Chapter 2

Data Collection and Land Capacity Analysis Methods

kitsap2035
Growing for a Better Tomorrow

Data Collection & Land Capacity Analysis Methodology

Overview

Kitsap County and its Cities continue to work cooperatively on the comprehensive planning and growth management requirements of RCW 36.70A.215. For the BLR process and data collection, a methodology was developed and agreed upon by each Kitsap County jurisdiction.[1] Where agreement could not be reached, certain variations were made on an as needed basis, and are outlined in memoranda in Appendix A. The Growth Management Act directs that counties compile all development data to show progress by jurisdictions toward Comprehensive Plan growth goals. Additionally, Kitsap County must determine whether existing unincorporated urban land is available for future development. This is done by collecting permit and plat data for a set time period in order to calculate achieved densities and comparing the forecast growth with available capacity to determine whether sufficient land analyzed is available to accommodate growth. The process to complete these tasks follows.

Land Capacity Analysis Discussion and Methods

The land capacity analysis (LCA) framework methodology for the 2007 BLR resulted from an update to 2005 land capacity methods. The complete discussion of the methodology, process, assumptions and factors involved are covered in Appendix A. The LCA methodology was endorsed by the KRCC and used to evaluate the 2007 buildable lands inventory for all unincorporated Kitsap County as well the Cities of Port Orchard and Poulsbo. The Cities of Bainbridge Island and Bremerton utilized the LCA methodology as the framework for buildable lands analysis, but in some cases, both Cities applied slightly different definitions and/or assumptions within that overall framework based on local factors affecting land supply in their respective jurisdictions[2].

The 2005 LCA involved ten steps to determine net population and housing unit capacity for residential lands and net buildable acres for commercial/industrial zoned lands. This method was utilized until 2011 when the Central Puget Sound Growth Management Hearings Board (CPSGMHB) issued a Remand Order requiring Kitsap County to evaluate certain aspects of its land capacity methods.

The decision by the CPSGMHB drove Kitsap County to re-examine its land capacity methods in the following areas; 1) urban density/minimum density in the Urban Low

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[1] Data Collection Methodology: Appendix D of this report.
[2] See Appendix A: Land Capacity Analysis Methodology for detailed descriptions of the Kitsap County 2005 Updated Land Capacity Analysis (ULCA) methodology as well as the variations to that methodology documented by the Cities of Bainbridge Island and Bremerton.

Zone, 2) possibly accounting for environmentally critical areas twice, and 3) minimum density utilization in all Urban Low Comprehensive Plan Designation Zones. After reviewing, evaluating, and analyzing trend data regarding densities and land capacity deduction factors, Kitsap County amended its land capacity methods in the following manner in 2011[3]:

    A. Use trend-based density factors for each residential zone for the purposes of determining residential land capacity;

    B. Increased the public facility deduction from 15 percent to 20 percent, based on actual development trends;

    C. Removed the discount for environmental purposes in the Urban Restricted Zone;

    D. Based on development trends within plats, remove all (100 percent) platted lots that were included as vacant or underutilized lands and add back in 25 percent of underutilized platted lots after the critical areas, roads and public facility reductions are taken and add all vacant lots back on a one to one basis. .[4]

This revised methodology forms the basis for determining residential land supply for this 2014 Buildable Lands Report. The revised methodology was found to be compliant by the CPSGMHB[5] and is described in detail below.

Kitsap County Land Capacity Analysis (LCA) Steps:

The land capacity analysis yields a data on a buildable land supply which can be compared to population and employment demand to indicate a relative supply and demand comparison for the forecast 20-year planning period (currently 2016-2036). The LCA begins with determining a gross supply of existing vacant and underutilized lands zoned for future development that can accommodate additional growth. The methodology then applies a series of "reduction factors" to that gross supply of developable land to account for undeveloped or underutilized lands that, for a variety of reasons, are not likely to accommodate additional residential, commercial, or industrial growth. These steps are conducted in sequential order, as listed below:

    1. Define Vacant and Underutilized Parcels by Residential Zone
    2. Identify Underutilized Lands Likely to Redevelop over the next 20 Years (-)
    3. Identify Critical Areas (-)
    4. Identify Future Roads/Right of Way Needs (-)
    5. Identify Future Public Facilities Needs (-)

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[3] Kitsap County UGA Sizing and Composition Remand: SEIS (August 2012)

[4] This change to the method of counting vacant and underutilized platted land removed a potential for "double deductions" of critical areas, roads and public facilities because it is assumed that those issues were addressed during the platting process.

