


Clark County  
2016 Comprehensive Growth Management Plan Update



CHECKING IN ON OUR FUTURE

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## Rural VBLM Planning Assumptions Basis

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The logical basis for the proposals by Councilor David Madore  
11/9/2015

This document provides a foundation of source materials and the logical basis for each of the proposed rural VBLM planning assumptions. The purpose of these assumptions is to enable policy makers to realistically plan for the most likely future scenario that is based the most reliable and accurate parcel totals

**Table 1 Arguments**

Ref	A (existing)	B (proposed)
1	Remainder lots of already developed cluster developments with permanent covenants prohibiting further development shall be counted as rural parcels that will develop	Parcels that cannot reasonably be expected to develop should not be counted as likely to develop. Those include remainder lots of already developed cluster developments that are prohibited from further development

**Why this is appropriate:**

Counting even one cluster remainder lot that is prohibited from further development would decrease accuracy and increase error by fallaciously inflating the expected number of rural lots that could accommodate population growth

**Argument against choice B:**

There is no way to account for all cluster remainder lots

**Rationale for choice B:**

None of these assumptions are expected to achieve perfection. Rather, the choice is between the more reasonable one that will most likely increase accuracy in contrast to the less reasonable one that will most likely increase error

Choice B is not a demand to go back and identify every possible remainder lot. The most obvious remainder lots have already been accounted for on the proposed maps. The assumption has already been incorporated by GIS into the proposed rural VBLM and the results are already known to be more accurate than choice A. The proposal is to accept the more reasonable assumption and the results already achieved.

*Not a demand to go back  
 include layer on GIS work already done - #s are good  
 - small #*

Ref	A (existing)	B (proposed)
2	Parcels located in areas far from any infrastructure with continuous long term commercial forestry operations are counted as rural parcels that will develop.	Parcels located in areas far from any infrastructure with continuous long term commercial forestry operations likely to continue should not be counted as likely to develop

**Why this is appropriate:**

These assumptions are not used to determine if something is possible. Rather, these assumptions are used to realistically predict more likely developments in contrast to less likely developments. That context is considered at the parcel level of the proposed maps.

**Argument against choice B:**

Individual owners may be relying on this assumption to authorize or prohibit the development of their particular parcel

**Rationale for choice B:**

These assumptions are not used to authorize or prohibit the development of individual parcels. Rather, these are incorporated into software accounting tools operating on proposed zoning maps to tally the most reasonable estimated totals to predict the most likely future scenario.

Accuracy is increased and error is decreased by assuming that likely events will happen and less likely events will not happen

Ref:	A (existing)	B (proposed)
3	Rural parcels including 100% of environmentally constrained areas that lack the necessary area for septic systems and well clearances shall be counted as rural parcels that will develop.	Rural parcels that have less than 1 acre of environmentally unconstrained land necessary for septic systems and well clearances should not be counted as likely to develop.

**Why this is appropriate:**

These assumptions are not used to prohibit individual parcels from developing or not developing. Rather, these are used to provide reasonable estimated totals for general planning purposes.

**Argument against choice B:**

County Habitat and Wetlands ordinances state: "This chapter shall not be used to deny or reduce the number of lots of a proposed rural land division allowed under applicable zoning density." New advances in septic technology allow for systems where lots not previously considered feasible are now developable."

**Rationale for choice B:**

This assumption already assumes that the higher density allowed by county code as stated applies. However, it is not that county code that makes even the smallest lot sizes unworkable for potential rural developments. Rather it is the physical limitation environment. It must be possible to achieve the minimum clearance between a well and a septic system. A minimum area for a septic system drain field and a home must be available outside of a wetland.

New septic technology allows septic systems to work in poor soil conditions. Septic system technology does not allow rural developments to build homes or septic drain fields in wetlands or on unstable slopes. County code does not allow rural developments to fill in wetlands. A minimum amount of environmentally unconstrained land must still be available for a rural development to be physically possible.

Proper setbacks have been established that do not allow septic drain fields to be built in environmentally constrained areas in order to prevent contamination of waterways.

- \* On-site septic systems are not allowed in wetlands
- \* Septic systems are required to maintain 100 foot setbacks from surface water (wetland) and wells.
- \* Septic systems are not allowed on geologically constrained areas without full geotechnical engineering and approval, a very costly endeavor
- \* Each well site is required to establish a 100 foot radius protection zone to fit within the lots lines

The Clark County Technical Advisory Committee on Septic Systems (TAC) recommends that we assume a minimum of 1 to 2 acres per rural lot them to normally be considered feasible. Although exceptions are possible, as a rule, regardless of the zoning, rural lots need a minimum of 1 acre of environmentally unconstrained land. See Appendix A for additional references.

