow for higher density development within the planning horizon.

City of Battle Ground

- The City of Battle Ground Comprehensive Plan, 2004, Chapter 3: Land Use Element, reviewed the ratio of zoned land to density goals, assuring the plan is implementing current countywide density goals and housing type mix.
- Battle Ground has developed a mixed-use ordinance, Ord. 04-024 § 20 (part), 2004. Their updated 2006 development code, Title 17, Chapter 17.101.040 and 2004 Comprehensive Plan, examine minimum densities in certain districts as tools to achieve density goals.
- Battle Ground Comprehensive Plan, 2004, contains a growth management element that addresses annexation and sub-area planning in four growth management goals, listed below.

Growth Management Goal 1: The City will seek a sustainable rate of growth

Objectives

GMO1.1 The City will coordinate its growth projections and growth goals with other jurisdictions.

GMO1.2 The City will balance its growth with other City goals.

GMO1.3 The City will strive to grow at a rate that maintains its small town character.

GMO1.4 The City will work to provide adequate urban services concurrently with development.

GMO1.5 The City will encourage efficient growth within the existing city limits before pursuing additional annexations.

GMO1.6 The City will coordinate with Battle Ground School District during annexation processes to maintain District service standards

Growth Management Goal 2: Future growth is to occur primarily to the west and south of the current city limits and in all directions consistent with the 50-year vision.

Objectives

GMO2.1 The City will primarily focus future planning efforts to the south and west of the current city limits.

GMO2.2 The City will focus secondary planning efforts for future growth to the north and east.

Growth Management Goal 3: The City will encourage the efficient and sustainable expansion of the City through the Urban Growth Areas.

Objectives

GMO3.1 The City will seek to achieve desirable growth patterns through annexations.

GMO3.2 The City will seek to achieve a jobs/housing balance through annexations.

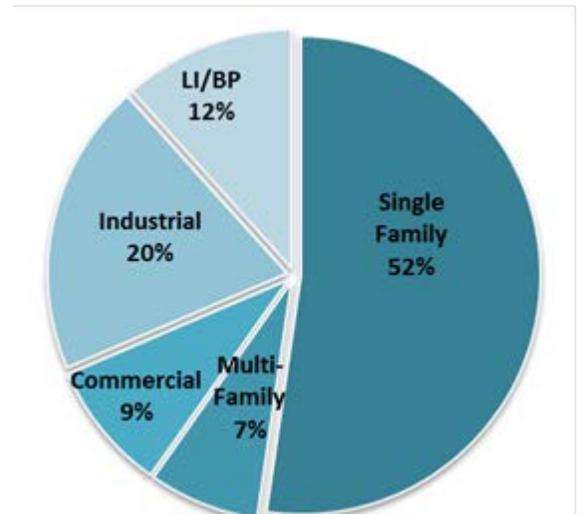
Growth Management Goal 4: The City will work with the County and other jurisdictions in determining growth policies for the Area of Influence.

Objectives

GMO4.1 The City will seek to preserve the Area of Influence for future urban growth patterns anticipated by the Vision.

City of Camas

- The City of Camas designated and zoned land, consistent with the 2007 Clark County Framework Plan, 52% of the land for single-family residential and 7% for multifamily with a range of densities such that the average density for new development can yield six units per acre. The City has designated the remaining area for 20% to industrial development, 12% for Light Industrial/Business Park development, and 9% for Commercial development.



