



To: BLPAC

From: Jose Alvarez, Project Manager

Date: May 29, 2020

Subject: Follow up to May 1, 2020

This memo is in response to items discussed at the May 1, 2020 Buildable Lands Project Advisory Committee meeting and committee comments submitted prior to the meeting.

Infrastructure gap related to the Town of Yacolt. The updated Buildable Lands Guidelines has a new requirement to evaluate whether jurisdictions have identified infrastructure gaps that will prevent them from meeting their assigned density target in the planning period.

The Town of Yacolt has not been assigned an urban density target, due to their lack of sewer, therefore the recommendation is that the reporting requirement is not applicable to the Town of Yacolt and no change is proposed. (See Community Framework Plan policy 1.1.1 bullet #4, Countywide Planning Policy 1.1.13) This does not affect their existing land use which allows a minimum residential lot size of 12,500 sq. ft, subject to health department approval for on-site septic systems.

An email was sent to Mayor Listek to reiterate the proposed recommendation as stated above along with the March email that was sent to all jurisdictions seeking input on the infrastructure gaps.

Industrial land. There was an issue raised regarding the amount of industrial land identified by the Vacant Buildable Land Model (VBLM). Staff provided CREDC documentation of the model methodology, model outputs and deductions, and a link to the existing mapping of the VBLM. A meeting to discuss CREDC concerns is pending, the outcome of the discussion will be shared with the group.

The model methodology is here: <http://gis.clark.wa.gov/vblm/assets/VBLM.pdf>

A sample of the numerical outputs that demonstrate the number of acres and deductions by jurisdiction is here: http://gis.clark.wa.gov/vblmreports/2018/reports/VancouverTotal_yield.pdf

Maps on line has a layer for the VBLM which can be found here: <http://gis.clark.wa.gov/maponline/?site=CompMgmtPlan&onLayers=Vacant%20Buildable%20Lands%20Model> The link opens to the combined VBLM for residential, commercial and industrial but you can also look at the industrial in isolation by clicking the industrial VBLM layer.

All of the links above can also be accessed through our VBLM overview page <http://gis.clark.wa.gov/vblm/>



Response to Committee member submittals -Bryan Snodgrass

The first bullet under Redevelopment references a resolution that was superseded by Issue Paper 7 (see attached) almost a year later. On page 2, Table 1 shows the 20-year population allocation by UGA. The additional allocation column as the table indicates was added by the Board to make the cities whole for the planning done in 2007, since the increase in growth from 2016 to 2035 was well below what had been planned for in 2007, given the subsequent recession.

The second bullet under Market Factor that purports to capture the aggregate never to convert factor at 38% actually includes both the 50% critical deduction **and** the never to convert market factor. That summary document combines these two deductions under the never to convert factor heading. If you look at the more detailed breakdown by jurisdiction you will see these deductions broken out separately and the percentage deductions are more consistent with what you would expect for those deductions.

http://gis.clark.wa.gov/vblmreports/2018/reports/VancouverTotal_yield.pdf

The residential development on commercial land outside of downtown. In reviewing the City of Vancouver's residential code VMC Table 20.430.030-1 there are two footnotes, four and eight, that allow for residential development on commercial land, the second was adopted last year and deals with affordable housing. Footnote four allows residential in a manner that seems to turn all commercial land to mixed use by allowing both vertical and horizontal mixed use. Most jurisdictions allow residential development above ground floor commercial, however it is rarely used and not accounted for in the model. The recent changes and number of projects may warrant consideration to account for the residential development however staff is waiting for analysis from the City to provide an estimate of the ratio of residential development on commercial lands.

Response to Committee member submittals -David McDonald

Annual comprehensive plan amendments require a cumulative impact analysis to consider the overall changes by Comprehensive Plan designation. There is no assumption in the model to account for these potential changes because it's difficult to predict in any systemic way what direction those individual requests will come in over time.

The proposed recommendation to account for platted lots between 5,000 sq. ft. and an acre as one unit is to avoid double counting. The current methodology aggregates the platted lots between 5,000 sq. ft. and an acre and then runs them through as vacant land and applies never to convert and infrastructure deductions. The proposed methodology recognizes that these lots have already been through a development process that accounts for infrastructure and is now a buildable lot that will not further divide and will be populated with a single housing unit.

The VBLM identifies critical lands as defined below and does not deduct 100% of the land from the inventory of buildable lands because: 1. the model overestimates the amount of land identified as critical (the critical layer is a tool used to flag potential critical lands so that an on-site assessment can be performed in conjunction with the development process) ; 2. Land identified as critical can have density transferred to non-critical land within a development site; 3. On-site and off-site mitigation allows for development on lands identified as critical;

Environmentally constrained layers

The model identifies land that has the following environmental constrained or critical layers:

- 100 - year floodplain or flood fringe
- Wetlands inventory (NWI, high quality, permitted, modeled) with 100 foot buffer
- Slopes
 1. greater than 15 percent
 2. greater than 25% for Vancouver plus 100 ft. buffer
- 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

Buffers vary by stream type and jurisdiction

***** NOTE: Stream Buffers are incorporated into HABITAT layer**

Clark County stream buffers

| Stream Type: | Buffer Distance: |
|--------------|------------------|
| S | 250' |
| F | 200' |
| N, or NP | 100 ft |
| NS | 75 ft |

City of Vancouver stream buffers

| Stream Type: | Buffer Distance: |
|--------------|------------------|
| S | 175' |
| F | 175' |
| N | 150' |
| Np | 150' |
| Ns | 125' |

From: [Jose Alvarez](#)
To: MayorListek@townofyacolt.com
Cc: [Oliver Orjiako](#); herb.noble@townofyacolt.com; davidwr@copper.net
Subject: FW: Buildable Lands - Infrastructure gaps
Date: Tuesday, May 26, 2020 3:16:00 PM
Attachments: [Inf. gap Buildable-Lands-Guidelines-Final.pdf](#)
[Infrastructure gaps Ltr.docx](#)

Mayor Listek,

I wanted to thank you, Council Member Noble, and Mr. Ridenour for attending the virtual Buildable Lands Project Advisory Committee (BLPAC) meeting on May 1, 2020. We value your participation.