For those reasons, choice B is considered more likely to increase accuracy and decrease error.

Ref	A (existing)	B (proposed)
4	The adopted "Never to Convert" deductions used by the VBLM inside the Urban Growth Boundaries shall be omitted outside the Urban Growth Boundaries. All built and all vacant rural parcels shall be counted as rural parcels that will develop.	The adopted VBLM used for urban areas assumes that a percentage of properties that have an existing residence will likely not divide further. That same 30% "Never to Convert" assumption should apply to already built rural parcels as well. The adopted VBLM used for urban areas assumes that a percentage of vacant properties will likely not divide further. That same 10% "Never to Convert" assumption should apply to vacant rural parcels as well.

**Why this is appropriate:**

The proposed policy of choice B inherits the considerable history of the more VBLM that has been refined and proven accurate over the years.

Ref	A (existing)	B (proposed)
5	Lots that are up to 10% smaller than the minimum lot size should be considered as conforming lots and counted as likely to develop as provided by current county code.	Same

**Why this is appropriate:**

Even though no change is proposed from choice A, this assumption is included to reflect existing county code that applies to both urban and rural developments.

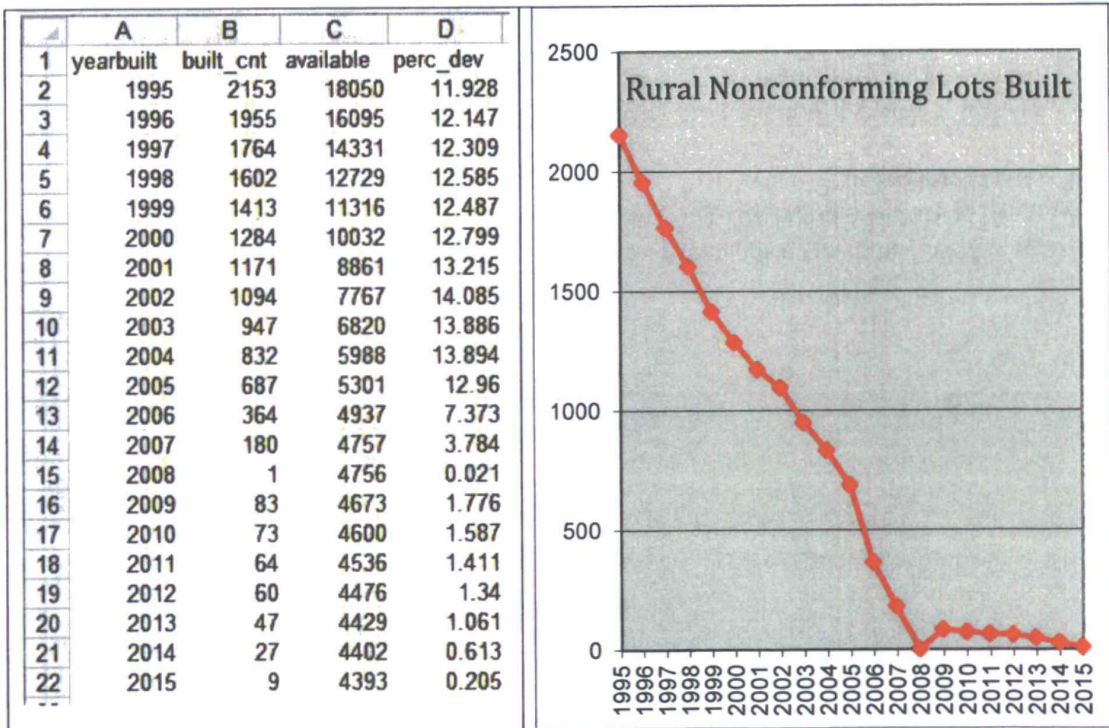
Ref	A (existing)	B (proposed)
6	All nonconforming parcels with 1 acre shall be counted as rural parcels that will develop.	10% of nonconforming parcels with at least 1 acre of unconstrained area will likely develop at the same rate indicated by historical records.

**Why this is appropriate:**

The following tables shows the number of vacant nonconforming lots that were built each year since 1995. Of the 18,050 nonconforming lots that were available in 1995, a total of 15,810 have been built. Each one built diminished the number of remaining lots. A total of 4393 vacant nonconforming rural parcels remain today.

The precipitous graph indicates that a small percentage of the remaining vacant nonconforming lots are likely to get built. A rough approximation of the years since the discontinuity in 2008, estimates that approximately 440 of the remaining 4393 lots will likely develop, or about 10% .

Even though choice B is a rough approximation at 10%, it is far more reasonable than choice A which assumes that 100% of the remaining lots will get built.



\* The built count for year 2015 was increased to compensate for a partial year.