- According to the County’s 2035 projections, the City must accommodate 3,868 additional housing units within the 20-year planning horizon. The City has approximately 3,607 vacant, platted or approved lots/multi-unit complexes within the existing city limits. There are also development agreements within vacant lands that will provide an additional 583 units. Notwithstanding lands within the UGB that have not been annexed, this combined data provides the city with 4,190 future residential units—a surplus of 322 units within the 20-year planning horizon. A study in 2013 for the purpose of updating the City’s transportation impact fees in 2013, forecasted that the City can accommodate a total of 7,002 additional housing units within the 20 year planning horizon. Both methods of factoring future units conclude that there will be a surplus of residential units within the planning horizon and densities in excess of 6 units per acre.
- The City of Camas adopted development standards that encourage density and efficient development of land. The following regulations in Camas Municipal Code (CMC) allow for flexible lot sizes and dimensions, to include: the Planned Residential Development code (CMC Chapter 18.23); Accessory Dwelling Units code (CMC Chapter 18.27); Mixed Use codes (CMC Chapters 18.22 and 18.24); and Flexible Development codes (CMC Chapter 18.26).
- The City has approximately 2,854 acres designated for employment (combined commercial and industrial lands), or 41% of the overall acreage. The County estimates that there is 1,279 gross acres of vacant and underutilized employment land, with a potential for creating 12,157 additional jobs.

City of La Center

- In 2006, the City La Center adopted new density requirements with single family zoning (LDR-7.5) at a minimum density of four (4) dwelling units per acre. Ninety percent of all new parcels in this district must average within 10 percent of 7,500 square feet as a total development and any phase within the development. LCMC18.130.080.
- In 2006, the City of La Center’s medium density residential (MDR-16) set a minimum requirement of eight units per net acre, and a maximum density of 16 units per net acre. LCMC 18.140.010
- In 2007, the City of La Center adopted critical area development regulations that prohibit the creation of lots in wetlands or wetland buffers, allowing the city to achieve a higher net density. LCMC 18.300.050.4.f.iii.
- In 2010, La Center amended their municipal code Title 18 Subdivision Provisions to mandate applicants remainder lost must contain at least 50 percent buildable area, and that the remainder lot is capable of being developed to urban density standards. LCMC 18.210.100.
- See City of La Center’s correspondence to their observed density.

La Center Correspondence

From: [Eric Eisemann](#)
To: [Albrecht, Gary](#); [Orjiako, Oliver](#); [Lebowsky, Laurie](#)
Cc: [Jeff Sarvis](#); "[Elizabeth Decker](#)"; [Naomi Hansen](#)
Subject: Buildable land report - Remedial action
Date: Friday, May 08, 2015 11:58:15 AM
Attachments: [BLR_Subdivivision table v2.docx](#)
[MultFamilyHousingMap.pdf](#)

Hello Gary,

I response to the recent iteration of the Buildable Land Report (BLR) the City of La Center would like to add the attached information in the County record and make the following comments.

Residential Land Supply. La Center, like every other jurisdiction in Clark County, experienced a dramatic run-up of housing activity in the early 2000s and an equally dramatic crash of housing starts as a result of the great recession. The City is recovering slowly, more so than Ridgefield or Camas. During the run-up, from 2005 – 2008, La Center approved 305 new single family lots. Each of the preliminary plats met the City's 4 DU/NET ACRE standard. Two subdivisions reached Final Plat (Hanna's Farm and Gordon Crest), however, 40% of their combined lots remain vacant as a result of the recession. Five (5) additional subdivisions, totaling 188 lots, were moving forward but abruptly stopped. Now, two are very close to final plat approval (Kays and Gordon Crest II) and two more have awakened and are moving forward. Earlier this year the City conducted a pre-application conference for Sunset Terrace, a new 121 lots subdivision along NE 339th St. Given this 'ground-truthing' information, it is highly unlikely that La Center has a surplus of residential land.

County-approved subdivision in La Center UGA. During the recession, Clark County approved the subdivision of approximately 75 acres of land within the La Center UGA creating 13 new lots. The average density of these new developments is 1 DU/5 acres. It is difficult to imagine how these lands in the La Center UGA will develop to urban densities during the 20-year planning horizon. I encourage you to consider the effect County-approved 5 acre lots has on La Center's density performance. (These lots at the City boundary limits and along arterial streets were approved with septic service. La Center requires all dwellings built on newly created land to connect to City sanitary sewer.)

Net Density. In La Center new subdivisions must achieve 4 DU/NET acre. 90% of all new subdivision lots must be within 10% of 7,500 S.F. The maximum allowable lot is 10,000 S.F. and the minimum 6,000SF. Like other jurisdictions La Center has an abundant supply of critical lands. The City prohibits the creation of lots in wetlands or wetland buffers. (LCMC 18.300.050.4.f.iii.) Consequently the city is able to achieve a higher net density.

