

DATE: August 28, 2020
TO: Clark County Buildable Lands Project Advisory Committee
FROM: Bob Parker, Becky Hewitt, and Margaret Raimann, ECONorthwest; Jose Alvarez, Clark County; Wayne Carlson and Nicole Stickney, AHBL
SUBJECT: Updates to Employment Land Classifications, Redevelopment, Mixed Use, Market Factor, and Infrastructure Set-Aside Topics

Introduction

Clark County contracted with ECONorthwest and AHBL to assist in identifying and addressing needed updates to the County's Buildable Lands Methodology and prepare the 2021 Buildable Lands Report in collaboration with the Clark County Buildable Lands Team, a Buildable Lands Project Advisory Committee (PAC) and other key stakeholders. The goal of the process is to ensure that the County's methodology is consistent with state law (including recent legislative changes); reasonably accurate in estimating land capacity for each Urban Growth Area and rural area; and supported by the available evidence and a broad base of stakeholders.

This memorandum provides supplemental information on the Project Team's additional analysis for new recommendations. We completed the additional analysis to build on discussions in previous meetings and provide further information about specific topics. The seventh PAC meeting is scheduled for September 25, 2020, and will focus on the information presented in the memorandum.

Employment Land Classifications

The Project Team considered further refinement of the existing approach to employment land classification. In addition to the existing recommendations to (1) index building value thresholds for underutilized land and (2) use additional assessor information on excess and rearge acreage, the Project Team is presenting three new recommendations to add to the existing methodology:

- **Use personal business property information for industrial land.** In the current methodology, industrial sites with no structures or very low-value structures are included in the vacant category. In an observation of the 2020 VBLM results, about 196 acres classified as vacant industrial land had associated business personal property accounts. Upon review of these parcels, about 7 acres were vacant, and the remaining land was classified as critical or had an active use. These remaining areas are better classified as underutilized.

The Project Team recommends that in cases where these sites have a business operation, consideration of personal business property information¹ would exclude these sites from being identified as vacant. They would be identified as “underutilized” based on having a low building value per acre.

- **Decrease minimum lot size for vacant commercial land.** The existing methodology uses a minimum lot size for vacant employment land of 5,000 square feet. There are many existing lots designated for commercial, particularly in Vancouver, that are very close to 5,000 square feet; development has occurred on a number of those lots. The Project Team proposes to reduce the minimum lot size to 4,000 square feet for vacant commercial land in Vancouver in order to account for those properties (other criteria for vacant land would still apply).
- **Include some tax exempt properties.** Sites owned by tax-exempt organizations, such as the Vancouver Housing Authority, are currently “excluded” in the model and not assigned any capacity. However, land owned by housing authorities and other nonprofit housing developers is typically developed with housing and should be considered in capacity calculations. The Project Team proposes to remove certain types of tax-exempt organizations (using the Owner ID or owner name) from the “excluded” category and assign a built or vacant classification as follows:
 - Sites with no existing housing units would be classified as vacant and 100% of acres would be allocated to residential.
 - If the site has units, it would be considered built. The redevelopment rates and commercial/residential split (15/85) would apply based on the criteria defined in those sections of this memorandum. (This would also apply to sites with these owner IDs in the residential model.)

¹ Businesses are required to pay property taxes on “personal property” (i.e., property that is “able to be moved from one location to another and typically includes most machinery, equipment, furniture and fixtures associated with commercial, industrial, or agricultural enterprises”). <https://www.clark.wa.gov/assessor/business-personal-property-faq#:~:text=If%20you%20own%20any%20business,real%20and%20For%20personal%20property.>

Redevelopment

The Project Team presented background information on the existing approach to redevelopment during the second PAC meeting. The existing approach includes a 5% assumption captured outside of the VBLM (i.e., on the demand side). The prior recommendation was to continue to account for development in unpredictable locations outside the VBLM. The Project Team completed additional analysis focused on residential redevelopment on commercial land in the City of Vancouver; the results are presented below along with refined recommendations.

Recommendation

The **new recommendation** for accounting for redevelopment is to apply a 5% residential redevelopment rate to commercial land in the Vancouver City Center, and a 1% residential redevelopment rate to commercial land in Vancouver outside of the City Center in addition to the 5% demand-side assumptions. The redeveloped commercial areas would be added to the residential land supply as net available acres with a density specific to residential in Commercial-designated areas based on observed trends.²