In July of 2019 County Council approved a public participation plan to establish a Project Advisory Committee to solicit public feedback on the Buildable Lands Program review. The list of representatives included the City of Vancouver and one of the smaller cities. Jeff Swanson, representing the City of La Center volunteered to be that representative with the consent of Planning directors at a quarterly City/County coordination meeting.

One of the new requirements in the updated Buildable Lands guidelines is for jurisdictions to identify any infrastructure gaps that could prevent assigned densities from being achieved. Attached is an email that was sent to all the jurisdictions in Clark County in March regarding the infrastructure gap requirement that was discussed at the May BLPAC meeting.

I just want to reiterate that since the town of Yacolt has not been assigned an urban density target due to the lack of a sewer system, consistent with both the Yacolt Comprehensive Plan and Countywide planning policies, therefore the draft recommendation is that the infrastructure gap analysis would not be applicable to the town. There would be no change to the status quo regarding development allowed by the existing zoning in the town of Yacolt.

We look forward to your continued participation. If you need any additional information about the project feel free to contact me or visit the project webpage at <https://www.clark.wa.gov/community-planning/buildable-lands-project-advisory-committee>



Jose Alvarez
Planner III
COMMUNITY PLANNING

564.397.4898



From: Jose Alvarez

Sent: Thursday, March 5, 2020 10:01 AM

To: 'Sam Crummett-Battle Ground' <sam.crummett@cityofbg.org>;
Mitch.Kneipp@cityofwashougal.us; 'Steve Stuart-Ridgefield' <steve.stuart@ci.ridgefield.wa.us>;
'Travis Goddard-Woodland' <goddardt@ci.woodland.wa.us>; Phil Bourquin
(PBourquin@cityofcamas.us) <PBourquin@cityofcamas.us>; Kennedy, Rebecca
<Rebecca.Kennedy@cityofvancouver.us>; Jeff Swanson <Jswanson@ci.lacenter.wa.us>;
clerk@townofyacolt.com

Subject: Buildable Lands - Infrastructure gaps

Hello,

Attached is a letter requesting a written response from your jurisdictions in response to the Department of Commerce's update Buildable Lands guidelines relating to infrastructure gaps. I've also included the pertinent pages from the update guidelines for your reference. A link to the full document is available here: <https://www.commerce.wa.gov/serving-communities/growth-management/growth-management-topics/buildable-lands/>

Please let me know if you have any questions.



Jose Alvarez
Planner III
COMMUNITY PLANNING

564.397.4898



Top of Form

Bottom of Form



March 5, 2020

Planning Director,

The updated Buildable Land Guidelines now require an assessment of infrastructure gaps: RCW36.70A.215(3)(b)(i) indicates that an assessment of land suitable for development must also include infrastructure gaps (including but not limited to transportation, water, sewer, and stormwater) that could prevent assigned densities from being achieved.

As part of the process to complete the 2021 Buildable Lands report, Clark County is seeking input from cities to identify any potential infrastructure gaps that merit consideration in the buildable lands inventory. Please keep the following guidance in mind in identifying potential infrastructure gaps:

- For infrastructure, RCW 36.70A.070(3) requires local comprehensive plans to have a capital facility plan element that includes *(d) a requirement to reassess the land use element if probable funding falls short of meeting existing needs and to ensure that the land use element, capital facilities plan element, and financing plan within the capital facilities plan element are coordinated and consistent.*
- The updated Buildable Land Guidelines state that in determining whether there is an infrastructure gap, jurisdictions should consider several factors:
 - Is there a long-term lack of urban development in the area?
 - How did the recent comprehensive plan address the needed infrastructure provision, and is that information still valid?
 - If the infrastructure is anticipated to be provided later in the planning period, is development likely to occur quickly so that planned development is realized within the planning period, or will some of the area remain undeveloped?

We would like each jurisdiction to answer the questions below and submit written responses by March 18, 2020 for consideration by the Buildable Lands Project Advisory Committee.

- Do you have any identified infrastructure gaps within your jurisdiction? If so, are any of those items not likely to be resolved within the 20-year (2015-2035) planning horizon?

Sincerely,

Jose Alvarez
Project Manager

cc: Oliver Orjiako



STEP TWO: Urban Capacity

RCW 36.70A.215(3)(a) states that a jurisdiction must *determine whether there is sufficient suitable land to accommodate the countywide population projection and subsequent population allocations within the county and between the county and its cities*. This is arguably the most complex component of the evaluation as it requires a determination of what land is available for development and redevelopment, what the potential development capacities for those lands might be, and what, if any, significant impediments might impact the ability for those lands to be developed as planned. RCW 36.70A.215(3)(b) states that:

An evaluation and identification of land suitable for development or redevelopment shall include:

(i) A review and evaluation of the land use designation and zoning/development regulations; environmental regulations (such as tree retention, stormwater, or critical areas regulations) impacting development; and other regulations that could prevent assigned densities from being achieved; infrastructure gaps (including but not limited to transportation, water, sewer, and stormwater); and

(ii) Use of a reasonable land market supply factor when evaluating land suitable to accommodate new development or development of land for residential development and employment activities. The reasonable market supply factor identifies reductions in the amount of land suitable for development and redevelopment.

Counties planning under the Review & Evaluation Program have developed different procedures for determining land suitable for development or redevelopment. The following sections expand on each of the requirements

listed within RCW 36.70A.215(3)(b). It should also be noted that land suitable for development pertains to vacant, under-utilized, and partially-utilized areas.

Land Use Designation, Zoning/Development Regulations, and Infrastructure Gaps

RCW 36.70A.215(3)(b)(i) provides that *a review and evaluation of the land use designation and zoning/development regulations and infrastructure gaps* are part of the evaluation criteria to determine if there is sufficient land suitable to accommodate county-wide population projections. The goal is to understand if and how development regulations or infrastructure gaps may affect density or timing of growth. The following guidance is intended to assist jurisdictions in evaluating this requirement.

