

Appendix B – Land Capacity Analysis Methodology

KITSAP COUNTY 2005 UPDATED LAND CAPACITY ANALYSIS (ULCA)

URBAN LANDS METHODOLOGY

Introduction

This document illustrates the methodology and assumptions used for determining the current residential and commercial/industrial capacity of urban zoned lands in Kitsap County. The actual land capacity analysis worksheets with reported outcomes for all urban zoned parcels were prepared by GIS staff and are reported in separate attachments.

The purpose of the Updated Land Capacity Analysis (ULCA) is to establish an objective methodology by which to determine the current supply of land and how much population and development Kitsap County can expect to accommodate under current zoning and development regulations in the existing UGAs.

Kitsap County examined four different methodological “options” as a part of the Urban Lands ULCA development process. These included review and evaluation of the methodologies used in two previous GMA-related land capacity analysis efforts in the County—the 1998 Comprehensive Plan Methodology and the 2002 Buildable Lands Report Methodology—as well as two new alternative methodologies developed in concert with a public involvement program to solicit input from interested individuals and stakeholders in the process. An additional private-initiated alternative land capacity analysis methodology performed by a local real estate company was also evaluated.

Public Involvement Process

The County established a Citizen Advisory Group (or CAG) comprised of interested citizens, developers, builders, realtors, local residents and growth management advocates to help develop a the new ULCA methodology. The CAG also included staff from the County and local municipalities who provided technical advice and expertise in the development of the ULCA. The CAG met intensely over a period of 5-7 months to develop and evaluate the alternative methodologies. The final CAG recommendations—with a focus on incorporating a heightened sense of “reality” to the land capacity analysis—were made to staff in late 2004 and incorporated in a draft staff-recommended ULCA methodology presented to the Kitsap Regional Coordinating Council (KRCC) and the Kitsap Board of County Commissioners. After

significant review and evaluation and subsequent public input, the Board of County Commissioners (BoCC) recommended a preferred 2005 Urban Residential Lands ULCA methodology on April 25, 2005. That preferred methodology is presented in this document. It also provides the basis for the subsequent Urban Commercial/Industrial Lands ULCA presented herein.

Applicability

Land capacity analysis is an "*inexact science*" and jurisdictions have discretion in choosing their methodology but its assumptions should be based on best available data and actual conditions to the maximum extent practical. Assumptions made about particular factors affecting development are often subject to debate or interpretation¹. Lively CAG meetings provided ample opportunity for such discussions to occur. Where assumptions are made as a part of the preferred ULCA methodology, consideration was given to alternative viewpoints and the evaluation of those issues is documented to the extent practical and applicable in this paper.

The preferred ULCA methodology outlines a step-by-step process by which the land supply is analyzed and "reduction factors" applied to "gross" acres of land in particular zones in order to eliminate lands presumed to be unbuildable for the purposes of accommodating additional housing and employment. Ultimately the ULCA derives the number of "net" acres available for development in each respective zone and converts those net acres into available capacity for new housing units, population and commercial/industrial development.

¹ Assumptions made in the 2005 preferred ULCA Methodology are documented in the text and/or footnotes accompanying the step-by-step methodology. However, there are also several significant criteria or factors that were discussed and *not included* in the preferred methodology. The most significant of those are documented here.

- The impact of CC&Rs (Covenants, Conditions & Restrictions) on land capacity is not included in the preferred methodology. These are private deed restrictions that often preclude further subdivision of platted lots even if allowed by zoning. They are not enforceable by cities or counties. If they had been utilized, the net effect would likely be to reduce existing development capacity.
- Accessory Dwelling Units (ADUs) are not included in the analysis. These are small "Mother-in-Law" units allowed on parcels with existing homes. ADUs typically only account for 1%-2% of total housing stock, so they are not considered to have a significant impact on total housing capacity in most communities. If they had been utilized, the net effect would be to increase existing development capacity.
- Consideration of Concurrency-Restricted Roadways was not utilized in the land capacity analysis. These are areas potentially subject to development restriction due to inadequate existing or anticipated future roadway capacity. If utilized, the net effect would potentially reduce existing development capacity.

Urban Residential Lands ULCA Methodology

This section illustrates the methodology and assumptions used in the preliminary updated land capacity analysis (ULCA) for urban residential zoned lands in Kitsap County. It is intended as a guide to understanding the background and rationale for assumptions made in the methodology for determining the current residential capacity of the Urban Growth Areas (UGAs) in Kitsap County. The actual residential land capacity analysis worksheets with reported outcomes for all UGAs were prepared by GIS staff and are reported in separate attachments.

The urban residential zones and their *minimum* dwelling unit densities included in the Urban Lands ULCA include:

- Urban Restricted (1 DU/Acre)
- Urban Low (5 DUs/Acre)
- Urban Medium (10 DUs/Acre)
- Urban High (18 DUs/Acre)
- Urban Village Center

The methodology prepared for the Urban Residential land capacity analysis was reviewed and recommended by the Kitsap County Board of Commissioners on April 25, 2005. The Urban Residential ULCA seeks to identify both *vacant* and *underutilized* lands in the inventory. The methodologies for the *vacant* and *underutilized* residential land capacity analyses are each presented separately. "Reduction factors" applied in the analysis are indicated by the symbol (-).

VACANT LANDS METHODOLOGY

Step 1: Identify All Vacant Parcels Zoned for Residential Use

The first step is to identify all *vacant* parcels (Assessors Code 9100) in each of the five urban residential zones. This step is further refined by eliminating all vacant tax-exempt and current use tax parcels within these zones. The result can be considered the inventory of "gross acres" for all *vacant* urban residential zoned lands in the respective UGAs.