Additional Analysis

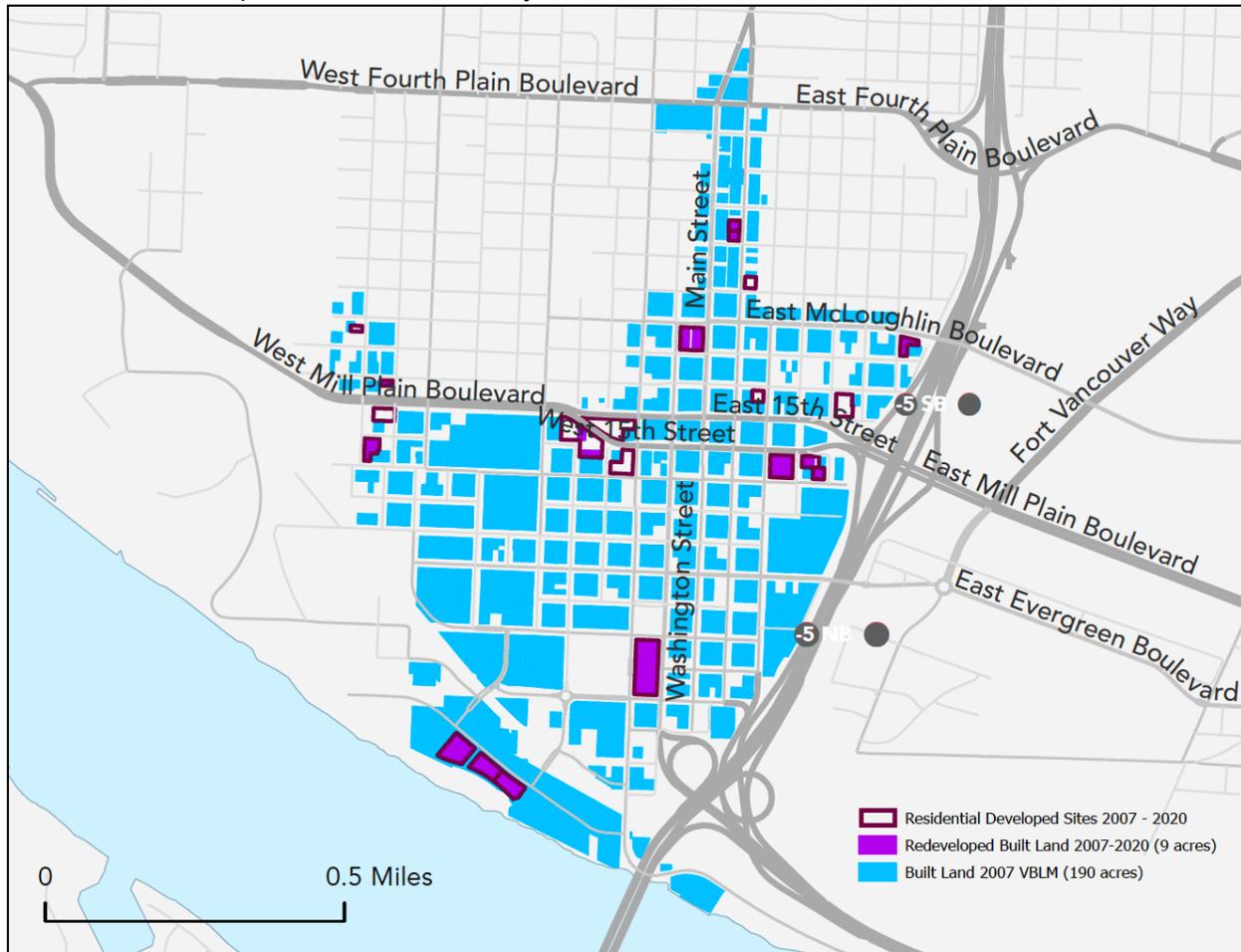
Redevelopment in the Vancouver City Center

The Project Team reviewed development in the Vancouver City Center between 2007 and 2019, including residential development that occurred. Land in this area is included in the commercial VBLM, and about 190 acres were classified as built in the 2007 VBLM. Of these, about 9 acres redeveloped with residential uses by 2020, as shown in Exhibit 1. This results in a redevelopment rate over the 12-year period³ of 4.7%; if extended over 20 years, this would translate to a redevelopment rate of 7.9%. Considering that the 2007-2019 time frame included a strong multifamily development market in Vancouver, and the Waterfront development was a large component of the redevelopment during this period, a rate closer to 5% looking ahead over a 20-year planning period is reasonable.

² Based a review of recent development projects, the density assumption is likely to be roughly 30 units per acre for residential on Commercial land, as discussed further in the following section.

³ While the data is from 2007, the City Center Plan went into effect in 2008, so we have counted from 2008 to 2020.

Exhibit 1. Redevelopment in Vancouver City Center, 2007-2019



Source: Clark County

Redevelopment in Vancouver (Outside of the City Center)

County staff also reviewed the areas in Vancouver outside of the City Center. Staff’s analysis focused on commercial built land redeveloped with residential uses since 2016 (when changes to zoning regulations allowing greater residential development took effect). The analysis found 1,220 acres of built commercial land outside of downtown Vancouver as of 2016, four acres of which redeveloped into housing since 2016. This translates to a redevelopment rate of 0.33% over the four-year period. If the same trend were extended over 20 years, this would translate to about 1.7% redevelopment. However, given that the 2016-2020 time frame included a strong multifamily development market in Vancouver, a rate closer to 1% looking ahead over a 20-year planning period is reasonable.

Further discussion of the approach to accounting for residential development in commercial areas is addressed in the next section.