Multi-family dwellings. La Center has 56 multi-family units in the City limits. See attached map. The Residential Professional (RP) zoning district allows single family development (4 DU/acre), multi-family units (8-16 units/acre), and retail/office uses. The Timmen Mixed Use (MX) zoning district allows single family development (4 DU/acre), multi-family units (8-16 units/acre), and retail/office uses. In the MX zone no single use may be less than 25 percent, nor more than 50 percent, of the net acreage. Regrettably, the multi-family and mixed use market has not yet found La Center a favorable location.

We recognize that the BLR is a general model. That is why we are pleased to provide this information to you in hopes that the model will more accurately tell the story of what is happening in La Center.

If you have any questions, please contact me directly.

Thank you.

Eric

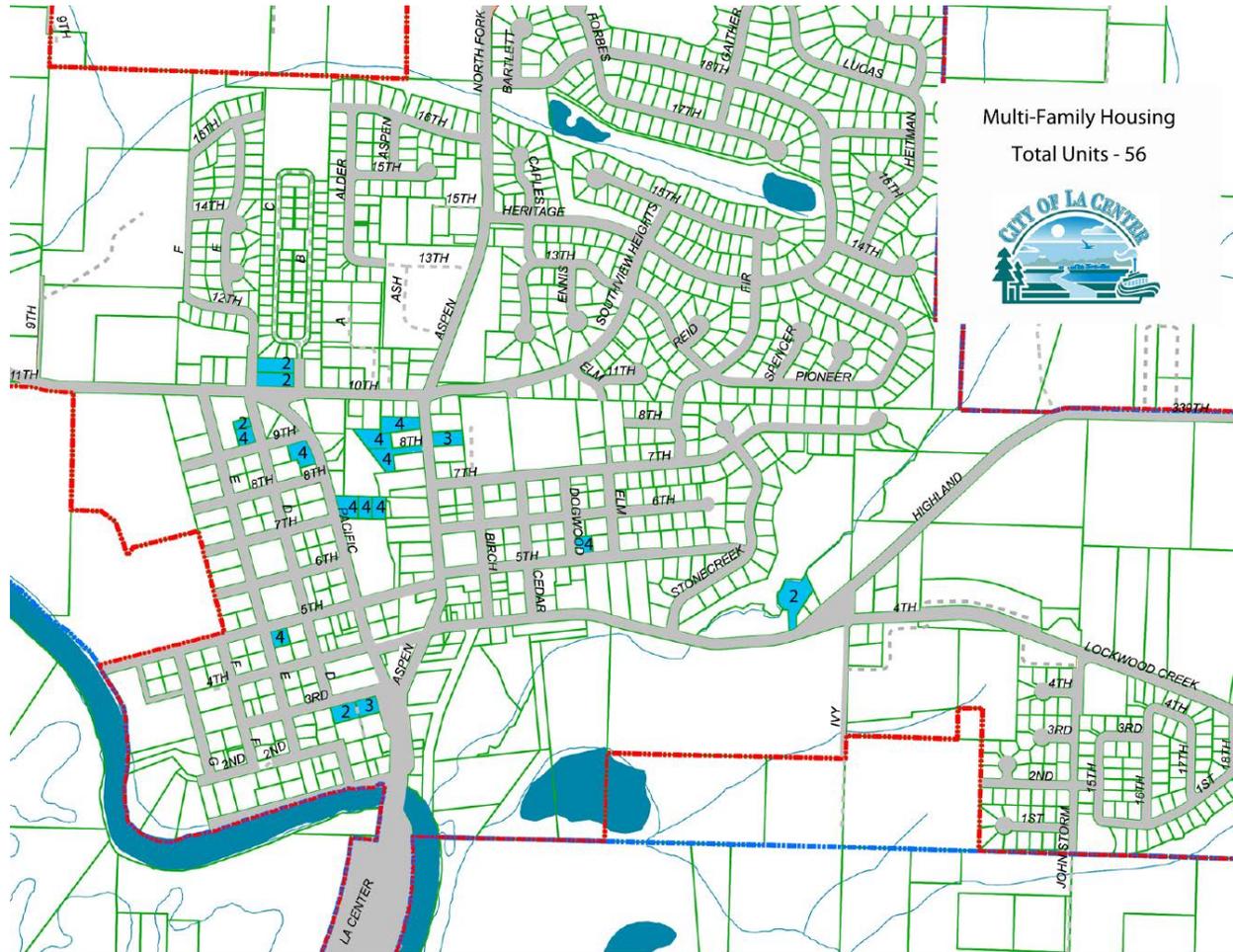
Eric Eisemann
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215 W. 4th Street, Suite # 201
Vancouver, WA 98660
360.750.0038
e.eisemann@e2landuse.com