Land Use Designation and Zoning/Development Regulations

RCW 36.70A.215(3)(b)(i) states that the evaluation of land suitable for development or redevelopment must also evaluate land use designation and zoning/development regulations including environmental regulations and other regulations that could prevent assigned densities from being achieved.

There may be situations where a development regulation may have an unintended impact on the ability of planned densities to be achieved. In most instances a regulation impacting development would be identified during the calculation of achieved densities. For example, if it was determined during the achieved densities calculation that densities in a zone or areas are not occurring as planned, further analysis might point towards a new regulation that was created. If this determination was made, a reasonable measure might be needed to reduce the inconsistency between planned and achieved densities. If not, there would

need to be some consideration for the impact of the development regulation on the future capacity identified, assuming the analysis clearly demonstrates that the regulation is reducing achieved densities.

There could be instances where the calculation of achieved densities would not assess the impact of a new or revised land use designation or zoning/development regulations. For example, the periodic update to local comprehensive plans takes place during the evaluation period. If critical area regulations, for example, are updated during the periodic update and wetland buffers increase, looking at achieved densities may not pick up on the impact to future development, especially when developments are vested prior to the new regulations being enacted. Updated regulations, such as stormwater or tree retention regulations, could have an impact, if lot size averaging is not allowed within a jurisdiction. Multi-family could be impacted if setback requirements were increased.

Regardless of how a jurisdiction chooses to approach this assessment, it is important to show your work and document that the issue has been assessed. Here are a few factors to consider for documentation:

- When collecting annual data, have jurisdictions provide high level details about newly adopted or modified regulations, possible impacts on development and redevelopment, and how they might impact planned densities from being achieved, when applicable. This could be a simple spreadsheet that provides baseline information;
- When inconsistencies between planned and achieved growth are identified, document how regulatory changes were reviewed as a possible cause for

this inconsistency and how it was addressed; and

- Pay special attention to major policy and regulation changes made between evaluation periods. Document those changes that may have an impact have been reviewed but might not be reflected in the achieved density analysis.

Infrastructure Gaps

RCW 36.70A.215(3)(b)(i) indicates that an assessment of land suitable for development must also include *infrastructure gaps (including but not limited to transportation, water, sewer, and stormwater)* that could prevent assigned densities from being achieved.

For infrastructure, RCW 36.70A.070(3) already requires local comprehensive plans to have a capital facility plan element that includes (d) *a requirement to reassess the land use element if probable funding falls short of meeting existing needs and to ensure that the land use element, capital facilities plan element, and financing plan within the capital facilities plan element are coordinated and consistent.*

Buildable Lands counties completing their analysis should reasonably be able to rely on adopted capital facility plans when completing their assessment of land suitable for development. While the capital facilities plan addresses a number of items, including water, sewer, storm, schools and transportation infrastructure to support growth, infrastructure gaps pertaining to those capital projects may still be possible. For example, if a planned treatment facility upgrade is needed to support additional growth, and that planned and financed project experiences a significant delay, funding lapse, or difficulty acquiring sufficient land for the facility, then growth could be impacted. The achieved density analysis could

point to this issue and, if necessary, reduced capacity or reasonable measures might be needed if the planned facility's delay would extend beyond the 20-year planning period. Infrastructure gaps could also be identified by a lack of development within an area where growth would typically be expected.

In determining whether there is an infrastructure gap, jurisdictions should consider several factors:

- Is there a long-term lack of urban development in the area?
- How did the recent comprehensive plan address the needed infrastructure provision, and is that information still valid?
- If the infrastructure is anticipated to be provided later in the planning period, is development likely to occur quickly so that planned development is realized within the planning period, or will some of the area remain undeveloped?

The key is to make sure the issue is documented so measures, including reasonable measures, can be implemented where appropriate.

In terms of redevelopment on partially-utilized and under-utilized parcels, the impacts of infrastructure gaps will likely be less than with the development of vacant land on the fringes of UGAs, but there may still be instances where capital facility gaps impact land suitable for development and urban capacity calculations. The provision of regional stormwater facilities, sewer treatment facilities, and other critical system improvements needed to support additional capacity in urban areas could have an impact if planned projects do not receive intended funding or if project design and review are delayed. A jurisdiction might make a finding that planned capacity will be impacted by significant delays to a planned and funded capital facility, which might result in a

reasonable measure. **It is also possible that the delay would not impact the 20-year planning horizon, in which case there would not necessarily be a need to account for the delay.**

This type of analysis would be limited to significant and funded capital facilities listed within the capital facilities plan.

For private development, there are times when the cost to provide improvements makes development infeasible. This could be a parcel that requires several lift stations or traffic improvements that are too costly and prevent development. At times, this gets resolved during the planning period and at times it may not. For example, there could be road improvements within the 6-year financing plan that, without being constructed, would render development infeasible or unlikely due to a failing level of service rating that prohibits development until improvements are made.

Additional Assessment Factors

The evaluation requires under RCW 36.70A.215(3)(b) typically includes an assessment of a variety of other factors. The evaluation, however, should consider factors that impact development and redevelopment on vacant, under-utilized, and partially-utilized land. The following are other common evaluation items considered during the evaluation of land suitable for development and redevelopment:

- **Utility Easements:** When assessing land suitable for development and redevelopment, significant utility easements can be considered as a deduction since the land is encumbered by uses that will limit developability;
- **Schools:** When future school sites are known, the land area can be deducted from available land for development and redevelopment; and

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.