Other Residential Development on Commercial Land

County staff found that roughly 6% of units (832 out of 13,095) built between 2016 and 2020 developed on non-residential land, excluding the commercial areas in Vancouver. This suggests

that even with the proposed refinements above, the model will be missing some residential capacity in locations that are difficult to predict. The Project Team recommends retaining the 5% demand-side redevelopment assumption for housing as well as for employment (since the number of employees on existing developed sites can increase with or without redevelopment).

Residential Development in Commercial Areas

The Project Team introduced this topic at the fourth PAC meeting and discussed further at the fifth PAC meeting. County staff completed additional analysis for residential development in commercial areas, and the Project Team developed a refined recommendation summarized below.

Since 2016 the City of Vancouver has experienced residential growth on commercial land outside of the downtown area, due to recent policy changes that allow more flexibility for residential development in commercial zones. Zoning regulations allow developments that are primarily residential though they may have a commercial component. There is often more flexibility to meet requirements for commercial use through live/work units or horizontal mixed use (i.e., residential and commercial in separate buildings on the same site or as part of one development) in addition to vertically integrated mixed use development (i.e., residential development with commercial on the ground floor). However, unlike areas zoned for mixed-use, these residential developments are not captured in the VBLM because the model does not currently assume any residential development on commercial land except if it is designated/zoned for mixed use.

Recommendation

The Project Team recommends applying a split between residential and commercial development for vacant and underutilized Commercial acres in Vancouver based on recent trends. The recommended splits are as follows:

- Within City Center: 30% residential, 70% commercial
- Outside City Center: 15% residential, 85% commercial

The residential acres would be added to the residential land supply as net vacant or underutilized acres with a density specific to residential in Commercial- and Mixed Use-designated areas based on observed trends—roughly 30 units per acre outside the City Center and roughly 100 units per acre in the City Center.

Additional Analysis

This section summarizes the results of additional analysis by Clark County staff of recent and pending residential development on Commercial land.

Magnitude of Residential Development on Commercial Land

Exhibit 2 shows the number of developments and acres developed in commercially zoned areas outside of the downtown Vancouver area. The acreage developed was relatively small (19 acres) in the 2016-2020 time period; however, the density of units built was over 30 units an acre. Unlike residential zones there are no density ranges in the commercial zones, the only limitations on units are building height and lot coverage constraints. The total number of housing units created in four years on commercial land (651) was approximately 14% of the total number of housing units that the 2016 VBLM estimated for the City of Vancouver (4,579) over a 20-year period. On an annualized basis, this would equal 71% of the housing units expected in the City of Vancouver.

Exhibit 2. Recent Residential Development in Commercial Zones Outside of Downtown Vancouver

Project Name	Prop. ID.	Acres	Units	Year Built	Zoning	Units/Acre
Meriwether Place	294500000	1.16	60	2018	CC	51.72
Ellwood LLP	294600000	0.84	46	2020	CC	54.76
Sea Mar	109980000	1.55	70	2017	CC	45.16
Clara Court	158587000	0.44	18	2020	CC	40.91
Evergreen BL	30873000	0.18	12	2019	CC	66.67
Evergreen BL	30908000	0.23	12	2019	CC	52.17
Affinity	159847000	8.76	170	2019	CG	19.41
The Plaza Lofts	986051754	1.94	109	2018	CC	56.19
The Plaza Lofts	986051753	0.49	27	2018	CC	55.10
The Plaza Lofts	126466000	0.71	27	2018	CC	38.03
Westridge Lofts	126454007	2.88	100	2020	CC	34.72
		19.18	651			33.94

Bold indicates development on built land

Source: Clark County GIS Assessor Taxlot 2 August 2020 and Tmp taxlots June 2020

Data compiled by Clark County staff

Exhibit 3 below shows the number of developments in various stages of review as of February 2020. About half of the projects listed are at the early stage of the development review process, but the remaining are closer to construction. The demand for these developments outside of downtown on commercially zoned land appears to be continuing. The density of these pending developments is anticipated to be about 28 units per acre.

Exhibit 3. Pending Residential Projects in Commercial Zones Outside of Downtown Vancouver

Project	Location	Use	Zoning	Acres	Size	Residential Units	Status
65th Ave Apartments	2951 NE 65th ave	MF	CG	2.2	4-5 stories	90	Preapp submittal
12 Up Main	3916 Main St	Mixed Use	CC	0.6	4 story bldg.	12	Preapp submittal
Veteran's Village	5118 NE Saint James RD	MF	CC	1.1	micro-homes for female veterans w/ meeting hall &	18	Preapp submittal
Gregory Apartments	7401 NE 18th ST	Mixed Use	CC	2.6	3 stories	101	Preapp submittal
Acero Parkside - Ph II	1317 NE 136th Ave	Mixed Use	CC	10	multi-story	376	Preapp submittal
Vancouver Mall Mixed Use	4906 NE 72nd Ave	Mixed Use	CN	1.4	2 story	76	Preapp submittal
The Atlantic (meridian) Apartments#108141466	NE 78th AV/ NE Fourth Plain	MF	CC	0.22	(3) 3-story	46	Preliminary site plan submittal
First Street Village	316 NE 202nd	Mixed Use	CG	9	4 stories	115	Site plan reivew submitted
Lincoln Apartments	1111 W Fourth Plain BV	Mixed Use	CC	0.2	3 stories	6	Building plan review
Acero Parkside	NE 138th AV/NE 18th ST (1332 NE 136th AV?)	Mixed Use	CC/OCI	11.8	multi-story	260	plan review
Total				39.12		1,100	

Source: City of Vancouver

Data compiled by Clark County staff

Residential Development as a Percentage of All Development in Commercial Zones

The VBLM already uses percentages of land that will develop as residential and commercial for mixed use designated areas. Applying a ratio split between land that has developed as residential and commercial could capture potential residential development on commercially zoned land.