[5] *Suquamish II,* Order Finding Compliance (11/6/2012).

6. Account for Unavailable Lands (-)
7. Determine Net Available Acres by Zone
8. Apply Appropriate Density in each Zone to Yield Housing Unit Capacity
9. Apply Average Household Size (Single Family/Multi Family) to Housing Unit Capacity to Yield Net Population Capacity

Note: Each step followed by a minus sign (-) is a LCA reduction factor.

Step 1—Define Vacant and Underutilized Parcels by Residential Zone

The first step determines the gross supply of vacant and underutilized parcels by residential, commercial and industrial zone. This data is retrieved from queries of the Kitsap County Assessor's parcel database.

Step 2—Identify Underutilized Lands Likely to Redevelop over the next 20 Years (-)

Underutilized parcels are those with some existing development that have remaining capacity for growth based on three variables; zoning density, parcel size and assessed value. Underutilized parcels are identified based on the relationship between those three variables[6]. This step determines which of the total amount of underutilized lands identified in Step 1 are likely to redevelop or accommodate additional future development.

Step 3—Identify Critical Areas (-)

Critical areas are defined by the GMA generally as wetlands, floodplains, geologically hazardous areas, fish and wildlife habitat conservation areas, and critical aquifer recharge areas. These are environmentally sensitive areas that must be protected under the GMA and are generally not available for development. The LCA determines critical areas locations and applies a mosaic feature that generalizes buffers and required setbacks. Once identified, these areas are deducted from the remaining vacant and underutilized land supply. The GIS applications to determine critical area coverage at the parcel level are based on the currently adopted Critical Areas Ordinance (CAO), as applicable.

Step 4—Identify Future Roads/Right of Way Needs (-)

This step accounts for future roads and rights-of-way that will be needed to accommodate new development in UGAs. Land needed for new roads, trails, and other rights-of-way will not be available to accommodate residential or commercial/industrial development. A standard reduction factor was applied to the remaining buildable land supply to account for future road and rights-of-way needs.

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[6] See Appendix A: Kitsap County 2005 Updated Land Capacity Analysis (LCA)

Step 5—Identify Future Public Facilities Needs (-)

This step accounts for future public facilities that will be needed to serve new development in UGAs and land needed for new parks, schools, stormwater and wastewater treatment facilities, fire and public safety services, libraries and other public-purpose lands that will not otherwise be available to accommodate residential or commercial/industrial development.   On remand, Kitsap County reviewed the development trends for this factor and adjusted it to more accurately reflect what actually occurred during development.   A standard reduction factor was applied to the remaining buildable land supply to account for future public facility needs.

Step 6—Account for Unavailable Lands (-)

This step accounts for vacant and underutilized lands, otherwise considered buildable, but that are likely to be unavailable for further development (i.e., held off the market). This conclusion is based on the fact that some properties will not develop or redevelop due to certain factors such as; property owners who do not wish to sell, properties with legal encumbrances, or property owners who choose not to maximize their zoned development potential. A standard reduction factor was applied to the remaining buildable land supply to account for unavailable lands.   This reduction factor is sometimes called a "market factor."

Step 7—Determine Net Available Net Acres by Zone

This step calculates the net buildable acres remaining in each applicable zone after all the above reduction factors have been applied and accounted for in the LCA.

Step 8—Apply Density in each Zone to Yield Housing Unit Capacity

This step applies housing unit density in each zone to determine total housing unit capacity for the applicable jurisdiction.

Step 9—Apply Average Household Size (Single Family/Multi Family) to Housing Unit Capacity to Yield Net Population Capacity

Finally, average household size populations are applied to the appropriate jurisdiction to determine total population capacities. This result offers a direct comparison of the total population capacity or supply for each jurisdiction and UGA with its associated 20-year forecast population growth or demand. Please see Appendix B for detailed information on Land Capacity Analysis by jurisdiction.