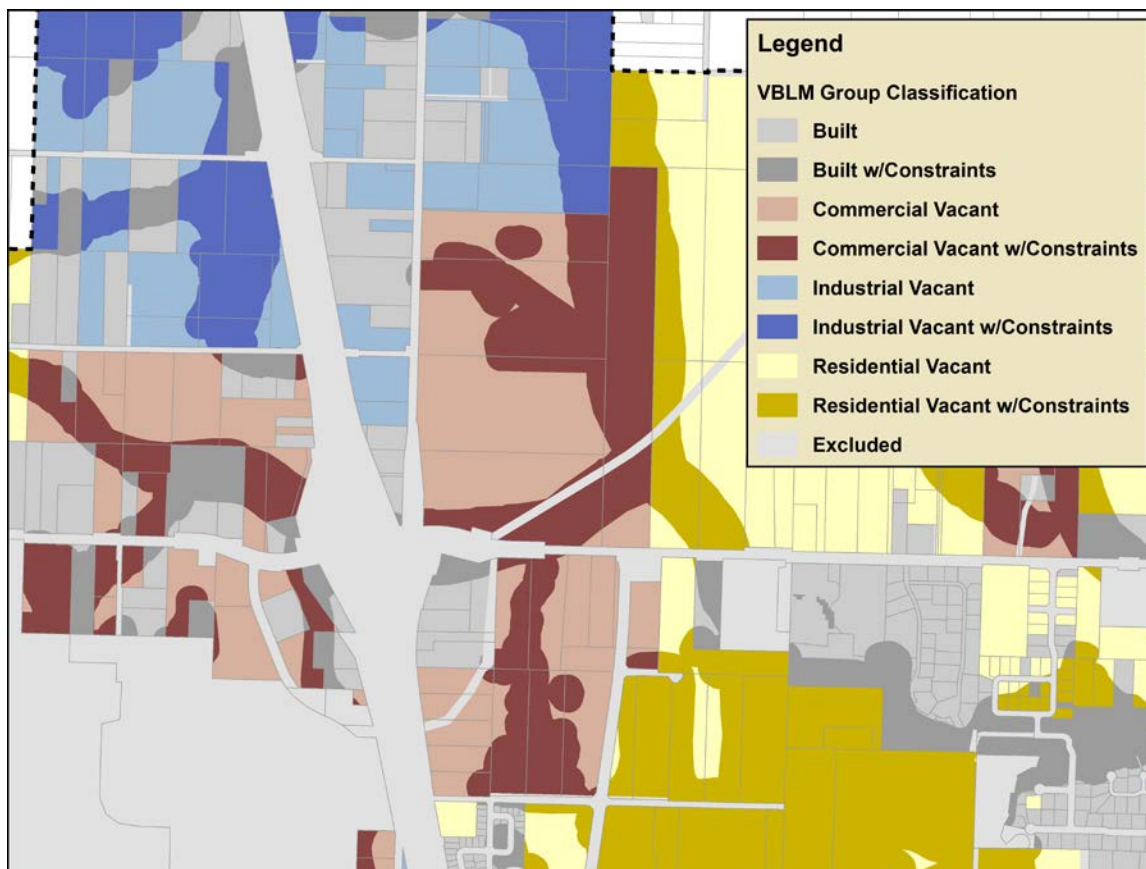
In the spring of 2000, the Board of Clark County Commissioners appointed a technical advisory committee consisting of local government agencies, Responsible Growth Forum members, and Friends of Clark County to revisit this process. They reviewed definitions for each classification of land and planning 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 | Commercial | Commercial |
| 3 | Neighborhood Commercial | Commercial |
| 3 | Community Commercial | Commercial |
| 3 | General Commercial | Commercial |
| 3 | City Center | Commercial |
| 3 | Regional Center | Commercial |
| 3 | Downtown | Commercial |
| 4 | Mixed Use | Commercial |
| 4 | Town Center | Commercial |
| 5 | Office Park/Business Park | Industrial |
| 5 | Light industrial/Business park | Industrial |
| 5 | Employment Campus | Industrial |
| 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
 - Parcel greater than 5,000 square feet
 - Not tax exempt
 - Not an easement or right of way
 - Not a state assessed or institutional parcel
 - Not parks or open space (public and private)
 - Not a mobile home park
- 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
 - Properties not owned by Vancouver Housing Authority
- 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

| INDCLASS | 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 include commercial 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 VBLM 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 MapsOnline web application at:

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

Underutilized land classes are grouped with vacant classes by land use in MapsOnline 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/Constraints |
| 3 | Residential Vacant |
| 4 | Residential Vacant w/Constraints |
| 5 | Commercial Vacant |
| 6 | Commercial Vacant w/Constraints |
| 7 | Industrial Vacant |
| 8 | Industrial Vacant w/Constraints |
| 99 | Excluded |

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.

Clark County Comprehensive Plan 2016 Update

Planning for growth 2015 – 2035

Preferred Alternative –Urban VBLM and Rural Capacity Estimates – Issue Paper 7

Purpose

The purpose of this issue paper is to ensure there is sufficient capacity to accommodate the projected 20-year population and employment growth in the Preferred Alternative under SEPA as selected by the Board of County Councilors on February 23, 2016.

Background

In July 2013, Clark County began the process of updating its Comprehensive Growth Management Plan to meet the 2016 periodic update requirement of Chapter 36.70A.140 RCW. Several issue papers have already been prepared to allow the Board to make decisions about the update:

- Issue Paper 1 - Comprehensive Plan Overview: A summary of the county's Planning Assumptions, 2013 vacant and buildable lands model (VBLM) inventory and population and employment projections.
- Issue Paper 2 – Population and Job Projections: Background information for a discussion with the cities and the town of Yacolt on population and job planning assumptions for 2015-2035. On Jan. 21, 2014, the Board adopted the state Office of Financial Management's (OFM) medium population projection of 562,207 for the 20-year period ending 2035 (Res. 2014-01-09).
- Issue Paper 3 – Employment forecast based on input from Washington Employment Security Department (ESD). It was revised as Issue Paper 3.1 to include the 2014 VBLM information. On April 29, 2014, the Board adopted the high employment forecast of 91,200 net new jobs for the 20-year period ending 2035 (Res. 2014-04-01).
- Issue Paper 4 – Population and Job Allocation: On June 24, 2014, the Board identified the methodology for allocating growth by UGA and adopted preliminary allocations for initial review (Res. 2014-06-17). It was revised as Issue Paper 4.1 to reflect the additional capacity for population and jobs not captured by the vacant land model and presented at a BOCC Worksession on September 24, 2014. Following the 2015 assessor's population update, the issue paper was revised as Issue Paper 4.2. (Res. 2015-04-05).
- Issue Paper 5 – SEPA Scoping: On July 16, 2014, the Board discussed the environmental impact review process under the State Environmental Policy Act (SEPA) and directed staff to proceed to scoping on development of alternatives.
- Issue Paper 5.1 – SEPA provides a partial list of what has transpired from July 17, 2014 through March 11, 2015 and discussed four potential alternatives for study under SEPA. (Res. 2015-04-06).
- Issue Paper 6 CWPP – Discussed the role of the Countywide Planning Policies and introduced a proposed amendment procedure for updating countywide planning policies.