Of the commercial vacant land that has developed in Vancouver (outside the City Center) since 2016, 19% has been for residential development. However, given that the 2016-2020 time frame included a strong multifamily development market in Vancouver, a rate closer to 15% of acres developing as residential looking ahead over a 20-year planning period is reasonable. Within the Vancouver City Center, about 11 acres of commercial vacant and underutilized land developed between 2007 and 2019. Of this development, about 36% (4 acres) was residential development. However, given the unusually strong multifamily development market in Vancouver's Central City in recent years, a rate closer to 30% of acres developing as residential looking ahead over a 20-year planning period is reasonable.

Market Factor

The Project Team introduced the topic of market factor at the third PAC meeting in March 2020. Over a 20-year period the current market factor assumption is that 90% of vacant land will develop (10% never-to-convert factor) and 70% of underutilized land will develop (30% never-to-convert factor). Critical lands can be on vacant and underutilized land. Currently, 50% of critical land is assumed to not be included in any development over the 20-year planning period. The remaining 50% that is assumed to develop will have the vacant or underutilized never-to-convert factor applied. The combined assumption is that 45% of the gross acres identified as vacant critical land will develop and 35% of the gross acres identified as underutilized critical will develop over the 20-year period.

County staff completed additional analysis to evaluate the current approach to market factor, including the never-to-convert factor. The new recommendation and additional analysis are described below.

Recommendation

To better account for market factor in the model, the Project Team recommends the following:

- **Maintain the existing never-to-convert factors for vacant and underutilized residential land** (10% for vacant residential land and 30% for underutilized residential land), which are roughly in line with the observed data.
- Eliminate the “demand-side” assumption of a 15% market factor.
- **For critical lands, apply deductions of 62.5% for Residential-Urban Low and 58.8% for Residential-Urban High** (vs. 50% today), but do not apply the vacant or underutilized never-to-convert factors to the land assumed to be developable.

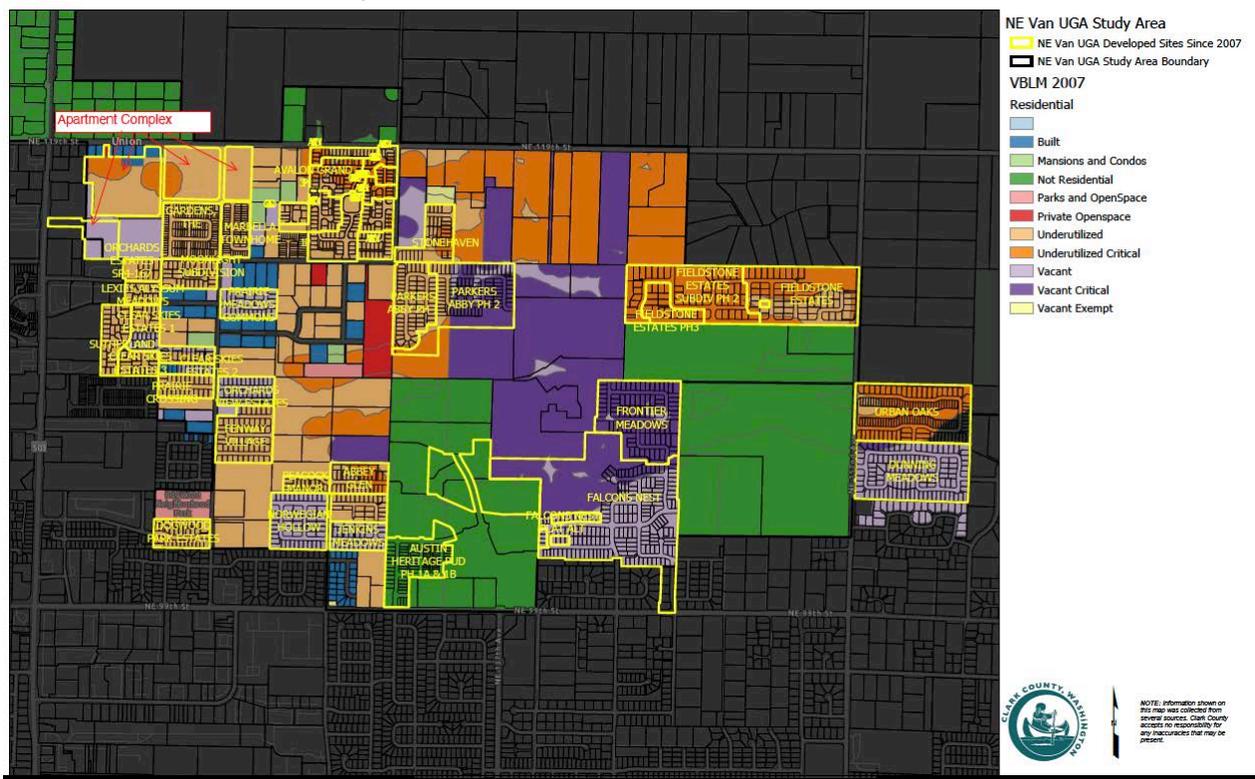
Additional Analysis

The prior analysis on market factor looked at the total amount of vacant and underutilized residential land within the 1996 UGA boundary relative to the amount of vacant and underutilized residential land within that same area in 1996. This approach was useful as a reference point to compare against the combination of never-to-convert and demand-side market factors, but did not give a good indication of the never-to-convert element on its own. This was due, in part, to a lack of a method to differentiate whether land did not convert because of property-specific factors, as well as the availability of more land than needed as a result of intentional policy choices intended to provide a buffer in the land market. The additional analysis by County staff described below uses an example study area to evaluate the never-to-convert assumptions more specifically. This analysis also provides a useful reference point for evaluating the critical areas deduction (currently 50% of critical areas are assumed not to develop).

Study Area Approach

The study area for evaluating the market factor (never-to-convert) and critical areas was brought into the Vancouver UGA in 2004 and had Urban Holding lifted in 2007. A new plan was adopted in 2007 that expanded the UGA in the study area to the east by 40 acres (including Urban Oaks and Dunning Meadows). This area has seen a high rate of growth since 2007 and there is over a decade's worth of development to analyze even with the slowdown of the Great Recession. The residential area is approximately 600 acres and is located at the Northeast corner of the Vancouver Urban Growth Area and is generally bound by SR503 to the west, 119th Street to the north, NE 99th Street to the south and NE 152nd Ave to the east (Exhibit 4).

Exhibit 4: Market Factor Study Area



Source: Clark County GIS

The study area includes 43 residential development projects (including multi-phase projects).⁴ All but four of these are platted subdivisions; the balance are apartment complexes located in the northwest corner of the study area near the intersection of NE 119th Street and SR-503.

The 2007 VLBM for this area was used as a baseline to identify the number of acres classified as Vacant, Vacant with critical, Underutilized and Underutilized with critical. The subdivisions and sites developed since 2007 were overlaid on the area to determine how much of each category had been developed in the intervening years and use the rate of development to

⁴ Austin Heritage development is shown on the map but this area was not included in any of the calculations because in 2007 it was zoned Mixed Use and no development occurred until after a zone change in 2012.

compare with the VBLM assumptions. The amount of development in gross acres was used to test market factor and critical assumptions.

Results

Exhibit 5 below shows the number of acres developed in the three residential VBLM categories and developed acres as a percentage of the total starting acreage in each category.

Exhibit 5. Gross Acres by VBLM Classification and Percent Developed, NE Vancouver UGA Study Area

Residential VBLM Classification	2007 VBLM Acres (Gross)	Acres Developed by 2020	% of Acres Developed by 2020 (13 years)	Average Annual Conversion Rate (Actual)	Assumed Conversion Rate over 20 years	Average Annual Conversion Rate (Assumed)
Vacant	101	80	79%	6.1%	90%	4.5%
Underutilized	218	134	61%	4.7%	70%	3.5%
Vacant w/Critical	140	47	34%*	2.6%*	45%	2.3%
Underutilized w/Critical	145	68	47%*	3.6%*	35%	1.8%
Total	604	329	54%			

Source: Clark County GIS data compiled by Clark County staff

* For purposes of this analysis, critical lands are considered “developed” if they are included within a plat or development site. This does not necessarily mean that they have been built over.

The average annual rate of development is above what is predicted under the current assumptions for all land classifications. However, in a greenfield area that is newly building out, development does not typically occur in a linear, evenly paced fashion over a 20-year period. The parcels remaining after 13 years of development appear to be generally smaller and more constrained than those that have developed. It may be that many of the readily buildable sites with willing owners have been developed in the first 13 years, and that development of the remainder will proceed more slowly. For the vacant and underutilized land, if the pace of development over the next 7 years slowed to roughly a quarter of rate observed in the first 13 years, over 20 years the overall conversion rate would be almost exactly the current assumed conversion rate. This supports continued use of the current never-to-convert factors for residential land.

Critical Lands

Land designated Underutilized with Critical in particular seems to be developing at a higher rate than expected. One possible reason for the difference is discrepancies between the high-level critical lands mapping in the VBLM and the ultimate delineation of critical areas that occurs in the development process. (The assumptions used to identify land that could be critical land are very broad and are used to identify potential critical lands and buffers so that a more detailed review can occur during the development review process.) In this study area, that seems to have been the case for several of the developments:

- One of the developments that had a high percentage of critical lands turned out to have no wetlands on site at all.

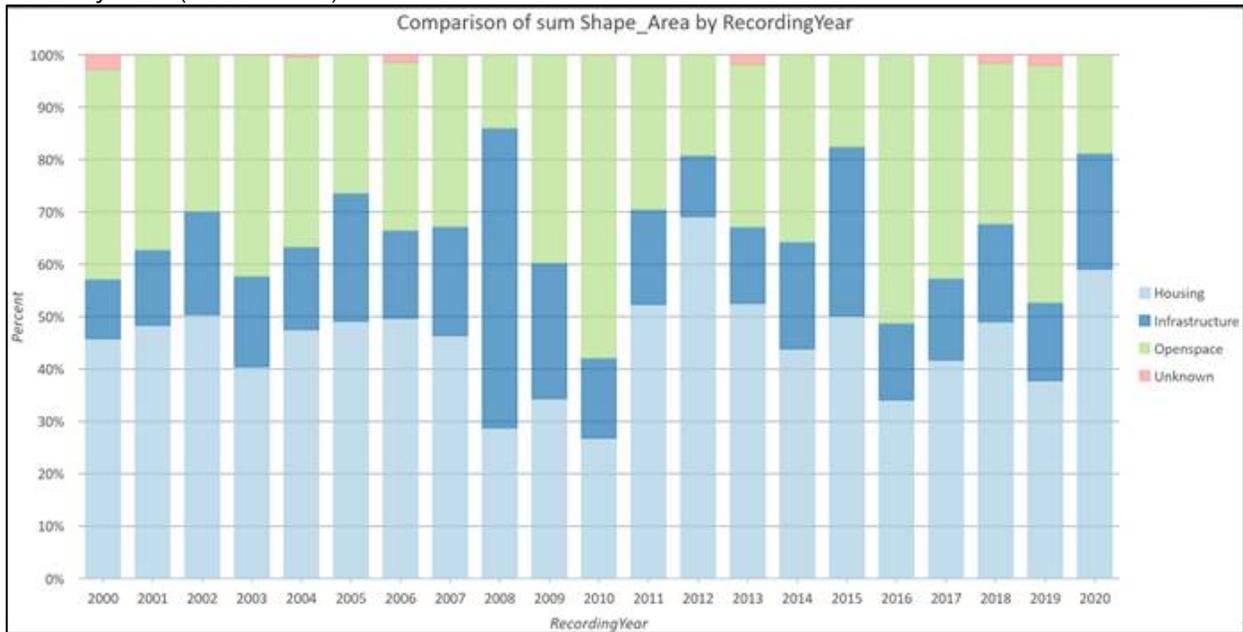
- Urban Oaks was developed on a 20 acre site with nearly 15.5 acres identified as critical. There were stands of Oregon White Oak on site but that did not amount to 75% of the site.
- The area that developed as Fieldstone Estates (phases 1-3) was also identified as having 33 acres of lands identified as critical but the actual amount was closer to 6 acres.

The model does not attempt to distinguish between the ultimate uses of that land. The primary function is to cast a broad enough net to not miss land that is subject to environmental protection. The rate of development assumes that land identified as critical will be part of a plat or development within the 20-year plan, but that it will occur at a slower rate than non-critical land. The data reviewed in the study area seems to generally support the rate of 50%. When the additional market factors applied to vacant and underutilized are included, there is a disconnect between the observed data and what the model assumes. It seems there is a stronger correlation between whether land is critical than to whether it is vacant or underutilized and critical. In particular, the underutilized with critical does not seem to support the additional 30% market factor deduction. Taken together, 40% of the critical lands in the study area became part of a development or plat over 13 years. If the average annual conversion rate were to continue through the remaining 7 years, this would translate to roughly 62% conversion rate overall. Using the same adjustment as described above to account for a potential slower conversion rate of the remaining land, this would translate to roughly a 46% conversion rate. This suggests that using the 50% deduction alone (rather than combining it with the never-to-convert factors for vacant and underutilized land) would be appropriate.

However, the 50% of critical land that is “developed” is simply the amount that becomes part of a plat or development site. For plats in particular, critical lands are often preserved as open space in separate tracts. In the model today, these areas are accounted for as part of the on-site infrastructure set-aside, but the Project Team’s analysis shows that the open space tracts within plats are largely made up of critical lands. The Project Team recommends addressing this as part of the critical lands deductions so that the deductions are more spatially accurate.