The fields in the above table are defined as follows:

built\_cnt = the total number of nonconforming parcels built that year.

available = the remaining number of nonconforming parcels.

perc\_dev = the percentage of available nonconforming parcels built that year

Ref	A (existing)	B (proposed)
7	The 15% Market Factor used for urban parcels to provide some margin for the law of supply and demand to satisfy the GMA affordable housing goal inside the UGB shall not apply outside the UGB.	A deduction of up to 7.5% is appropriate to provide some margin for the law of supply and demand of rural parcels to help satisfy the GMA affordable housing goal.

**Why this is appropriate:**

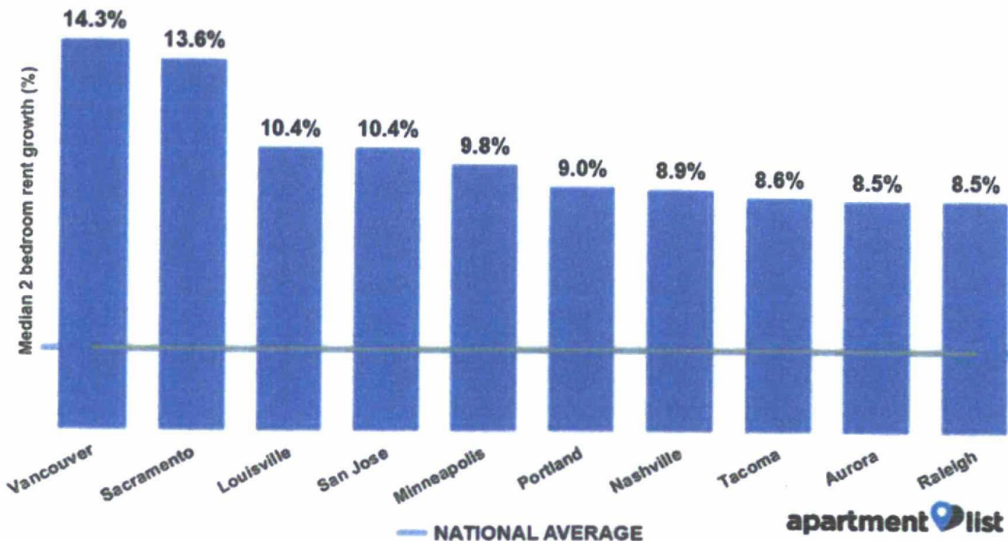
The universal law of supply and demand applies across Urban Growth Boundaries. Failing to plan ahead and supply sufficient land for foreseeable population growth, results in unaffordable housing and increased homelessness. That reality has been built into the urban VBLM for many years.

To meet the GMA requirement of providing sufficient land for a 20-year supply and the GMA goal of reducing low density sprawl, the proposed choice B policy is to adopt a 7.5% rural market factor that is half that of the urban area.

A market factor can be implemented two equivalent ways. One adds a positive margin to the forecasted population. The other subtracts a margin from the supply. Choice B proposes the latter for simplicity purposes. The key to the Market Factor is understanding why it is necessary – to provide a margin for the law of supply and demand.

Our community now has the distinction of having the fastest growing rent prices in the nation. ApartmentList.com uses the largest city in a county to represent the conditions in that county.

**The 10 Cities With the Fastest Growing Rents**



Source: <https://www.apartmentlist.com/rentonomics/september-2015-national-rental-price-monitor/>

Ref	A (existing)	B (proposed)
8	A 27.7% infrastructure deduction is use for urban parcels But because rural parcels are larger, the rural infrastructure deduction is assumed to be small. No deduction shall be used for rural parcels for any infrastructure such as roads, storm water, parks, schools, fire stations, conservation areas, lakes, streams, protected buffers, Etc	Same



## Appendix A

### Assumption 3: Minimum lot sizes required for septic systems and wells

*David Madore, Chairman  
Office of Clark County Councilors*

*Dear Councilor,*

*This is a response to your inquiry about septic systems when rural parcels have sensitive land areas. Hopefully the information presented will assist in developing a rural Vacant Land Model.*