Step 2: Identify Critical Areas Affecting Vacant Parcels Zoned Residential (-)

The second step measures critical areas ordinance (CAO) impacts on all *vacant* urban residential parcels identified in the first step. First it identifies *unencumbered* acres (i.e., acres of vacant residential zoned parcels *without* CAO coverage or impact). Then it identifies the acres with CAO coverage and estimates the net impact of those critical areas on the parcel's development potential by deducting

the portions of the affected parcels assumed to be unavailable for development due to the provisions of the CAO.

These calculations are based on the CAO “reduction factor” assumptions recommended by the BoCC for use in the Urban Residential ULCA on April 25, 2005².

Step 3: Identify Vacant Residential Zoned Lands that are Sewer Constrained (-)

This step recognizes the sewer constraint methodology approach recommended by the BoCC for use in the Urban Residential ULCA. Such a constraint analysis is authorized by state buildable lands guidelines, but does not appear to have been implemented by any other jurisdictions to date³. The application of a sewer

² The recommended methodology assumes *adopted* CAO definitions and buffers for streams, wetlands, floodplains and geologic hazard areas. Stream buffers are per the current adopted CAO and include the 200 foot HMP buffers on salmon-bearing streams. Wetlands are mapped in the GIS database but are not classified by type. Therefore, an average 75’ wetland buffer is used based on recommendations from the Kitsap County DCD wetland biologist for NWI wetlands that are not classified in the database. This is based on review of delineated wetlands identified on preliminary plats from 1998-2004 where most unclassified wetlands were determined to be Type 2 (100 foot buffer) and Type 3 (50 foot buffer) wetlands. Some areas of CAO-encumbered parcels will be unbuildable due to environmental constraints. However, the County’s adopted CAO allows for buffers and portions of critical areas outside of open water to be included in the density calculation for a particular parcel (i.e., density transfer from the CAO-encumbered portions of parcels—outside of open water areas—is allowed). It is presumed that developers seeking to maximize their return-on-investment will utilize this policy to the maximum extent practicable. Even though all CAO buffers may allow for some development potential (for purposes of avoiding “takings” and to allow for reasonable uses), it is clearly the practical intent of the CAO to discourage, if not prevent development altogether, within the buffers. Studies of approved plats in Snohomish County, noted in the Kitsap County 1998 Comp Plan, indicated, on average, that 60% of density was lost on CAO-encumbered plats.

The County’s wetlands are mapped primarily on the basis of the National Wetlands Inventory (NWI). The NWI utilizes aerial photography to identify wetlands which often fails to adequately identify forested wetlands. This typically means that the NWI data undercounts wetland acres, especially where forested wetlands are prevalent. However, according to Kitsap County GIS analysis, soil types associated with forested wetlands lie mostly in the rural areas of the county. The developed areas of the UGAs actually contain the most accurately mapped wetlands data in the county based on surveyed wetlands from pending and approved plats. Consequently, for the purposes of the 2005 ULCA, an additional (unaccounted for) wetland factor is not recommended. *However, the overall recommended methodology utilizes a 75% density reduction figure for CAO-encumbered acreage from the minimum zone density to account both for some unaccounted for wetlands and density transfer from the buffer areas to other portions of parcels intended for development.*

The impact of “*areas of geologic concern*” (AOCs) which comprise slopes less 30% with unstable or highly erodable soils, slopes less than 15% with springs or groundwater present, etc., were also evaluated. The AOCs are buildable under the CAO but their site characteristics present challenges to development which often results in developments avoiding these areas altogether or resulting in loss of density to the overall site. The recommended ULCA methodology utilizes a 50% density reduction factor on the AOCs.

³ The Washington Department of Community, Trade and Economic Development (CTED), Buildable Lands Program Guidelines notes that “*land assumed to not have water and sewer infrastructure available within the 20-year planning period*” should be deducted from the buildable land supply and that all assumptions should be well documented. In addition, both Snohomish County and King County recognized that such constraints should be incorporated in their Buildable Lands Program methodologies. The King County Buildable Lands Program, Reference Guide II: Land Supply Inventory, report specifically pointed out that “*an additional and optional step in the land inventory analysis is to deduct from the inventory land for which the provision of basic utility services (e.g., sewer and water) is judged to be infeasible or otherwise very unlikely within the planning horizon*”. Although it appears that no jurisdictions in King County actually took that step in their buildable lands analysis. It appears that no other county subject to the buildable lands requirements of the GMA had included an infrastructure constraint factor in their land capacity analyses.

constraint is intended to acknowledge that due to the unique topography of the County, some small, low density (hence relatively low value) residential zoned lots in fragmented ownership located in close proximity to critical areas and steep slopes may be unfeasible to develop at urban densities when located at significant distances from existing sewer mains⁴.

Sewer service constraint criteria examined several different parameters including: 1) distance from sewer main; 2) size of parcel; and 3) zoning density as surrogate variables to assess development feasibility based on lack of sewer availability or the excessive cost of extending sewer at developer expense to reach undeveloped or re-developable lots, given distance, topography, critical area, and small lot size constraints⁵.

⁴ The ULCA Citizen Advisory Group (CAG) discussed addition of an “infrastructure constraint” reduction factor in the 2005 ULCA to more accurately address the issue of development infeasibility on small lots due to lack of efficient sewer access. In instituting such a factor for consideration, the CAG discussed and evaluated overall infrastructure constraints in the County’s UGAs (e.g., prevalence of small lots which are less efficient to develop, sewer and water service constraints based on remaining vacant lands site location related to availability of infrastructure or impact of topography and critical areas that makes development of these sites infeasible due to the cost of providing expensive pump stations, utility extensions having to cross or avoid critical areas, and the constraint associated with developer extension and ULID financing mechanisms, etc.).