Methodology

The Geographic Information System (GIS) department ran the vacant buildable lands model and rural capacity estimate on the Preferred Alternative Plan map selected by the Board of County Councilors on February 23, 2016. Exhibit 1 vacant buildable lands model and Exhibit 2 rural capacity analysis provide the methodologies used and the data output.

The summary results of the VBLM capacity analysis in Table 2 indicate that in aggregate, Clark County can accommodate population growth of 135,122 and is sufficient to accommodate the 20-year projected population growth of 128,586 as identified in Table 1 Population Allocation.

The VBLM indicates that the cities of La Center and Ridgefield do not have sufficient capacity to accommodate their respective growth allocation. However, the VBLM does not reflect site specific planned redevelopment improvements. Each city reviews the VBLM data and provides the county with site specific additional population capacity overrides based on future planned growth. For example, the Vancouver waterfront redevelopment potential is not captured in the VBLM. Site specific overrides have been recognized by the county to more accurately reflect development potential. When the overrides are factored in, each jurisdiction has sufficient capacity to accommodate the projected 20-year projected population growth.

The rural area is allocated 10% of the total county growth which would be 12,859. (128,586 * 10%)
The 2015 rural capacity estimate indicates the rural area can accommodate an additional 21,343 persons.

Table 1 Population Allocation

| UGA | January 1, 2015 Population Estimates | 2015 to 2035 VBLM Population Allocation | Additional Allocation | Total Allocation | 2035 Estimates (Jan. 1, 2015 Pop. Est + Total Allocation) |
|---------------|--|---|--------------------------|---------------------|--|
| Battle Ground | 20,871 | 15,972 | 1,600 | 17,572 | 38,443 |
| Camas | 22,843 | 11,255 | | 11,255 | 34,098 |
| County | 62,205 | 12,859 | | 12,859 | 75,064 |
| LaCenter | 3,209 | 3,233 | 1,200 | 4,433 | 7,642 |
| Ridgefield | 6,575 | 13,087 | 5,832 | 18,919 | 25,494 |
| Vancouver | 315,460 | 52,786 | 3,815 | 56,601 | 372,061 |
| Washougal | 15,932 | 6,023 | 392 | 6,415 | 22,347 |
| Woodland | 89 | 229 | | 229 | 318 |
| Yacolt | 1,661 | 303 | | 303 | 1,964 |
| Total | 448,845 | 115,747 | 12,839 | 128,586 | 577,431 |

Note: This table reflects the revised information in Resolution 2016-03-01. The additional allocation column reflects the cities request to be made whole for the planning done in 2007 and to reflect site specific overrides to the VBLM. In order to stay within the 2035 population projection the Vancouver UGA additional allocation was reduced by 2,385.

Table 2 VBLM Capacity

| UGA | January 1, 2015 Population Estimates | VBLM Preferred Alt. 2016 Population Capacity |
|---------------|--|---|
| Battle Ground | 20,871 | 17,845 |
| Camas | 22,843 | 13,832 |
| County | 62,205 | NA |
| LaCenter | 3,209 | 3,941 |
| Ridgefield | 6,575 | 16,542 |
| Vancouver | 315,460 | 74,724 |
| Washougal | 15,932 | 7,501 |
| Woodland | 89 | 468 |
| Yacolt | 1,661 | 269 |
| Total | 448,845 | 135,122 |

*Rural Capacity is estimated at 21,343.

Table 3 below shows the VBLM Preferred Alternative 2016 employment capacity which includes additional land requested by the cities of Battle Ground, La Center and Ridgefield. The county has capacity for 75,847 net new jobs. The existing assumptions of total potential jobs not captured by the vacant lands model increase the employment capacity by 16,775 jobs for redevelopment and 7,400 public sector jobs, thus increasing the total potential job capacity from 75,847 to 100,022.

Table 3 VBLM Employment Capacity

| UGA | VBLM Preferred Alt. 2016 Employment Capacity |
|--|---|
| Battle Ground | 10,060 |
| Camas | 10,965 |
| La Center | 2,052 |
| Ridgefield | 8,780 |
| Vancouver | 39,496 |
| Washougal | 4,026 |
| Woodland | 0 |
| Yacolt | 468 |
| Total | 75,847 |
| Total w/redevelopment and public employment | 100,022 |

NEXT STEPS

This data will be provided to Environmental Science Associates (ESA) for inclusion in the Final Supplemental Environmental Impact Statement (FSEIS). County staff are working to update the comprehensive plan policies and text, Title 40 Clark County code, the Capital Facilities Plan, and the Capital Facilities Financial Plan, consistent with the Preferred Alternative 2016.

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.