Data Collection Methods and Purpose: Permitted Development from 2006-2012

This report relies on collected data on new residential, commercial, and industrial development permitted from 2006-2012 in each jurisdiction. The building permit data collection methodology was prepared and coordinated with Kitsap County Cities[7]. Each jurisdiction was responsible for collecting and reporting its respective permit data, using the above mentioned collection methods. Collection of permit data in association with consistent methods assures that each jurisdiction is reporting data that is uniform condition allowing for consistent results.

The permitted development data provides information in several important areas:

- It determines achieved urban densities. In essence, it determines whether the actual urban densities achieved on the ground in the UGAs from 2006-2012 are consistent with planned urban densities in the jurisdiction's respective Comprehensive Plans. There are basically two ways to measure achieved densities: by examining "platted densities" and/or "permitted densities". Each technique illuminates different aspects of the residential growth characteristics for each jurisdiction.

- It assesses the integrity of assumptions used in sizing UGAs.

- It establishes development trends and can be used to evaluate buildable land assumptions incorporated in subsequent land capacity analyses.

There are potential problems with using the seven year analysis results as indicators of future activity. First, jurisdictions may not have experienced a sufficient level of development to establish statistically valid trends. Second, some of the new development reported may be vested under pre-GMA regulations and built to different standards than post-GMA approved development. Third, jurisdictions may amend planned or allowed densities in their Comprehensive Plan updates (as Kitsap County has done) that could affect future achieved development densities. All of these situations may affect the veracity of interpretations made regarding future development trends based on the past seven-year permitted development data.

Platted Densities

Platted densities reflect the density of new lots created in final subdivisions approved from 2006-2012. For this analysis subdivisions resulting in the creation of five or more new lots recorded by the Kitsap County Assessor from 2006-2012 were collected and analyzed for each jurisdiction. Data indicating total gross acres, total common areas not

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[7] See Appendix D: Buildable Lands Permit Data Collection Methodology Memorandum

devoted to building lots, net building lot area acres and total number of lots created yielded a *net* "platted density" for each final plat. Those *net* densities were then averaged by zone and reported. In cases where jurisdictions did not report the applicable zoning for each plat, summary net platted densities are reported. Platted densities are the best indicator of "achieved densities" since a *net* density figure can be accurately ascertained that accounts for critical areas, roads, and other lands not devoted to buildable lots as part of the development process.

Permitted Densities

Permitted densities measure the total amount of new residential units permitted in a given time period divided by the total *gross* acres of the associated parcels. This measure examines building activity on existing lots and parcels rather than on new lot creation. The data provide a good indicator of the total amount of land consumed for new residential development in a given period since it measures *gross* acres rather than *net* acres of new units developed. However, the *gross* acre density results from this approach are a less accurate indicator for evaluating achieved *net* densities. This is due to the fact that new units built on larger (non-conforming) parcels are also included in the total permitted density analysis. This tends to artificially deflate overall average gross permitted densities reported for the Cities and UGAs.

Commercial and industrial permitted development for 2006-2012 is reported by net square feet of gross floor area (gfa). That is the net square footage of actual commercial/industrial buildings permitted from 2006-2012 by jurisdiction.

Comparing Existing Development Capacity to Forecast Growth Demand

The land capacity analysis illustrates the amount of future growth that may be accommodated in the Cities and UGAs. The final component of the buildable lands program is to compare development capacity with forecast development to the end of the planning horizon, i.e., to 2025. The purpose of this analysis is to ensure adequate land has been designated for urban development and at sufficient urban densities to accommodate the forecast growth. This BLR also compares the capacity to the end of the subsequent planning horizon, 2036.

The *supply* and *demand* components of this analysis are reported in the same formats. The 2005 net buildable acres of residential zoned land reported in the ULCA are converted to population (based on average household size) to make a direct comparison with the 2025 and 2010-2036 population growth forecasts allocated to UGAs and Cities through the CPPs. The LCA reports the supply of commercial/industrial land by number of jobs. The Kitsap County Comprehensive Plan and the Kitsap Countywide Planning Policies report countywide 20-year commercial/industrial demand by jobs[8]. The BLR utilizes the same methodology used in

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[8] See Appendix D: Kitsap County Employment Memo: BERK and Associates

the Comprehensive Plan to convert number of employees to commercial/industrial acres required to locate these employees in the Cities and unincorporated UGAs.

The assumptions of forecast employee growth by jurisdiction are derived from countywide forecasts and may not necessarily reflect jurisdiction-specific policy preferences for allocation of commercial/industrial lands.