The CAG took testimony from all the sanitary sewer service providers in the UGAs as to capacity and their 6-year and 20-year facility and conveyance improvement plans. The sewer providers all indicated that they had adequate *treatment capacity* for the 20-year planning period but the issue of concern about the ability to accommodate new growth was *conveyance* of sewage. The only existing viable mechanisms to extend sewer mains into currently unsewered areas of the UGAs to accommodate growth is through ULID formation or by developer extension. The former of which is extremely difficult to do in areas of fragmented land ownership (often the case in areas with a prevalence of small lots) and the latter of which is often infeasible, according to testimony from developers, due to the lack of remaining large vacant parcels in the UGAs where sufficient density is available to make sewer extension feasible based on development economies-of-scale.

⁵ Staff and the CAG prepared and evaluated numerous options for measuring sewer constraint based on available GIS data. Consensus was that the selected option that included “tiered” reduction factors based on zoning and distance of the parcel from the sewer main best utilized the existing data and was the most reflective of actual constraint, insofar as the ULCA can accurately assess without site-specific parcel analysis. The recommended methodology is designed to reflect the impact of lack of sewer on otherwise buildable lands while acknowledging:

- the need to plan for a 20-year land supply;
- the presumption that as land values increase over the planning period, sewer extension will become more feasible; and
- consideration of “reasonable measures” that could be taken to increase feasibility of sewer extension within the current UGAs (e.g., upzoning, public subsidy of sewer construction, etc.).

A “ground truthing” exercise was incorporated in the analysis that included average cost assumptions to construct sewers as a means to better define the actual sewer feasibility threshold based on “real world” data in the current UGAs. The average cost assumptions for sewer and pump station construction were based on actual developer experience and were reviewed by the Kitsap County Department of Public Works. The “ground truthing” analysis incorporated parcel size as a third component of the feasibility analysis. The analysis identified the various parcel sizes needed in each respective residential zone (based on distance from the closest sewer main in 500 foot intervals) in order to maintain the feasibility threshold of developing and sewer 20 lots at a distance of at least 2500 feet from the closest existing sewer main. Minimum parcel sizes needed to maintain feasibility are reduced equally by 25% for each of the four 500-foot intervals (i.e., ¼ reduction in minimum parcel size needed to maintain feasibility for each of the four subsequent 500 foot ‘distance from sewer main’ intervals in each zone from 500-2500 feet). There is no minimum parcel size constraint applied if the parcel is less than 500 feet from an existing sewer main.

The recommended sewer constraint reduction factor analysis is applied to all urban residential zones except the urban restricted zone.⁶

The sewer service constraint formula includes application of a tiered set of (%) reduction factors based on distance of the parcel from the sewer main and the zoning density of the property in each UGA. The percentage reduction factor applies to the actual acreage of particular affected parcels—not to parcels in total.

Sewer Constraint Reduction Factors (%) Applied to Parcel Acreage in Existing UGAs based on Distance of Parcel from Sewer Main in each Residential Zone		
<u>Urban Low Zone</u>	<u>Urban Medium Zone</u>	<u>Urban High Zone</u>
0% = less than 500 feet	0% = less than 500 feet	0% = less than 500 feet
20%= 500-1000'	15%= 500-1000'	10%= 500-1000'
40%= 1000-1500'	30%= 1000-1500'	20%= 1000-1500'
60%= 1500-2500'	45%= 1500-2500'	30%= 1500-2500'
75%= >2500'	60%= >2500'	40%= >2500'

Vacant acres in the three urban residential zones noted above, remaining to this point in the inventory, that meet the criteria identified in this step are removed from the supply of land considered buildable to this point in the land capacity analysis.

Step 4: Identify Vacant Residential Lands that are Water Constrained (-)

Consistent with the recommendation of the BoCC on April 25, 2005 this reduction factor is **not** applied to either the Urban Residential or Urban Commercial/Industrial land capacity analyses⁷. In the accompanying ULCA worksheets prepared by GIS staff, the reader will observe that this step is labeled as “not applicable” in the land capacity analysis.

⁶ The recommended methodology removes the Urban Restricted (UR) zone parcels from the sewer constraint analysis since at the minimum density of 1 du/acre in the UR zone, no sewer is required. Sewer would only be required to achieve the maximum 5 du/acre density allowed in the zone. The ULCA assumes the minimum density in each zone.

⁷ Analysis of public water constraints focused on water purveyors’ ability to provide fire flow, water rights and water supply availability based on the 20 year planning period. Evaluation indicated that no development constraint was likely at the present time based on current and anticipated water availability based on review of the Kitsap County Coordinated Water System Plan. Although fire flow and water availability remain constraints to achieving higher urban densities within the UGAs, uncertainty about water issues means that no *measurable* development constraints are identified at the present time in terms of land capacity

Step 5: Identify Vacant Residential Lands Needed for Future Roads & Rights-of-Way (-)

This step identifies urban residential zoned *vacant* lands remaining in the inventory to this point that are likely to be needed for future roads and/or as dedicated rights-of-way.

These calculations are based on the 20% Roads/R-O-W “reduction factor” assumption recommended by the BoCC for use in the Urban Residential ULCA on April 25, 2005⁸.

Step 6: Identify Vacant Residential Lands Needed for Future Public & Quasi-Public Facilities (-)

This step identifies urban residential zoned *vacant* lands remaining in the inventory to this point that are likely to be needed for future public and quasi-public facilities. These include needs for regional public facilities such as schools, parks, stormwater treatment facilities, utilities and transmission facilities as well as internal lands within new development devoted to similar purposes. It also includes quasi-public land needs for facilities such as churches, community centers, clubhouses and fraternal organizations, etc. that could occupy lands otherwise intended for residential development.

A 15% Public Facilities “reduction factor” was recommended by the BoCC for use in the Urban Residential ULCA on April 25, 2005⁹.

Step 7: Identify Vacant Residential Lands Likely to be Unavailable for Development (-)

This step seeks to identify urban residential zoned *vacant* lands remaining in the inventory to this point that are likely to be unavailable for development over the planning period due to legal constraints or factors related to landowner intent (e.g., property owners who withhold land from sale, property subject to legal encumbrances, easements that preclude development, etc.).

These calculations are based on a 5% “reduction factor” applied to vacant lands as recommended by the BoCC for use in the Urban Residential ULCA on April 25, 2005¹⁰.

⁸ This is based on discussions with development review engineers at the Department of Public Works, experience of local developers with recent plats, and discussions among CAG members based on the needs of new development and future road rights-of-way in the UGAs.

⁹ Maintains the same 15% reduction factor for public purpose lands used in the 2002 Buildable Lands Report.

Step 8: Report Remaining Net Acres of Vacant Residential Zoned Parcels Available for Development

This step calculates the remaining supply of *vacant* land (in “net” acres) able to accommodate new residential development in each urban residential zone within the applicable UGAs after all the preceding *reduction factors* have been accounted for in Steps 2-7.

Step 9: Calculate Total Housing Unit and Population Holding Capacity for each Residential Zone by UGA

This is the last step in the *vacant* urban residential lands analysis. This step first calculates the total new housing unit capacity in each zone by multiplying the net remaining vacant acres in each zone by the *minimum density* allowed in each zone. Total population capacity for each zone and UGA is then derived by multiplying the housing unit capacity in each zone by the average household size for applicable single-family and multi-family zones.

UNDERUTILIZED LANDS METHODOLOGY

Step 1: Identify All Developed but Underutilized Residential Parcels

The first step is to identify all developed but *underutilized* residential parcels in each of the five urban residential zones. *Underutilized* parcels are identified as all developed residential parcels with the ability to accommodate at least one additional housing unit under existing zoning (based on a comparison of parcel size, zoning density and the number of existing units on the parcel). This step excludes all tax-exempt parcels, all shoreline parcels less than one acre and all otherwise underutilized parcels that are 0.5 acres or smaller in size¹¹.

¹⁰ This is a significantly smaller reduction factor than was applied in the 1998 Comprehensive Plan land capacity analysis since new sewer infrastructure-constraint and larger defined critical area reduction factors are incorporated in the 2005 ULCA. This should more accurately reflect lands deducted from the land supply solely for “market” reasons or due to landowner intent—which is the sole intent of this reduction factor.

¹¹ The CAG agreed to maintain the basic 1998 Comp Plan methodology of defining underutilized parcels with a few exceptions (noted below) aimed at getting a more accurate assessment of truly underutilized lands. The CAG discussed and agreed to exclude *small* shoreline parcels since the County's residential developed shorelines were almost exclusively platted and the potential for redevelopment (where density increase was potential) was negated by the high land and improvement values (i.e., redevelopment was occurring on shoreline lots but not in a manner that increased density on existing parcels, it merely replaced one home with another, usually larger structure).

The CAG also discussed increasing the minimum parcel size threshold for consideration as underutilized from 0.5 acre to 2.5 and even 5 acres due to the development feasibility constraints

Step 2: Identify Underutilized Residential Parcels that are Likely to Redevelop (-)

The second step is to identify *underutilized* lands (from Step 1) that are likely to redevelop over the course of the planning period. This is done by evaluating the residential parcel size-to-density ratio and the existing home value on the parcel. This step attempts to identify residential parcels of land within an Urban Growth Area (UGA) that:

1. Are larger than minimum zoning size
2. Contain building improvements, and
3. Have re-development potential

Minimum *zoning size* indicates the lot area necessary to accommodate additional development at the minimum density in each particular zone—where a home already exists on the parcel. In the **Urban Low Zone**, for example, the minimum density is 5 dwelling units per acre (approx. 1/5th acre per unit), therefore the minimum parcel ‘zoning size’ necessary to accommodate at least one additional unit is at least 2/5th acre (i.e., 1/5th acre each for the existing home and the potential new dwelling unit). For purposes of the capacity analysis the *zoning size* figure is estimated to be approximately one-half (0.5) acre for the **Urban Low Zone**. It is of course correspondingly different for the **Urban Medium** and **Urban High** residential zones based on their respective minimum densities.

Determining which existing residential parcels are likely to redevelop is based on two factors: the value of existing building improvements (based on the median assessed home value within each UGA); and the size of the parcel¹². This particular methodology does not take into account the value of the land or the age of the home already existing on the parcel in determining which lands are likely to redevelop¹³. However, it adds an additional large parcel size screen to recognize

placed on small parcels. However, the group decided this was inappropriately large and excluded too many potentially redevelopable albeit small parcels.

Existing dwelling units on underutilized parcels will be removed in the final step prior to calculation of net available dwelling unit capacity for each UGA. This will prevent any potential for double-counting density on underutilized parcels.

¹² This factor seeks to differentiate between all underutilized lands (identified in the previous step) from those underutilized lands with the most potential to redevelop over the next 20 years. These are lands identified as underutilized but due to the value and age of the existing building improvements, size of the parcel, or layout of existing development on the site, are not likely to redevelop over the course of the planning period. A general rule of thumb regarding redevelopment analysis indicates that between 20%-80% of relatively *lower value* underutilized lands can be expected to further subdivide, depending on local market conditions. This set of criteria does not include examination of redevelopment constraint based on the availability or feasibility of infrastructure needed for urban development (e.g., sewer and water). See infrastructure constraint criteria discussion in previous section.

¹³ Empirical studies in other areas indicate that improvement value is generally a more accurate indicator of redevelopment potential than land value for residential development. The age of the

that especially large parcels (based on zoning) within the UGAs may have redevelopment potential regardless of the value of the existing home¹⁴.

- Redevelopment potential is assumed to not exist if the parcel size is less than 2.5 X (times) the minimum zoning size¹⁵.
- Between 2.5 and 4X zoning size, redevelopment potential is assumed to not exist unless the assessed value of the onsite buildings are less than one-half (0.5X) the assessed median home value in that UGA.
- Between 4X and 5X zoning size, the building value must be less than median home value in the particular UGA for the parcel to have redevelopment potential.
- Between 5X-10X zoning size, the value of the home must be less than 1.5X median home value in the UGA for the parcel to have redevelopment potential.
- If the parcel is greater than 10X zoning size, then redevelopment is assumed likely regardless of existing home value on the parcel.

existing home on the parcel was reviewed and evaluated during development of the ULCA—the idea being that recent home construction (e.g., homes built in the last 10 years) would be less likely to be redeveloped during the next 20 years. However, this screen was not recommended for inclusion in the final methodology.

¹⁴ This step assigns improvement value thresholds to underutilized parcels based on an appropriate value (based on standard variation from the median home values in each UGA rather than arbitrary assumed home value thresholds) cross-referenced to parcel size. The general idea is that the more expensive the improvements already on the property the less likely the parcel is to redevelop during the planning period.

¹⁵ The first step in this analysis was to identify developed parcels that could accommodate additional dwelling units based on adopted zoning and size of parcel. The Kitsap County 2002 Buildable Lands Report utilized an existing/zoned density ratio of 2 (i.e., the allowed density is more than twice the existing parcel density) as a first step to identify the likelihood of “underutilized” parcels actually being redeveloped. This ratio provides an indicator of subdivision potential that is fundamental to redevelopment. However, the King County Buildable Lands Program, Reference Guide II: Land Supply Inventory report, noted that *“...a threshold of 2 is probably, for many jurisdictions, overly inclusive of parcels that have little realistic subdivision potential over the remainder of the planning horizon. The infill potential of many parcels between 2 and 3 times the minimum lot size is hindered by numerous factors, such as the position of the existing house on the lot and parcel shape. A recommended threshold ratio of between 2.5 and 3 will, in most cases, provide a more realistic estimate of the number of single-family parcels with infill potential.”* Therefore, the 2005 Kitsap County ULCA increases the minimum underutilized parcel size threshold to 2.5X current zoning.

For example, in the **Urban Low** Zone, if median UGA home value is \$100,000, redevelopment potential would be calculated on the following basis:

Building Value	Parcel Size	Redevelopment Potential?
	Less than 2.5 X 'zoning size' (0.5 acre X 2.5= 1.25 acre)	No—parcel must be at least 1.25 acres to have redevelopment potential
Less than \$50,000	Between 2.5 X and 4X 'zoning size' (1.25-<2 acres)	Yes
More than \$50,000	Between 2.5 X and 4X 'zoning size' (1.25-<2 acres)	No
Between \$50,000 and \$100,000	Between 4 X and 5X 'zoning size' (2-2.5 acres)	Yes
More than \$100,000	Between 4 X and 5X 'zoning size' (2-2.5 acres)	No
Between \$100,000 and \$150,000	Between 5X and 10X 'zoning size' (>2.5 acre-<5 acres)	Yes
Greater than \$150,000	Between 5X and 10X 'zoning size' (>2.5 acre-<5 acres)	No
	Greater than 10 X 'zoning size' (0.5 acre X 10= 5 acres)	Yes—parcels 5 acres or larger likely to subdivide regardless of existing home value

Underutilized parcels identified in Step 1 of the ULCA that meet the criteria identified in Step 2 are the parcels considered to have **potential** for redevelopment over the 20-year timeframe. The worksheets calculate an estimate of the "gross acres" of *underutilized* parcels considered likely to redevelop over the course of the planning period in each of the respective UGAs.

Step 3: Identify Critical Areas Affecting Underutilized Residential Parcels Likely to Redevelop(-)

This step measures critical areas ordinance (CAO) impacts on all *underutilized* urban residential parcels identified in Step 2. First it identifies *unencumbered* acres (i.e., acres of underutilized urban residential zoned parcels *without* CAO coverage or impact). Then it identifies the acres with CAO coverage and estimates the net impact of those critical areas on the parcel's development potential by deducting

the portions of the affected parcels' assumed to be unavailable for redevelopment due to the provisions of the CAO.

These calculations are based on the CAO "reduction factor" assumptions recommended by the BoCC for use in the Urban Residential ULCA on April 25, 2005.

Step 4: Identify Parcels Likely to Redevelop that are Sewer Constrained (-)

This step recognizes the sewer constraint methodology approach recommended by the BoCC for use in the Urban Residential ULCA. The application of a sewer constraint acknowledges that due to the unique topography of the County, some small, low density (hence relatively low value) residential zoned lots in fragmented ownership located in close proximity to critical areas and steep slopes may be unfeasible to develop at urban densities when located at significant distances from existing sewer mains.

See discussion of how the criteria were developed and are applied in the previous *Vacant Land Methodology* section.

Step 5: Identify Parcels Likely to Redevelop that are Water Constrained (-)

The water constraint reduction factor is *not* recommended for use in the Urban Residential ULCA. In the accompanying ULCA worksheets prepared by GIS staff, the reader will observe that this step is labeled as "not applicable" in the methodology. Refer to the rationale for the applicability of this reduction factor in the *Vacant Land Methodology* section previously discussed.

Step 6: Identify Land Needed for Future Roads and Rights-of-Way (-)

This step identifies urban residential zoned *underutilized* lands remaining in the inventory to this point that are likely to be needed for future roads and/or as dedicated rights-of-way.

These calculations are based on the 20% Roads/R-O-W "reduction factor" assumptions recommended by the BoCC for use in the Urban Residential ULCA on April 25, 2005.

Step 7: Identify Land Needed for Future Public & Quasi-Public Facilities (-)

This step identifies urban residential zoned *underutilized* lands remaining in the inventory to this point that are likely to be needed for future public and quasi-public facilities such as parks, utilities, stormwater management facilities, schools, churches, etc. Meaning that lands devoted to these uses will not otherwise be available for residential development.

These calculations are based on the same (15%) Public Facilities “reduction factor” assumptions recommended by the BoCC for use on vacant lands in the Urban Residential ULCA on April 25, 2005.

Step 8: Identify Land Likely to be Unavailable for Redevelopment (-)

This step seeks to identify urban residential zoned *underutilized* lands remaining in the inventory to this point that are likely to be unavailable for development over the planning period due to legal constraints or factors related to landowner intent (e.g., property owners who withhold land from sale, property subject to legal encumbrances, easements that preclude development, etc.).

These calculations are based on the 15% “reduction factor” assumptions recommended by the BoCC for use on *underutilized* lands in the Urban Residential ULCA on April 25, 2005¹⁶.

Step 9: Report Remaining Net Acres of Underutilized Residential Zoned Parcels Available for Redevelopment

This step calculates the remaining supply of *underutilized* land (in “net” acres) able to accommodate new residential development within the applicable UGAs after all the preceding *reduction factors* have been accounted for in Steps 2-8.

Step 10: Calculate Total Housing Unit and Population Holding Capacity for each Residential Zone by UGA

This is the last step in the *underutilized* urban residential lands analysis. This step first calculates the total new housing unit capacity in each zone by multiplying the net remaining *underutilized* acres in each zone available for development by the minimum density allowed in each zone. Total population capacity for each zone and UGA is then derived by multiplying the housing unit capacity in each zone by the average household size for applicable single-family and multi-family zones.

¹⁶ Unavailable lands factors are typically higher on underutilized lands than vacant lands (i.e., in general, a vacant parcel is more likely to develop than an underutilized parcel is to redevelop).

Urban Commercial/Industrial (C/I) Lands (ULCA) Methodology

This section illustrates the methodology and assumptions used in the preliminary updated land capacity analysis (ULCA) for urban commercial and industrial (C/I) zoned lands in Kitsap County. It is intended as a guide to understanding the background and rationale for assumptions made (including alternative assumptions in some cases) in the methodology for determining the current supply (inventory) of commercial and industrial (C/I) lands in Kitsap County. The actual land capacity analysis worksheets with reported outcomes for all urban commercial and industrial zoned parcels were prepared by GIS staff and are reported in separate attachments.

The overall structure of the C/I ULCA generally follows the methodology prepared for the Urban Residential land capacity analysis and recommended by the Kitsap County Board of Commissioners on April 25, 2005. However, the C/I methodology differs from the urban residential analysis approach in some ways necessary to address the unique nature of commercial/industrial lands.

The urban commercial/industrial zones included in the Urban Lands ULCA include:

- Highway Tourist Commercial
- Neighborhood Commercial
- Urban Commercial
- Regional Commercial
- Business Park
- Business Center
- Industrial

Similar to the Urban Residential ULCA, the C/I approach seeks to identify both *vacant* and *underutilized* lands in the inventory. The methodologies for the *vacant* and *underutilized* C/I land capacity analyses are each presented separately. "Reduction factors" applied in the analysis are indicated by the symbol (-).

VACANT LANDS METHODOLOGY

Step 1: Identify All Vacant Parcels Zoned Commercial or Industrial

The first step is to identify all *vacant* parcels (Assessors Tax Code 9100) in each of the seven commercial/industrial zones. This step is further refined by eliminating all vacant tax-exempt parcels within these zones. The result can be considered the inventory of "gross acres" for all *vacant* urban C/I zoned lands in the respective UGAs.

Step 2: Identify Critical Areas Affecting Vacant Parcels Zoned Commercial/Industrial (-)

The second step measures critical areas ordinance (CAO) impacts on all *vacant* C/I parcels identified in the first step. First it identifies *unencumbered* acres (i.e., acres of vacant C/I zoned parcels *without* CAO coverage or impact). Then it identifies the acres with CAO coverage and estimates the net impact of those critical areas on the parcel's development potential by deducting the portions of the affected parcels assumed to be unavailable for development due to the provisions of the CAO. These calculations are based on the same CAO "reduction factor" assumptions recommended by the BoCC for use in the Urban Residential ULCA on April 25, 2005.

Step 3: Identify Vacant C/I Lands that are Sewer Constrained (-)

This step was intended to recognize the same sewer constraint methodology approach recommended by the BoCC for use in the Urban Residential ULCA. However, upon analysis of C/I zoned parcels, this approach appeared problematic for several reasons. First many of the characteristics noted for its application to the Urban Residential ULCA are not present in regards to commercial/industrial zoned parcels—namely, that small, low density (hence relatively low value) residential zoned lots in fragmented ownership located in close proximity to critical areas and steep slopes were considered likely to be unfeasible to develop at urban densities when located at significant distances from existing sewer mains. Most of the C/I parcels are more concentrated, of higher value and located in closer proximity to existing sewer mains than the more prevalent residential parcels. Second, during GIS analysis, very few C/I parcels were actually found at distances from existing sewer mains that would have triggered the sewer constraint reduction factors recommended by the BoCC in the urban residential portion of the ULCA. Of those parcels that were, most were already developed C/I parcels with existing uses that do not require sanitary sewer service for their operation (e.g., warehouses, storage, etc.). Hence the need for sewer extension in these areas is not considered as critical a requirement to foster development (or redevelopment) of existing C/I lands.

Therefore, the sewer constraint reduction factor is *not* recommended for use in the Urban C/I ULCA. In the accompanying ULCA worksheets prepared by GIS staff, the reader will observe that this step is labeled as "not applicable" in the C/I methodology.

Step 4: Identify Vacant C/I Lands that are Water Constrained (-)

Consistent with the recommendation of the BoCC on April 25, 2005 this reduction factor is not applied to either the Urban Residential or Urban C/I land capacity analyses. In the accompanying ULCA worksheets prepared by GIS staff, the reader will observe that this step is labeled as "not applicable" in the land capacity analysis.

Step 5: Identify Vacant C/I Lands Needed for Future Roads and Rights-of-Way (-)

This step identifies C/I zoned *vacant* lands remaining in the inventory to this point that are likely to be needed for future roads and/or as dedicated rights-of-way. These calculations are based on the same (20%) Roads/R-O-W “reduction factor” assumptions recommended by the BoCC for use in the Urban Residential ULCA on April 25, 2005.

[Note: At this point two preliminary alternative assumptions for the Roads/R-O-W reduction factor are presented for staff review and discussion. The first (Option A) is the same 20% reduction factor applied to the Urban Residential ULCA indicated above. The second (Option B) applies a smaller 10% reduction factor based on the rationale that most of the land needed for new roads or roadway lanes in the UGAs will have already been accounted for in the aforementioned Urban Residential ULCA (20%) Road/R-O-W reduction factor—since most—but certainly not all—of the demand for new roads will likely come from new residential rather than new commercial development. Those new lanes needed exclusively for commercial development should consume commensurately less land (especially considering that at least some underutilized C/I lands may already have adequate roadway access). Note, however, that off-street parking requirements for C/I uses may require more land be set-aside for on-site parking than is needed for public rights-of-way (compared to residential uses) and may still provide sufficient rationale to maintain the Option A assumptions, but for different reasons.]

Step 6: Identify Vacant C/I Lands Needed for Future Public & Quasi-Public Facilities (-)

This step identifies C/I zoned *vacant* lands remaining in the inventory to this point that are likely to be needed for future public and quasi-public facilities such as parks, utilities including stormwater management facilities, schools, churches, etc. Meaning that lands devoted to these uses will not otherwise be available for C/I development. These calculations are based on the same (15%) Public Facilities “reduction factor” assumptions recommended by the BoCC for use in the Urban Residential ULCA on April 25, 2005.

[Note: At this point there are two preliminary alternative assumptions for the Public Facilities reduction factor presented for staff review and discussion. The first (Option A) is the same 15% reduction factor applied to the Urban Residential ULCA indicated above. The second (Option B) applies a smaller 10% reduction factor based on the rationale that most of the land needed for new public and quasi-public facilities in the UGAs will have already been accounted for in the aforementioned Urban Residential ULCA (15%) Public Facilities reduction factor—since most—but not all—of the demand for new public facilities will likely come from new residential

not new commercial development. Those new facilities needed for or induced exclusively by new commercial development should consume commensurately less land.]

Step 7: Identify Vacant C/I Lands Likely to be Unavailable for Development (-)

This step seeks to identify C/I zoned *vacant* lands remaining in the inventory to this point that are likely to be unavailable for development over the planning period due to legal constraints or factors related to landowner intent (e.g., property owners who withhold land from sale, property subject to legal encumbrances, easements that preclude development, etc.).

These calculations are based on the same percentage “reduction factor” assumptions recommended by the BoCC for use in the Urban Residential ULCA on April 25, 2005 for *vacant* and *underutilized* lands, respectively.

Step 8: Report Remaining Net Acres of Vacant C/I Zoned Parcels Available for Development

This is the final step in the C/I ULCA methodology. It calculates the remaining supply of *vacant* land (in “net” acres) able to accommodate new commercial and industrial development within the applicable UGAs after all the preceding *reduction factors* have been accounted for in Steps 2-7.

UNDERUTILIZED LANDS METHODOLOGY

Step 1: Identify All Developed Parcels Zoned Commercial or Industrial

The first step is to identify all developed parcels in each of the six commercial/industrial zones. This step is then refined by eliminating: 1) all “unavailable” developed parcels in the non-residential zones—essentially multifamily residential units, mobile home parks, streets and rights-of-way and current use tax parcels within these zones; and 2) all developed tax-exempt parcels within these zones.

Step 2: Identify Developed Parcels Zoned Commercial or Industrial that are Likely to Redevelop (-)

The second step is to identify already developed lands (from Step 1) that are likely to redevelop over the course of the planning period. This is done by examining the relationship between a parcel’s improvement (i.e., building) value and its land

value. The primary assumption is that a developed C/I parcel is considered to be *underutilized* when the parcel's improvement value is equal to or less than its corresponding land value (i.e., the land is worth more than the buildings on it). Put another way, developed parcels are considered *underutilized* when the improvement-to-land value ratio is 1.0 or less. Most communities use improvement-to-land value ratios generally ranging from 0.25 to 1.5 to identify redevelopment opportunities among non-residential parcels, depending on local market conditions and characteristics¹⁷. In this C/I methodology, parcels with improvement to land value ratios greater than 1.0 are deducted from the C/I inventory identified in Step 1—leaving an estimate of the “gross acres” of developed C/I parcels considered *underutilized* or likely to redevelop over the course of the planning period in each of the respective UGAs.

*[Note: Staff review of preliminary C/I methodology included discussion of situations where a high revenue-generating business that would otherwise appear to be underutilized based purely on the 1.0 improvement-to-land value ratio would, in reality, **not** be likely to redevelop owing to its presumed profitability. Automobile dealerships may be one example of such a use—where the building value may be relatively low compared to the land value but the revenue generation is significant (and assuming other factors such as location are adequate). Individual business revenues are of course private information. However the Washington State Department of Revenue (DOR) does track retail sales by business type—but these records are typically collated and published at the Standard Industrial Classification (SIC) code level. Again, for privacy reasons, individual business sales tax records are not published by DOR. So we cannot directly connect state sales tax revenue to C/I parcels in the Kitsap County Assessors database.]*

As an alternative methodology, however, we can adjust the improvement-to-land value ratio downward to account for or acknowledge such situations where relatively low building value but “high revenue generating” businesses are discounted from the inventory of available C/I lands assumed likely to redevelop over the course of the planning period. Option B establishes a lower threshold improvement-to-land value ratio of 0.5 (rather than 1.0 in Option A) to identify underutilized C/I lands. The 0.5 ratio in Option B is the same used by the majority of King County jurisdictions in their land capacity analyses.]

Step 3: Identify Critical Areas Affecting C/I Developed Parcels Likely to Redevelop(-)

¹⁷ The 1.0 improvement-to-land value ratio threshold is the same as used in the Kitsap County 2002 Buildable Lands Report. King County noted in its Buildable Lands methodology that “[a] threshold of 0.5 has historically been most widely adopted by King County jurisdictions (although significant variation exists within the county).” Unfortunately, there is little empirical evidence to support one universal ratio in determining redevelopment potential. King County notes that the 0.5 improvement to land value ratio figure is based more on “*professional judgment rather than data analysis*”. In theory, the ratio reflects the potential profitability of more intensive uses of a site relative to the revenue-generating potential of the existing use. The widely acknowledged professional judgment is that, in general, as the improvement-to-land value ratio decreases, the confidence of predicting potential redevelopment in most communities increases.

This step measures critical areas ordinance (CAO) impacts on all *underutilized* C/I parcels identified in Step 2. First it identifies *unencumbered* acres (i.e., acres of vacant C/I zoned parcels *without* CAO coverage or impact). Then it identifies the acres with CAO coverage and estimates the net impact of those critical areas on the parcel's development potential by deducting the portions of the affected parcels' assumed to be unavailable for redevelopment due to the provisions of the CAO. These calculations are based on the same CAO "reduction factor" assumptions recommended by the BoCC for use in the Urban Residential ULCA on April 25, 2005.

Step 4: Identify Parcels Likely to Redevelop that are Sewer Constrained (-)

The sewer constraint reduction factor is *not* recommended for use in the Urban C/I ULCA. In the accompanying ULCA worksheets prepared by GIS staff, the reader will observe that this step is labeled as "not applicable" in the C/I methodology. Refer to the rationale for the applicability of this reduction factor in the *vacant land* methodology previously discussed.

Step 5: Identify Parcels Likely to Redevelop that are Water Constrained (-)

The water constraint reduction factor is *not* recommended for use in the Urban C/I ULCA. In the accompanying ULCA worksheets prepared by GIS staff, the reader will observe that this step is labeled as "not applicable" in the C/I methodology. Refer to the rationale for the applicability of this reduction factor in the *vacant land* methodology previously discussed.

Step 6: Identify Land Needed for Future Roads and Rights-of-Way (-)

This step identifies C/I zoned *underutilized* lands remaining in the inventory to this point that are likely to be needed for future roads and/or as dedicated rights-of-way. These calculations are based on the same (20%) Roads/R-O-W "reduction factor" assumptions recommended by the BoCC for use in the Urban Residential ULCA on April 25, 2005.

[Note: At this point two preliminary alternative assumptions for the Roads/R-O-W reduction factor are presented for staff review and discussion. The first (Option A) is the same 20% reduction factor applied to the Urban Residential ULCA indicated above. The second (Option B) applies a smaller 10% reduction factor based on the rationale that most of the land needed for new roads or roadway lanes in the UGAs will have already been accounted for in the aforementioned Urban Residential ULCA (20%) Road/R-O-W reduction factor—since most—but certainly not all—of the demand for new roads will likely come from new residential rather than new commercial development. Those new lanes needed exclusively for commercial development should consume commensurately less land (especially considering that at least some underutilized C/I lands may already have adequate roadway

access). Note that off-street parking requirements for C/I uses may require more land than is needed for public rights-of-way.]

Step 7: Identify Land Needed for Future Public and Quasi-Public Facilities (-)

This step identifies C/I zoned *underutilized* lands remaining in the inventory to this point that are likely to be needed for future public and quasi-public facilities such as parks, utilities including stormwater management facilities, schools, churches, etc. Meaning that lands devoted to these uses will not otherwise be available for C/I development. These calculations are based on the same (15%) Public Facilities “reduction factor” assumptions recommended by the BoCC for use in the Urban Residential ULCA on April 25, 2005.

[Note: At this point there are two preliminary alternative assumptions for the Public Facilities reduction factor presented for staff review and discussion. The first (Option A) is the same 15% reduction factor applied to the Urban Residential ULCA indicated above. The second (Option B) applies a smaller 10% reduction factor based on the rationale that most of the land needed for new public and quasi-public facilities in the UGAs will have already been accounted for in the aforementioned Urban Residential ULCA (15%) Public Facilities reduction factor—since most—but not all—of the demand for new public facilities will likely come from new residential not new commercial development. Those new facilities needed for or induced exclusively by new commercial development should consume commensurately less land.]

Step 8: Identify Land Likely to be Unavailable for Redevelopment (-)

This step seeks to identify C/I zoned *underutilized* lands remaining in the inventory to this point that are likely to be unavailable for development over the planning period due to legal constraints or factors related to landowner intent (e.g., property owners who withhold land from sale, property subject to legal encumbrances, easements that preclude development, etc.).

These calculations are based on the same percentage “reduction factor” assumptions recommended by the BoCC for use in the Urban Residential ULCA on April 25, 2005 for *vacant* and *underutilized* lands, respectively.

Step 9: Report Remaining Net Acres of Underutilized C/I Zoned Parcels Available for Redevelopment

This is the final step in the C/I ULCA methodology. It calculates the remaining supply of *underutilized* land (in “net” acres) able to accommodate new commercial and industrial development within the applicable UGAs after all the preceding *reduction factors* have been accounted for in Steps 2-8.