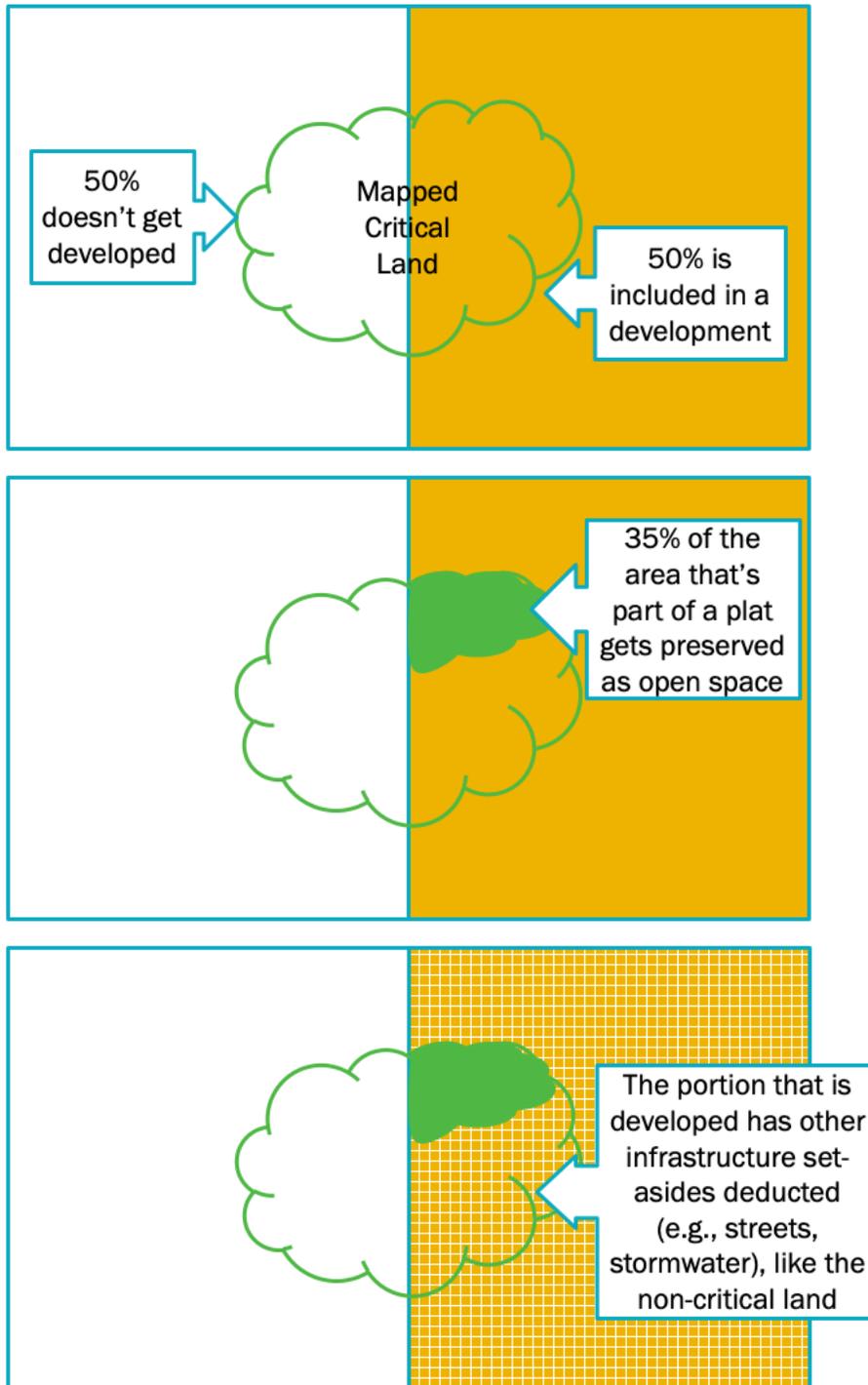
Analysis by County staff of all constrained lands that became part of a plat used the same County-wide plat dataset analyzed by AHBL for purposes of establishing refined infrastructure set-aside assumptions. The analysis shows that in aggregate since 2000, 35% of the mapped critical lands were preserved as open space in tracts (Exhibit 6). There has been variation from year to year but no clear trend up or down over time. Most of the rest has become buildable home sites or infrastructure (e.g., roads or stormwater facilities). This suggests including an additional deduction of about 35% applied to the portion of critical lands that are assumed to become part of a development. This is illustrated graphically in Exhibit 7.

Exhibit 6: Percent of Critical Lands in Plats Converted to Housing, Infrastructure, Open Space, or Other by Year (2000-2020)



Source: Clark County staff analysis

Exhibit 7: Illustration of Proposed Residential Critical Lands Assumptions



Source: ECONorthwest

One final nuance is that this primarily applies to areas developed as subdivisions. Multifamily development is less likely to create separate tracts for open space, and more likely to simply work around the protected areas on the site. Thus, for multifamily, any preserved critical lands would be included in the observed net density, because they are still part of the site. The Urban Low residential designation is almost entirely developed with subdivisions, but the Urban High

designation—particularly in Vancouver—tends to develop with a mix of small-lot detached homes, townhomes (which are usually still platted as subdivisions with separate tracts for open space, etc.), and multifamily. To account for this, the project team recommends the following assumptions for critical lands in the residential model:

- Urban Low and Urban High outside the Vancouver UGA:
 - 62.5% deduction: 50% undeveloped; 50% into plats, of which 35% is deducted for land preserved as open space ($50\% + (50\% \times 35\%) = 62.5\%$)
 - Apply on-site infrastructure set-asides to the buildable portion that goes into plats and is not preserved for open space (see next section)
- Urban High in the Vancouver UGA:
 - 58.8% deduction: 50% undeveloped; 25% into multifamily developments with no deduction; 25% into plats, of which 35% is deducted preserved for open space ($50\% + (25\% \times 35\%) = 58.8\%$)
 - Apply on-site infrastructure set-asides to the buildable portion that goes into plats and is not preserved for open space (see next section)

Infrastructure Set-Asides

The Project Team introduced the infrastructure set-asides topic at Meeting 5, and presented updated information based on BLPAC input at Meeting 6. Since the PAC did not provide an initial indication of support related to these topics at the prior meetings, they are presented as new recommendations below.

On-Site Infrastructure Deductions

The recommendation is to use calculations derived from AHBL's analysis for on-site set-asides, with a few updates, summarized below.

- **Address stormwater facilities located in wetlands or their buffers.** The County's critical areas ordinance on these topics is not current and Washington State Department of Ecology identified that the County must address the degree to which stormwater facilities are allowed in wetlands and their buffers. The County needs to adopt regulations generally avoiding placing stormwater facilities in wetlands and their buffers going forward.⁵

Given these circumstances, AHBL revisited the original methodology and reviewed the previous calculations used to arrive at the previous recommendation. As a first attempt, AHBL conducted a further review of the sample set used to arrive at the previous recommendation for a 3.81% deduction, selecting only those plat records for development that did not have any wetlands in or near the developments. (Note that buffer areas were considered.) The sample size that resulted was too small for reasonable use. Thus, AHBL re-sampled the data, considering following:

- Changes to the regulations will prevent nearly all future stormwater facilities from being located in wetlands or their buffers;
- The importance of maintaining the approach of avoiding the double-counting of critical areas and infrastructure deductions;
- The reasonable assumption that development has already occurred in areas with the best soils, generally leaving sites with poorer soil quality for future development, which will impact stormwater facility sizing; and
- Changes to the Ecology Stormwater Management Manuals, which were identified and discussed in previous meeting material.

To better account for the impacts of wetlands on stormwater facility sizing, AHBL used a different data sub-set which did not exclude plats by year or location (with respect to

⁵ Limited exceptions include (1) some "additional" runoff treatment or flow control of stormwater may be allowed in limited cases where specific criteria are met and mitigation is applied; or (2) if it can be shown that treated stormwater is beneficial and can improve the hydrologic functions of the wetland.

stormwater manual adoption by municipalities). Instead, AHBL only included plats that did not have any wetland areas present, and removed plats that were part of a larger phased development with a wetland present.

In all, a total of 335 plats were selected for the revised analysis, making up 2,304 total acres of gross land area. The aggregate area of all the stormwater facilities within those plats was 140.9 acres. This means that, looking back, about 6.12% of lands in platted areas (within the UGAs) were used for tracts or parcels containing stormwater facilities.

Given the factors identified in previous memos (and also listed above), this will result in increases to stormwater facility sizing going forward. The Project Team recommends increasing the 6.12% figure by 30% to account for such factors, which results in a final stormwater deduction figure of 7.95%.

- **Apply the stormwater deductions that reflect the new stormwater management regulations to all UGAs.** AHBL’s analysis differentiated between stormwater set-asides in jurisdictions subject to current stormwater manuals and those still operating under older manuals for purposes of calculating a stormwater set-aside that is reflective of the increased requirements under the new manual. While there are several jurisdictions in Clark County still under an older set of regulations at this time (Woodland, La Center, Ridgefield and Yacolt), several of these may become subject to the updated regulations at some point during the 20-year planning period. The project team recommends applying a single stormwater set-aside assumption that is based on compliance with the latest stormwater regulations for all UGAs going forward. (See Exhibit 8.)
- **In the Residential-Urban High designation within the Vancouver UGA, reduce on-site infrastructure assumptions to account for multifamily development.** As noted above, the Residential-Urban High designation in Vancouver tends to develop with a mix of small-lot detached homes, townhomes, and multifamily units. Multifamily development typically has internal circulation that is not on public right-of-way and accommodates stormwater, shared open space, and other facilities on the same site as the housing rather than putting those facilities in separate tracts. To account for this, the Project Team recommends applying the same 50/50 split between plats and multifamily development, as noted above in accounting for on-site infrastructure set-asides for critical lands. In aggregate, for the Residential-Urban High designation in Vancouver, the deductions would be applied at 50% of the assumptions used for other residential land (Exhibit 8).

With these refinements, the on-site infrastructure deductions would be as follows:

Exhibit 8: Recommended On-Site Infrastructure Deductions

Infrastructure Category	Plat Deduction for Residential-Urban Low	Adjusted Deduction for Residential-Urban High (Vancouver UGA)
Stormwater	7.95%*	3.97%
Roads	18.6%	9.3%
Utilities	0.5%	0.25%
Total	27.05%	13.52%

Source: ECONorthwest summary of AHBL analysis using Clark County plat data

Off-Site Infrastructure Needs

After further consideration, the Project Team recommends accounting for the land needed for schools and parks on the demand side (not in the VBLM) for sizing of UGB boundaries based on the population forecast and adopted parks and schools land need formulas, because the needs are linked to population growth.