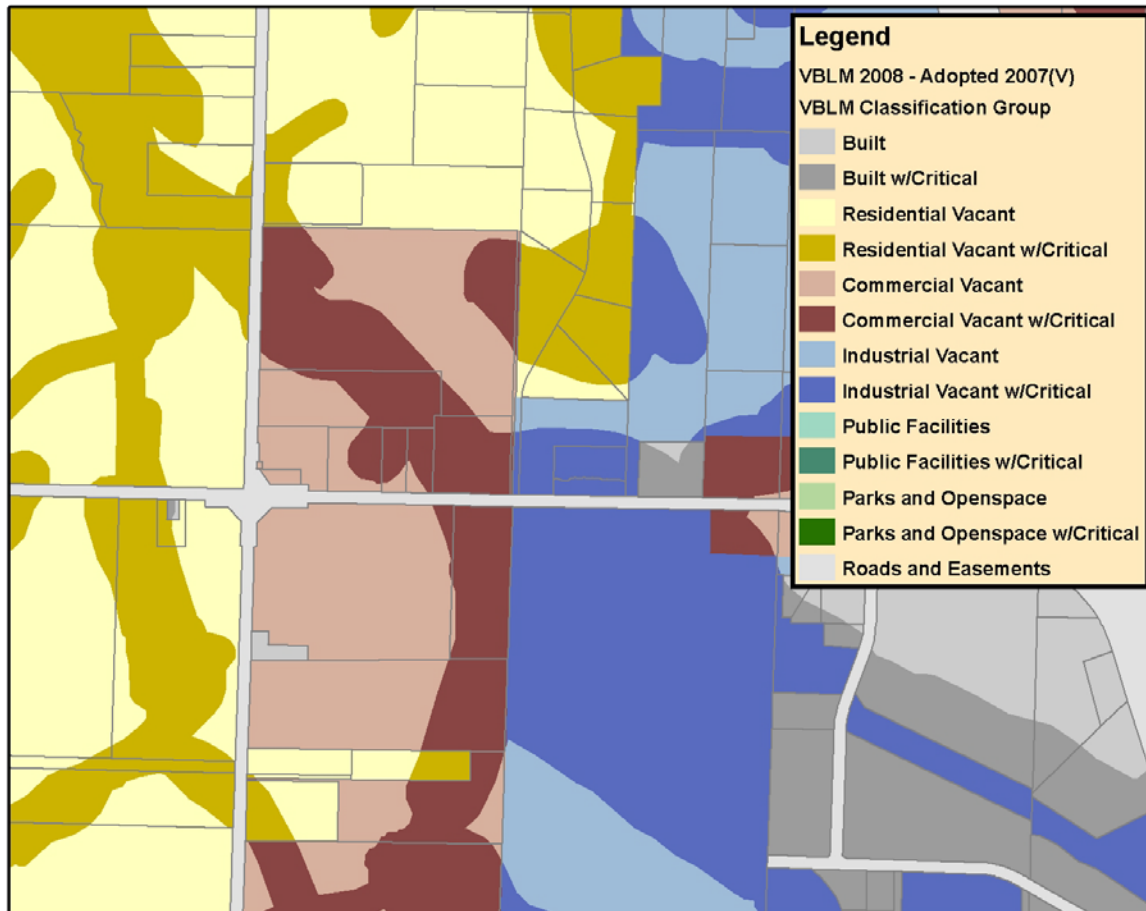
In the spring of 2000, the Board of Clark County Commissioners appointed a technical advisory committee consisting of local government agencies, Responsible Growth Forum members, and Friends of Clark County to revisit this process. They reviewed definitions for each classification of land and planning 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 | Industrial |
| 5 | Light industrial/Business park | Industrial |
| 5 | Employment Campus | Industrial |
| 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
 - Parcel greater than 5,000 square feet
 - Not tax exempt
 - Not an easement or right of way
 - Not a state assessed or institutional parcel
 - Not parks or open space (public and private)
 - Not a mobile home park
- 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

| INDCLASS | 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 include commercial 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 VBLM 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 MapsOnline web application at:

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

Underutilized land classes are grouped with vacant classes by land use in MapsOnline 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/Constraints |
| 3 | Residential Vacant |
| 4 | Residential Vacant w/Constraints |
| 5 | Commercial Vacant |
| 6 | Commercial Vacant w/Constraints |
| 7 | Industrial Vacant |
| 8 | Industrial Vacant w/Constraints |
| 99 | Excluded |

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.

February 2016 BOCC Preferred Alt Summary Totals 2016

| RESIDENTIAL | Gross Acres | Will Not Convert Acres | Infrastructure Acres | Developable Net Acres | Housing Units | Persons |
|--------------------------|-----------------|---------------------------|-------------------------|--------------------------|-----------------|------------------|
| Battle Ground | | | | | | |
| City | 1,797.3 | 711.9 | 299.2 | 786.1 | 4,716.8 | 12,546.6 |
| UGA | 740.0 | 283.7 | 124.3 | 331.9 | 1,991.7 | 5,297.9 |
| Total | 2,537.2 | 995.6 | 423.5 | 1,118.1 | 6,708.4 | 17,844.5 |
| Camas | | | | | | |
| City | 1,517.4 | 561.5 | 264.8 | 691.2 | 4,147.0 | 11,030.9 |
| UGA | 383.9 | 141.1 | 67.3 | 175.5 | 1,053.2 | 2,801.5 |
| Total | 1,901.3 | 702.5 | 332.1 | 866.7 | 5,200.2 | 13,832.4 |
| La Center | | | | | | |
| City | 570.6 | 227.5 | 94.5 | 248.6 | 994.4 | 2,645.1 |
| UGA | 314.2 | 145.8 | 46.7 | 121.8 | 487.1 | 1,295.6 |
| Total | 884.8 | 373.2 | 141.2 | 370.4 | 1,481.4 | 3,940.7 |
| Ridgefield | | | | | | |
| City | 1,535.4 | 643.2 | 247.1 | 645.0 | 3,870.3 | 10,294.9 |
| UGA | 921.2 | 379.7 | 150.0 | 391.4 | 2,348.7 | 6,247.4 |
| Total | 2,456.6 | 1,023.0 | 397.1 | 1,036.5 | 6,218.9 | 16,542.3 |
| Vancouver | | | | | | |
| City | 1,178.7 | 412.0 | 211.6 | 555.2 | 4,441.5 | 11,814.3 |
| UGA | 6,498.8 | 2,418.2 | 1,124.4 | 2,956.3 | 23,650.2 | 62,909.6 |
| Total | 7,677.5 | 2,830.1 | 1,335.9 | 3,511.5 | 28,091.7 | 74,723.9 |
| Washougal | | | | | | |
| City | 659.1 | 247.4 | 113.2 | 298.6 | 1,791.4 | 4,765.1 |
| UGA | 403.9 | 166.8 | 65.7 | 171.4 | 1,028.4 | 2,735.6 |
| Total | 1,063.1 | 414.3 | 178.8 | 470.0 | 2,819.8 | 7,500.7 |
| Yacolt | | | | | | |
| City | 65.6 | 14.8 | 14.1 | 36.7 | 147.0 | 390.9 |
| UGA | 16.4 | 6.4 | 2.8 | 7.3 | 29.1 | 77.3 |
| Total | 82.0 | 21.1 | 16.9 | 44.0 | 176.0 | 468.3 |
| Woodland | | | | | | |
| City | 5.8 | 3.1 | 0.8 | 2.0 | 8.0 | 21.2 |
| UGA | 88.9 | 56.8 | 8.9 | 23.3 | 93.0 | 247.4 |
| Total | 94.8 | 59.9 | 9.7 | 25.2 | 101.0 | 268.5 |
| RESIDENTIAL TOTAL | 16,697.2 | 6,419.8 | 2,835.1 | 7,442.3 | 50,797.5 | 135,121.2 |

| COMMERCIAL | Gross Acres | Will Not Convert Acres | Infrastructure Acres | Developable Net Acres | Jobs |
|-------------------------|----------------|---------------------------|-------------------------|--------------------------|-----------------|
| Battle Ground | | | | | |
| City | 580.2 | 90.9 | 123.9 | 365.3 | 7,306.8 |
| UGA | 98.2 | 11.6 | 21.6 | 64.9 | 1,298.3 |
| Total | 678.4 | 102.5 | 145.6 | 430.3 | 8,605.1 |
| Camas | | | | | |
| City | 499.7 | 63.3 | 109.1 | 327.2 | 6,544.7 |
| UGA | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 499.7 | 63.3 | 109.1 | 327.2 | 6,544.7 |
| La Center | | | | | |
| City | 61.5 | 4.4 | 14.3 | 42.8 | 856.7 |
| UGA | 54.3 | 4.0 | 12.6 | 37.8 | 755.7 |
| Total | 115.9 | 8.4 | 26.9 | 80.6 | 1,612.4 |
| Ridgefield | | | | | |
| City | 283.0 | 32.2 | 62.7 | 188.1 | 3,762.3 |
| UGA | 10.4 | 1.0 | 2.3 | 7.0 | 140.3 |
| Total | 293.4 | 33.2 | 65.0 | 195.1 | 3,902.7 |
| Vancouver | | | | | |
| City | 484.2 | 25.2 | 114.7 | 344.2 | 6,884.2 |
| UGA | 835.7 | 58.5 | 194.3 | 582.9 | 11,658.5 |
| Total | 1,319.9 | 83.7 | 309.0 | 927.1 | 18,542.6 |
| Washougal | | | | | |
| City | 74.2 | 7.3 | 16.7 | 50.2 | 1,003.3 |
| UGA | 45.5 | 3.2 | 10.6 | 31.8 | 635.0 |
| Total | 119.7 | 10.5 | 27.3 | 81.9 | 1,638.4 |
| Yacolt | | | | | |
| City | 14.1 | 0.0 | 3.5 | 10.6 | 211.5 |
| UGA | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 14.1 | 0.0 | 3.5 | 10.6 | 211.5 |
| Woodland | | | | | |
| City | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| UGA | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| COMMERCIAL TOTAL | 3,041.0 | 301.6 | 686.5 | 2,052.9 | 41,057.3 |

0

| INDUSTRIAL | Will Not Convert | Infrastructure | Developable Net | Jobs | |
|------------------|------------------|----------------|-----------------|---------|----------|
| | Gross Acres | Acres | Acres | | |
| Battle Ground | | | | | |
| City | 307.3 | 91.9 | 53.9 | 161.6 | 1,454.5 |
| UGA | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 307.3 | 91.9 | 53.9 | 161.6 | 1,454.5 |
| Camas | | | | | |
| City | 848.7 | 240.1 | 152.1 | 456.4 | 4,108.0 |
| UGA | 72.6 | 26.4 | 11.5 | 34.6 | 311.5 |
| Total | 921.2 | 266.5 | 163.7 | 491.1 | 4,419.5 |
| La Center | | | | | |
| City | 83.3 | 19.1 | 16.1 | 48.2 | 433.5 |
| UGA | 1.1 | 0.2 | 0.2 | 0.7 | 6.1 |
| Total | 84.4 | 19.3 | 16.3 | 48.8 | 439.6 |
| Ridgefield | | | | | |
| City | 941.4 | 266.5 | 168.7 | 506.2 | 4,555.5 |
| UGA | 65.3 | 17.7 | 11.9 | 35.7 | 321.5 |
| Total | 1,006.7 | 284.1 | 180.6 | 541.9 | 4,877.0 |
| Vancouver | | | | | |
| City | 2,650.7 | 841.2 | 452.4 | 1,357.1 | 12,213.7 |
| UGA | 1,779.3 | 484.6 | 323.7 | 971.0 | 8,739.0 |
| Total | 4,429.9 | 1,325.8 | 776.0 | 2,328.1 | 20,952.7 |
| Washougal | | | | | |
| City | 218.4 | 87.7 | 32.7 | 98.0 | 881.9 |
| UGA | 286.8 | 63.8 | 55.8 | 167.3 | 1,505.5 |
| Total | 505.2 | 151.5 | 88.4 | 265.3 | 2,387.5 |
| Yacolt | | | | | |
| City | 9.7 | 0.9 | 2.2 | 6.5 | 58.9 |
| UGA | 39.6 | 10.3 | 7.3 | 21.9 | 197.5 |
| Total | 49.2 | 11.3 | 9.5 | 28.5 | 256.4 |
| Woodland | | | | | |
| City | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| UGA | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INDUSTRIAL TOTAL | 7,304.1 | 2,150.4 | 1,288.4 | 3,865.2 | 34,787.1 |

0

Estimating Potential Rural Housing and Employment Clark County, Washington

The Rural Vacant Buildable Land Model (Rural VBLM) estimates the number of houses and jobs on lands outside of the Urban Growth Area. Rural lands and rural development behave differently than urban development. These differences are significant enough to require a new VBLM classification method. This document describes the Rural VBLM.

The Rural VBLM works very similar to the Urban VBLM. The primary input is a proposed land use layer. This layer is used to classify lands into the 3 VBLM land use categories: Residential, Commercial, or Industrial. The Assessor's database is used to classify the parcels into VBLM classifications: Vacant, Built, Underutilized, Excluded) based on the property type, ownership, and size. The Residential Rural VBLM differs most substantially from the Urban VBLM.

Rural VBLM Land Uses

Land use designations from the comprehensive plan or proposed zoning plan are categorized into the three land use models.

- Residential – rural, rural center residential, urban reserve, agriculture, and forest land use designations
- Commercial – commercial land use designations
- Industrial – industrial land use designations

Residential VBLM Classifications

Property with a proposed land use of Residential are subdivided into the following VBLM categories based on information from the Assessor's database.

- Built
 - Parcel has existing housing units
 - Parcel is too small to be further divided based on minimum lot size requirements
- Vacant
 - No existing housing units
 - May contain outbuildings
- Underutilized
 - Parcel has existing housing units
 - Parcel is large enough to be further divided based on minimum lot size requirements
- Excluded
 - Forest zoned lands in the Current Use program (Timber or Designated Forest Land (DFL))
 - Remainder lots of cluster developments
 - Surface mining overlay area
 - Water Areas
 - Private street or Right of Way
 - Transportation or utilities
 - Private park or recreation areas
 - Assessed as a zero value property
 - Size is less than 1 acre
 - Tax exempt
 - Mobile Home Parks

- Not a Residential land use

Residential Planning Assumptions:

- Housing capacity calculation:
 - One housing unit per undersized vacant parcel
 - Conforming vacant and underutilized parcels
 - Housing unit capacity is calculated by dividing the parcel acres by the minimum lot size.
 - For dividable parcels remainder lots are considered buildable if they are within 10% of the minimum lot size.
- Population Capacity calculation
 - 2.66 persons per housing unit

Employment

Most of the rural area is designated rural residential but there are pockets of commercial and industrial areas available for future employment. Commercial and Industrial lands use the same Rural VBLM classifications. The only difference is in the number of employees per acre

Commercial and Industrial VBLM Classifications

- Vacant
 - Building value less than \$67,500
- Underutilized
 - Parcels with existing buildings that have a building value per acre less than \$50,000
- Excluded
 - Surface mining overlay area
 - Water
 - Private street
 - Right of Way
 - Utilities
 - A Private park or recreation areas
 - Assessed as a zero value property
 - Tax exempt
- Built
 - Building value of \$67,500 or more
- Not Commercial or industrial

Employment Planning Assumptions:

- Vacant and underutilized lands receive the same number of employees per acre.
 - No reductions for constrained areas or infrastructure
 - Commercial employment
 - 20 employees per acre
 - Industrial employment
 - 9 employee per acre

| Potential Housing Units and Persons in Rural Clark County | | | | | | | | |
|---|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------|
| Zone | Conforming Parcels | | | | Undersized Parcels | | Total | |
| | VACANT | | UNDERUTILIZED | | VACANT | | | |
| | Net Acres | Housing Units | Net Acres | Housing Units | Net Acres | Housing Units | Housing Units | Persons |
| AG-10 | 7,822.02 | 712 | 10,879.19 | 705 | 1,550.76 | 333 | 1,750 | 4,655 |
| AG/WL | 269.50 | 1 | 0.00 | 0 | 377.64 | 15 | 16 | 43 |
| FR-20 | 1,300.50 | 60 | 641.31 | 16 | 1,143.29 | 225 | 301 | 801 |
| FR-80 | 320.43 | 3 | 0.00 | 0 | 1,436.25 | 108 | 111 | 295 |
| GLSA 40 | 593.23 | 13 | 96.44 | 1 | 133.02 | 12 | 26 | 69 |
| GLSA 80 | 293.45 | 3 | 0.00 | 0 | 186.51 | 6 | 9 | 24 |
| GR 10 | 15.71 | 1 | 41.77 | 2 | 23.48 | 5 | 8 | 21 |
| GR 5 | 17.93 | 3 | 0.00 | 0 | 18.18 | 8 | 11 | 29 |
| GSAG | 131.62 | 5 | 64.19 | 2 | 10.29 | 1 | 8 | 21 |
| GSFF | 0.00 | 0 | 0.00 | 0 | 25.17 | 2 | 2 | 5 |
| GSSA | 100.39 | 5 | 157.72 | 5 | 34.00 | 5 | 15 | 40 |
| GSW 20 | 38.44 | 2 | 39.83 | 1 | 31.73 | 5 | 8 | 21 |
| GSW 40 | 0.00 | 0 | 0.00 | 0 | 8.32 | 1 | 1 | 3 |
| R-10 | 5,132.96 | 464 | 4,376.89 | 255 | 1,880.69 | 422 | 1,141 | 3,035 |
| R-20 | 761.81 | 35 | 558.94 | 15 | 420.55 | 73 | 123 | 327 |
| R-5 | 10,548.35 | 1,927 | 9,151.32 | 1,074 | 2,746.27 | 1,118 | 4,119 | 10,957 |
| RC-1 | 100.31 | 94 | 283.92 | 179 | 0.00 | 0 | 273 | 726 |
| RC-2.5 | 149.57 | 53 | 179.72 | 40 | 14.57 | 9 | 102 | 271 |
| Total | 27,596.22 | 3,381 | 26,471.24 | 2,295 | 10,040.72 | 2,348 | 8,024 | 21,343 |

Potential Employment in Rural Clark County

| Zone | VACANT | | UNDERUTILIZED | |
|-------|--------|----------|---------------|----------|
| | Acres | Jobs | Acres | Jobs |
| CR-1 | 38.59 | 771.71 | 8.16 | 163.28 |
| CR-2 | 68.60 | 1,372.08 | 46.53 | 930.59 |
| IH | 121.35 | 121.35 | 78.86 | 78.86 |
| Total | 228.54 | 2,265.14 | 133.55 | 1,172.73 |