Subdivision	PIN	Location	File	Gross Acres	Lots
		La Center UGA	Approved by Clark County		
East Fork Estates (Goode Cluster)	986028830	1514 NW 339 th St. La Center, WA	PLD2010-00008 Final plat 2010	40+	10
Perrott Short Plat	209062000	2219 NE 339 th St. La Center, WA	PLD-2008-0005 Final Plat in 2009	35+	3
Totals			5.7 DU/Acre	75+	13
		City of La Center	Approved by City of La Center	Gross Acres *	Lots
Hanna's Farm	258905000 62965040 258924000 62965094	North of NW Pacific Highway	2005-001-SUB 21 vacant lots	17.07	57
Gordon Crest	258894000 258896000 258943000	West of Aspen Ave	2005-007-SUB 26 vacant lots	18.19	60
Total Final Plats			3.31 DU/ <u>Gross</u> ac.	35.26	117
Approved Preliminary Plats					
Kays	209488000	South West of NW Pacific Highway	2008-016-SUB	11.8	37
Gordon Crest II	258892000	West of Aspen Ave	2006-012-SUB	6.74	26
Highland Terrace	258636000 258644000 258702000 258703000 258704000 258727000 258763000	East of NW Pacific Highway	2006-019 SUB	25.3	100
Dana Heights	62647000	North of East 7 th Street	2006-002-SUB	3.87	14
Sargent	258717000	34102 NW 9th Avenue	2006-033-SUB	5.3	11
Preliminary Plat Total			3.55 DU/ <u>Gross</u> ac.	53.01	188

La Center Buildable Land Report Comments: 2005 – 2014

5/8/2015

* **Note:** New subdivisions must achieve 4 DU/Net acre. New plats must achieve 7,500 S.F. average lot size. The maximum lot size, allowable at the perimeter of the City Limits, is 11,000 S.F.



Ridgefield Correspondence

From: [Elizabeth Decker](#)
To: [Albrecht, Gary](#); [Orjiako, Oliver](#); [Eric Eisemann](#); [Jeff Niten](#)
Subject: VBLM remedial actions for Ridgefield **Date:**
Friday, May 08, 2015 5:13:20 PM
Attachments: [VBLM_PreliminaryPlatInfo.docx](#)

Hi Gary,

I had a few comments to submit regarding the recent version of the Buildable Lands Report for the City of Ridgefield, and would like to have these comments included in the record.

Residential Land Supply: A couple of things I want to put in the record for the VBLM report for Ridgefield since the change in methodology shows the City with a 63 acre surplus for residential land, when the previous versions showed Ridgefield with a significant deficit. The City, as have most areas, suffered a tremendous downturn in development activity during the great recession. We have several hundred lots platted preliminarily and those lots still exist, and are going through the final plat process and/or being constructed now at a rapid pace. Several subdivisions and PUDs I want to bring to your attention include Ridgefield Woods which just received signatures on the final plat last week and contains 34 single family home lots. Canterbury Trails received preliminary plat approval in 2006 and is now going through the process to finalize the plat. Canterbury Trails will provide for 69 single family home lots. Pioneer Canyon Phases 3 and 4 are rapidly coming on-line and will provide both single family and multi family home sites. Bella Noche is coming forward with a revised preliminary plat that will provide 30 lots. Hawks Landing was preliminary platted recently and will move forward with 57 lots in the near future. Additionally, the Kemper subdivision was approved in 2007 for a total of 200 single family homes sites, none of which have been constructed at this time. In total, Ridgefield knows of 444 single and multifamily lots that will be coming forward within a year for final plat or have been final platted within the past month.

We estimate an additional 290 lots may move forward to final plat within the coming years, based on existing preliminary plat approvals, for a total of 734 lots on over 200 acres of residential land. These lots have already been committed to development and should not be calculated and vacant and buildable in the County's report.

Another factor that will impact the development potential of the residential land in the City's UGA is the City's strong commitment to parks. The City requires 25% of residential land be dedicated to park and open space during the development approval process. While up to half of that dedication may contain critical areas, the other half must contain active usable space. An override for the standard infrastructure deduction would be an appropriate remedy to accurately reflect the residential land Ridgefield has available for future development. We would suggest an additional 12.5% of gross acres be deducted from the VBLM totals to account for active usable space required for parks use, assuming that the critical areas have already been accounted for in the VBLM standard deduction.

A final consideration is that some of the residential land within Ridgefield's UGA has already been developed as large lot subdivisions under County standards, which will make it unlikely and difficult for that land to be developed at urban densities.

Multifamily Targets: The City currently has sufficient low and medium density residential land to achieve a 75/25 split for new development, however, the market for single-family development has moved more quickly than multifamily development. While on-the-ground supply of multifamily housing does not yet meet the 25% split, the City will comply at full build-out as proposed in the 20-year plan. Further, there are additional opportunities for higher density residential development in the City's commercial and mixed-use zones.

The City is under taking several major planning efforts including the 45th and Pioneer sub-area plan which is expected to provide up to 2,000 dwelling units during the planning horizon along with commercial uses. Ridgefield Junction sub-area and the Downtown/Waterfront sub-area are expected to promote additional dwelling units as well.

The VBLM can't, unfortunately, take into account what is planned for in our current boundary and only recognizes what is on the ground at a moment in time. However, I think this e-mail should provide the county policy makers with the appropriate information to determine that the 63 acre surplus is not reflective of the development activity occurring now, or expected to occur over the next several years. Additionally, the model or the staff discussion of the model should take into account the additional ways in which Ridgefield can satisfy its 75/25 housing split with future mixed use development.

Thank you,

Elizabeth

Elizabeth Decker
City of Ridgefield Consulting Planner
[503.705.3806](tel:503.705.3806)
edecker@jetplanning.net

Technical information: Supplemental VBLM Information City of Ridgefield

The following are active preliminary plats with potential to be final platted.

Subdivision Name	Assessor serial number	Location	Number of lots
Ridgefield Woods	986036007	45 th and Pioneer	34 (has been recorded on GIS now)
Canterbury Trails	213958000	N 45 th Ave and Pioneer	69
Kemper	213745000	Pioneer and Bertsinger	200
Bella Noche	213707000	Pioneer and N 35 th Ave	30
Hawks Landing	215825000	Hillhurst and S 35 th Place	57
Pioneer Canyon Phase 3	986027692	Pioneer and N 40 th Ave	54 (final plat approved by Council April 23)
Pioneer Canyon Phase 4	986027694 and surrounding	NW corner of N 45 th Ave and Pioneer	50 (estimated)
Taverner Ridge Phases 7-9	220025000, 220034000, 220032114, 216032010, 216032005, 216032015	Hillhurst and Great Blue Rd	105 (estimated)
Garrison Ridge Phase 2	121105000	Hillhurst and S Refuge Rd	15 (estimated)
Stephenson Manor	220016000	Hillhurst and Great Blue Rd	30 (estimated)
Columbia Acres	213710000	Reiman and N 10 th St	30 (estimated)
Cedar Creek	213713000	N 35 th Ave and N 10 th St	30 (estimated)
Pioneer Place	213800000, 213798000	N 35 th Ave and N 10 th St	30 (estimated)
Total known			444
Total estimated			290
Combined total expected			734