- *On-site septic systems are not allowed in wetlands*
- *Septic systems are required to maintain 100 foot setbacks from surface water (wetland) and wells.*
- *By and large, the areas within wetland buffers are poor soils. On pre-existing parcels with failed septic systems, waivers can be obtained to place septic systems within 100 feet of wetlands. However, this is very uncommon due to the soils being generally poorer close to wetlands.*
- *Septic systems are not allowed on geologically constrained areas without a full geotechnical engineering and approval. This is a costly endeavor. Statistically, we as an industry group estimate that less than 0.2% of (less than one in five hundred) on-site systems permitted within the past 10 years have went through the rigorous and costly reviews.. Under platting rules, it is likely that full geotechnical review would be required as well. It is more common for developers to simply avoid these areas with septic systems.*
- *Well setbacks are also an important feature to this discussion that should not be left out. Table X under WAC 246-272A (septic code) requires a 2 acre minimum lot size for lots served by septic and wells under the most common (silt loams and clay loam) soil types 5 in Clark County, (See enclosed information). It would be prudent to adjust the required unconstrained parcel area upward to accommodate this. Approximately 10-20% of the available land outside the urban growth boundaries in the county is soil type 4 (loams and gravelly loams), resulting in a requirement of on 1 acre.*

*In summary, for the most part septic systems are not placed in sensitive land areas. However sensitive land areas can exist on a parcel on the condition all health requirements pertaining to septic systems are met such as lot size, soil conditions and setbacks are met.*

*If you have any questions feel free to contact us.*

*Comment Developed By: Mark Collier, ASD2 Inc., Collier Septic Consulting and Design, Septic designer, Clark County Technical Advisory Committee on*

**WAC 246-272A-0320 Developments, subdivisions, and minimum land area requirements.**

- (1) A person proposing a subdivision where the use of OSS is planned shall obtain a recommendation for approval from the local health officer as required by RCW 58.17.150.
- (2) The local health officer shall require the following prior to approving any development:
  - (a) Site evaluations as required under WAC 246-272A-0220, excluding subsections (3)(a)(i) and (4)(d);
  - (b) Where a subdivision with individual wells is proposed:
    - (i) Configuration of each lot to allow a one hundred-foot radius water supply protection zone to fit within the lot lines; or
    - (ii) Establishment of a one hundred-foot protection zone around each existing and proposed well site;
  - (c) Where preliminary approval of a subdivision is requested, provision of at least one soil log per proposed lot, unless the local health officer determines existing soils information allows fewer soil logs;
  - (d) Determination of the minimum lot size or minimum land area required for the development using Method I and/or Method II:

**METHOD I.** Table X, Single-Family Residence Minimum Lot Size or Minimum Land Area Required Per Unit Volume of Sewage, shows the minimum lot size required per single-family residence. For developments other than single-family residences, the minimum land areas shown are required for each unit volume of sewage. However, the local health officer may require larger lot sizes where the local health officer has identified nitrogen as a concern either through planning activities described in WAC 246-272A-0015 or another process.

**Single-Family Residence or Unit Volume of Sewage**

Type of Water Supply	Soil Type (defined by WAC 246-272A-0220)					
	1	2	3	4	5	6
Public	0.5 acre	12,500 sq. ft.		15,000 sq. ft.		18,000 sq. ft.
		20,000 sq. ft.	22,000 sq. ft.			
Individual, on each lot	2.5 acre <sup>1</sup>					
	1.0 acre	1 acre	1 acre	1 acre	2 acres	2 acres
	2.5 acres <sup>1</sup>					

<sup>1</sup> See WAC 246-272A-0234(6).

**METHOD II. A minimum land area proposal using Method II is acceptable only when the applicant:**

- (i) Justifies the proposal through a written analysis of the:
  - (A) Soil type and depth;
  - (B) Area drainage, and/or lot drainage;
  - (C) Public health impact on ground and surface water quality;
  - (D) Setbacks from property lines, water supplies, etc.;
  - (E) Source of domestic water;
  - (F) Topography, geology, and ground cover;
  - (G) Climatic conditions;
  - (H) Availability of public sewers;
  - (I) Activity or land use, present, and anticipated;
  - (J) Growth patterns;
  - (K) Reserve areas for additional subsurface treatment and dispersal;
  - (L) Anticipated sewage volume;
  - (M) Compliance with current planning and zoning requirements;
  - (N) Types of proposed systems or designs, including the use of systems designed for removal of nitrogen;
  - (O) Existing encumbrances, such as those listed in WAC 246-272A-0200 (1)(c)(v) and 246-272A-0220 (2)(a)(vii); and
  - (P) Estimated nitrogen loading from OSS effluent to existing ground and surface water;
  - (Q) Any other information required by the local health officer.
- (ii) Shows development with public water supplies having:
  - (A) At least twelve thousand five hundred square feet lot sizes per single-family residence;
  - (B) No more than 3.5 unit volumes of sewage per day per acre for developments other than single-family residences; and
- (iii) Shows development with individual water supplies having at least one acre per unit volume of sewage; and
- (iv) Shows land area under surface water is not included in the minimum land area calculation; and
- (e) Regardless of which method is used for determining required minimum lot sizes or minimum land area, submittal to the health officer of information consisting of field data, plans, and reports supporting a conclusion the land area provided is sufficient to: