

Snohomish County Tomorrow

A GROWTH MANAGEMENT ADVISORY COUNCIL



Snohomish County Tomorrow

2002 Growth Monitoring/Buildable Lands Report

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Executive Summary

Purpose and Use of the Report

This final report responds to and satisfies the review and evaluation requirements of the Washington State Growth Management Act (GMA) in RCW 36.70A.215. This report was prepared through the Snohomish County Tomorrow (SCT) process, the County's adopted multi-jurisdictional process for GMA issues.

Through the SCT process, Snohomish County and the cities conducted a review of future land capacity and growth trends, in order to evaluate the factors cited in Section 215 of the GMA. This report is a good faith first step at characterizing the capacity in Urban Growth Areas (UGAs), as of April 1, 2001, based on densities actually achieved between 1995 and 2000. As described later in the report, there is an on-going need to monitor and assess the methodological factors and data, in order to ensure the accuracy of future land capacity analyses for each urban growth area. Therefore, this report cannot be considered as the final word on the subject until the next 5-year report.

Snohomish County and the cities have prepared this evaluation report to review future land, housing and employment needs. Any jurisdiction may use this report, or may prepare and use their own report, to satisfy the state law requirements or as a planning tool. As new information becomes available, this report may be updated. Jurisdictions are encouraged to review the information contained herein, prior to taking any legislative decisions or performing environmental review relying upon the report, and to freely augment or revise findings and conclusions contained herein at the time of land use decisions based on new information presented at public hearings. Likewise, legislative bodies should consider updated information presented by docket applicants in support of their applications. Areas are identified in the report (see page 9) where additional research and evaluation will improve the accuracy and usefulness of the report as a planning tool.

Background and Process

The report has been produced using input and review from a variety of stakeholders, interest groups, special districts, property owners, the 20 cities, and Snohomish County. Early on, a set of CPPs was developed and adopted by the County Council to guide the effort. Also, a Procedures Report was developed through a consultant and approved through the SCT process to establish general principles and an outline of methods.

A Technical Advisory Committee (TAC) was formed in early 2000 and met as needed during the following two and a half years to review data collection and methodology issues. Public meetings were held through the SCT process in July 2002, to take comment on early draft maps and calculations. A Planning Advisory Committee (PAC) of planners from various jurisdictions received a draft report at its August 8, 2002 meeting.

SCT Steering Committee process

On August 28, 2002, the SCT Steering Committee approved, on behalf of the member jurisdictions, the August 8, 2002 Buildable Lands Report as recommended by the PAC. That report was submitted to the state as preliminary report on August 31, 2002. As of the date of this writing, no further formal action has been taken by the Steering Committee, except to form an ad hoc oversight committee to oversee the preparation of this final report.

County Council Process

In August 2002, the County Council held public hearings to take testimony on the August 8, 2002 report recommended by the PAC. Subsequently, the County Council adopted, on behalf of the County, an initial preliminary Buildable lands Report on August 29, 2002. The Council report contained several methodological assumptions that differed from the SCT version. The narrative for that report was submitted to the state as a preliminary report, and the County planning department was instructed to prepare an Updated Tabulation and Computation document that utilized the factors found more appropriate by the County Council. That document was prepared and submitted to the Council on October 14, 2002. A second County Council public hearing was held on October 28-29, 2002 to take testimony on the October 14th County Council version of the report.

Methodology Issues

This report analyzes the buildable land and capacity in Snohomish County as of April 2001, utilizing densities computed between January 1995 and December 2000. Using April 2001 as a base year allows for consistent data collection, analysis, and comparisons across all jurisdictions as of that date. This report has been developed using available information and reasonable methodological assumptions. All data contained and analyzed within this report and methodological steps and assumptions should be reviewed and monitored. As new information or experience is available, the report should be revised and updated at an appropriate time.

The analysis of the data and the resulting capacity calculations for cities and UGAs depend on certain methodological assumptions. If assumptions or factors other than those used in this report were to be utilized, the resulting numbers and capacity figures would change. Such changes may or may not significantly affect any conclusions. It is important however that jurisdictions using the information in this report are aware of the methodological assumptions if the report is considered in future policy analyses.

The TAC and PAC both recommended that monitoring of several data and methodological assumptions are needed over the next several years including additional analysis and data collection in the short term.

Determining Actual Density

Since density is key to the projection of capacity, the computation of density is critical to the report. This report approximates actual density by computing average densities in the several residential, commercial and industrial categories across the UGA over the 1995-2000 time period (See “Step 1: Development History” below).

The Scenarios

The graphs attached to this final report have been prepared with calculations based on two separate Scenarios, A and B. Including both scenarios allows for a single, final Buildable Lands report to be developed through the SCT process for review by individual jurisdictions. Scenarios A and B use the same parcel information, but reflect different methodological assumptions, and therefore have different calculations of remaining residential and employment capacity. Scenario A is that which was developed through the SCT review process. Scenario B was developed through the County Council review process.

Caveats

This report builds upon, improves, and revises the land capacity work done as a precursor to the initial comprehensive plans adopted in the mid-1990s by the cities and the county to implement GMA. As such, the quality and accuracy of the assumptions and information has been greatly improved. The authors and contributors to this report have endeavored to remove errors and ensure that the information and analysis has been subject to quality control and quality assurance processes. However, in any large-scale analysis such as this report, there are bound to be some small number of errors in data or calculation. Such errors are not thought to significantly affect the major factual conclusions of the report.

The report is not intended to analyze whether any particular UGA is adequately sized. While this review and evaluation fulfills the statutory requirements contained within RCW 36.70A215, additional analysis may be needed to accurately reflect more current UGA information during consideration of new policies or GMA legislation by any city or the County. The intent of this report is to meet the GMA statutory requirements for compiling and analyzing buildable lands information across all jurisdictions.

Under the GMA, the County is the level of government charged with establishing and modifying UGAs and UGA boundaries. When the County makes a legislative decision to consider a proposed UGA expansion, that decision must contemplate not only the capacity information contained herein, but also the thirteen planning goals articulated in the GMA. This buildable lands report serves as one source of information and analysis in reaching an informed legislative judgment on whether to expand a UGA boundary.

The report is not an attempt to fully analyze or depict the market feasibility or availability of a particular parcel or of a geographic area, the affordability of land, the availability or capacity of infrastructure, or the pace at which individual parcels of land will develop in the future. Rather, this report is intended to provide useful information and analysis for use in subsequent policy discussions and actions that implement the GMA in Snohomish County.

Again, this report is not a policy document and makes no policy recommendations or conclusions as to the effectiveness of, or need to revise, any GMA plans, policies, or regulations.

Major Findings

The following are the major findings of this Buildable Lands Report. The reader is encouraged to review these findings in light of the above sections of the report, including Purpose and Use, the Background and Processes used to create the report, the Methodological issues and assumptions, and the Caveats.

- For the period 1995 – 2000, the cities and county are achieving urban densities, consistent with their comprehensive plans, within urban growth areas.
- The population and employment capacity estimates for UGAs computed in this report are generally higher than those originally calculated in 1995 for the period 1992 – 2012 and which were reported in “Urban Growth Area Residential Land Capacity Analysis (Summer 1995)”, and “Employment Land Capacity Analysis for Unincorporated Snohomish County (revised June 1995).”
- The 50% threshold in countywide Planning Policy (CPP) UG-14 has been attained in Gold Bar, Monroe and Arlington.
- Due to methodological differences, under Scenario B there is less residential and employment capacity than under Scenario A.
- Under Scenario A, there is sufficient individual and collective residential and employment land capacity within the existing UGAs to accommodate the remaining portion of the adopted 2012 population and employment growth targets. (RCW 36.70A.215 (3)(a) and (3)(c).
- Under Scenario B, using population and employment forecasts updated as of January 2002, there is sufficient collective population and employment capacity for 2012. However, there are two individual UGA capacity exceptions: 1) insufficient population capacity for 2012 in the Gold Bar UGA, and 2) insufficient employment capacity for 2012 in the Lake Stevens UGA.

Future Reports

The GMA and Countywide Planning Policy UG-14 have on-going annual monitoring requirements and a requirement to complete analyses like this one at least every five years. The information and analyses in this report should be updated annually and a new report submitted to the state periodically as new information warrants. Data will continue to be collected, and sections of the report can be produced for review processes undertaken by a city or the county, as needed.

Introduction

Purpose and Use of the Report

This report is a product of the Snohomish County Tomorrow process. It was prepared by the staff from the County and the cities, and responds to the review and evaluation requirements of the Washington State Growth Management Act (GMA) in RCW 36.70A.215. The statute requires the county and the cities to review whether the adopted land uses and development regulations in the Urban Growth Areas (UGAs) have sufficient buildable land to accommodate the forecasted residential, commercial, and industrial needs through the year 2012.

The report updates the buildable land capacity information done in 1992 for cities and the county by using a five-year period (1995-2000) to review and evaluate actual, observed densities. The information in the report, as it is updated, may assist in updating jurisdictional comprehensive plans and development regulations to accommodate the next 20-year planning period, out to the year 2025. The report is intended to be informational in nature and not a policy document.

Background

In 1997, the Growth Management Act (GMA) was amended to include new requirements for six western Washington counties (including Snohomish County) and the cities within those counties to establish review and evaluation programs that monitor residential, commercial and industrial development, and the densities at which this development has occurred, since the adoption of a jurisdiction's GMA comprehensive plan. Using this information, an evaluation of the sufficiency of remaining suitable residential, commercial and industrial land supply within urban growth areas (UGAs) to accommodate projected growth at development densities observed since the adoption of GMA plans is required at least every five years. (See RCW 36.70A.215.)

If the results of the 5-year review and evaluation reveal deficiencies in buildable land supply within UGAs, cities and counties are required to adopt and implement measures that are reasonably likely to ensure sufficient buildable lands throughout the remaining portion of the 20-year GMA planning period. Before remedial actions are taken, however, the GMA requires that counties and cities first identify reasonable measures, other than adjusting urban growth areas, that may be taken by cities or the County to address any buildable land supply shortfalls revealed by the review and evaluation program.

Countywide Planning Policies

The 1997 amendments to GMA also required that Snohomish County and its cities adopt Countywide Planning Policies (CPPs) that established the review and evaluation program

within the County. This was accomplished in February 2000, with the adoption of amendments to CPP UG-14 by the County Council.

Procedures Report

Policy UG-14 in the CPPs called for the development of a buildable lands “Procedures Report.” In December 1999, Snohomish County hired ECONorthwest to develop this report. Titled “Recommended Methodology and Work Program for a Buildable Lands Analysis for Snohomish County and its Cities”, this report was reviewed by a Technical Advisory Committee, by the Planning Advisory Committee and approved by the SCT Steering Committee in October 2000 as the guiding document for subsequent interjurisdictional technical work on the buildable lands program by city and county staff for the next two years.

The ECONorthwest report provided guidance to Snohomish County jurisdictions on buildable lands definitions, methodology, inter-jurisdictional work program responsibilities and budget. The report, however, did not go so far as to recommend a single, step-by-step, prescriptive approach to the review and evaluation program analysis. Instead, it provided a general set of basic steps to follow when conducting the buildable lands analysis, with various optional approaches described along the way. In short, the report acknowledged up front that the data development in Snohomish County for the buildable lands analysis had not proceeded far enough at that point in 2000 to articulate a single, one-size-fits-all approach to the review and evaluation program analysis for Snohomish County jurisdictions. Instead, the report built in flexibility for the approach over time, as more data compilation and familiarity with the data sources occurred. This report is consistent with the recommended methodology. The preface states:

“This report is based on the best available information at this point in time. As buildable lands data collection and analysis efforts proceed into this year and next, however, there may be a need to refine this recommended methodology in order to respond to any unanticipated problems associated with the buildable lands data sources or methodological approaches outlined in this report”.

Subsequent Evaluative-Work

The County, cities and participants in the SCT process continued to meet and share information, following the approval of the Procedures Report by SCT. Work on the following major data compilation efforts for buildable lands was accomplished:

- Compilation, analysis and review of 1995-2000 single family and multi-family residential, commercial/industrial and mixed-use development and density by jurisdiction;

- Conversion of key countywide datasets into a GIS format, including city and county comprehensive plan and zoning designations and critical areas information;
- Review of the methodological assumptions for estimating buildable land supply by jurisdiction and UGA using the County's parcel-based GIS;
- Review of the accuracy of the GIS information using parcel attribute information from the County Assessor; and
- Review and recommendation on various methodological assumptions as applied to the buildable land supply estimation and capacity calculations.

Methodology Issues

This report is the first product of the review and evaluation program in Snohomish County using actual densities achieved over the period 1995-2000 and land parcel information as of April 2001. It has been developed using available information and methodological assumptions. All data contained and analyzed within this report and methodological assumptions should be reviewed and monitored. As new information or experience is available, it should be factored into the future iterations of this report.

The analysis of the data and the resulting capacity numbers for cities and UGAs necessarily depend on certain methodological assumptions. If assumptions or factors other than those used in this report were to be utilized, the resulting numbers and capacity figures would change. Such changes may or may not be significant.

The methodological assumptions used in this report should be monitored over time to identify issues and potential revisions. Such issues include the following, but are not limited to:

- The effect of future potential regulations, such as the new DOE stormwater manual or different buffers for critical areas due to ESA.
- Potential densities of development under any revised regulations in the cities or the county.
- Land needed for future public purposes.
- The effect of roads at risk for concurrency problems.
- The effect of annexation law on the availability and density of new developments.
- The effect of potential future groundwater management regulations.
- Storm water runoff facility limitations.
- Utilities, such as water and sewer.

Future Reports

RCW 36.70A.215 and CPP UG-14 each require on going annual monitoring and an evaluation report at least every five years.

Caveats

This report builds upon, improves, and revises the land capacity work done as a precursor to the initial comprehensive plans adopted in the mid-1990s by the cities and the county to implement GMA. As such, the quality and accuracy of the assumptions and information has been greatly improved

The report is not intended to analyze whether any particular UGA is adequately sized. While this review and evaluation fulfills the statutory requirements contained within RCW 36.70A215, additional analysis may be needed to accurately reflect more current UGA information during consideration of new policies or GMA legislation by any city or the County. The intent of this report is to meet the minimum statutory requirements for compiling and analyzing buildable lands information across all jurisdictions.

The report is not an attempt to fully analyze or depict the market feasibility or availability of a particular parcel or of a geographic area, the affordability of land, the availability or capacity of infrastructure, or the pace at which individual parcels of land will develop in the future. Rather, this report is intended to provide useful information and analysis for use in subsequent policy discussions and actions that implement the GMA in Snohomish County.

Again, this report is not a policy document and makes no policy recommendations or conclusions as to the effectiveness of, or need to revise, any GMA plans, policies, or regulations.

Major Findings

The following are the major findings of this Buildable Lands Report. The reader is encouraged to review these findings in light of the above sections of the report, including Purpose and Use, the Background and Processes used to create the report, the Methodological issues and assumptions, and the Caveats.

- For the period 1995 – 2000, the cities and county are achieving urban densities, consistent with their comprehensive plans, within urban growth areas.
- The population and employment capacity estimates for UGAs computed in this report are generally higher than those originally calculated in 1995 for the period 1992 – 2012 and which were reported in “Urban Growth Area Residential Land Capacity Analysis (Summer 1995)”, and “Employment Land Capacity Analysis for Unincorporated Snohomish County (revised June 1995).”
- The 50% threshold in countywide Planning Policy (CPP) UG-14 has been attained in Gold Bar, Monroe and Arlington.

- Due to methodological differences, under Scenario B there is less residential and employment capacity than under Scenario A.
- Under Scenario A, there is sufficient individual and collective residential and employment land capacity within the existing UGAs to accommodate the remaining portion of the adopted 2012 population and employment growth targets. (RCW 36.70A.215 (3)(a) and (3)(c).
- Under Scenario B, using population and employment forecasts updated as of January 2002, there is sufficient collective population and employment capacity for 2012. However, there are two individual UGA capacity exceptions: 1) insufficient population capacity for 2012 in the Gold Bar UGA, and 2) insufficient employment capacity for 2012 in the Lake Stevens UGA.

Methodology

Summary of Major Review and Evaluation Program Analysis Steps

The review and evaluation program analysis is a combination of five basic steps and a variety of sub-steps and iterations. **Step 1** involves the establishment of the residential, commercial, industrial and mixed-use development history for all urban areas in the county (city and unincorporated UGAs) covering the period since the adoption of the GMA comprehensive plans. The period selected in Snohomish County for this step was January 1995 through December 2000. Residential densities and commercial/industrial intensities (FARs) were calculated by comprehensive plan and zoning designations for each jurisdiction.

Step 2 involved the establishment of a parcel-based buildable lands inventory using GIS, simultaneous with the development history analysis. This involved the conversion of city and county comprehensive plan and zoning, and critical areas information into a GIS format that could be used to establish the parcel-level buildable lands inventory.

In **Step 3**, parcels were analyzed for their capacity to accommodate additional residential and employment growth as vacant, partially-used or redevelopable parcels. Based on the observed densities established in the development history database, future residential and employment capacities were calculated by comprehensive plan/zoning designation for vacant, partially-used and redevelopable parcels.

Step 4 is the quality assurance/quality control and review process to ensure accuracy of the data, analysis and conclusions.

Step 5 applies final reduction factors to the capacity results to account for uncertainties in market and land availability.

Step 1: Development History – Residential, Commercial and Industrial

The history of residential, commercial, commercial and mixed-use development in cities and the county was collected and evaluated for the buildable lands analysis. The period of time covered by the detailed development history database was from January 1995 to December 2000. The information collected was summarized by each jurisdiction's comprehensive plan designation and zone. The following sections on single family and multi-family land uses are included so that the reader may see how the information was collected and calculations performed.

The Difference Between Gross, Buildable and Net

Gross acres, gross residential densities, and commercial/industrial floor area ratios (FARs) are calculated using the total site area of the subdivision or development. *Buildable acres*, residential densities and commercial/industrial FARs are calculated after deducting for critical areas and major utility easements. *Net acres*, residential densities and commercial/industrial FARs are calculated after deducting for critical areas, major utility easements, and all other non-residential uses (e.g., roads, parks, stormwater detention facilities, etc.). Please see the attached graphic for a visual example of the differences in these definitions and text below for more detailed definitions for different land use types.

Through various Growth Management Hearings Board decisions, a “bright line” for minimum urban residential densities of 4 units per *net* residential acre has been established. In the development history summary tables which follow in a later section of this report, all three density statistics (gross, buildable and net) are published in order to help the reader evaluate the densities achieved at the jurisdictional level in relation to the Board’s bright line for minimum urban density using the net density definition.

Single Family Residential Development

This description focuses on single-family residential lot creation and construction trends in Snohomish County. The County Assessor maintains information on recorded subdivisions.

The cities and county annually provide information on pending subdivisions and short subdivisions to Snohomish County Tomorrow for analysis and display. Information for the SCT Growth Monitoring Reports was updated during a series of meetings between city and county staff.

Data on formal plats and segregated-lot condominiums begins with plat maps. Developers submit plat maps to the County Auditor for recording. Recordable plat maps show the location and intended use of each parcel and easement. Boundaries for parcels and easements must have survey-level accuracy.

After recording a map, the Auditor sends a copy to the County Assessor. The Assessor maintains and updates a countywide base map by digitizing the plat using the survey points from the recorded map.

Snohomish County Planning and Development Services (PDS) relies on the Assessor's digital copies of the recorded maps. PDS codes each parcel and easement based on its intended use. Geographic, jurisdictional, and other attributes apply to the entire plat. Once coding is complete, PDS enters the information into a database for analysis. This analysis provides the basis for the development history tables and charts in this report.

Gross residential density is the number of units divided by total area in acres.

Buildable area is the area of any use that alters the landscape, e.g. building lots, roads, detention ponds, and tot lots. It does not include wetlands, critical area buffers, utility easements, or any area that is to remain unchanged. Another way of defining buildable area is total area minus unusable areas. Buildable density is the number of units/altered acreage.

Net residential area is the area used for residential building lots only. Typical land uses that are excluded from residential include roads, wetlands, roads, Native Growth Protection Areas, and detention ponds.

Information on short plats and current year subdivisions undergoes a similar process; however, density attributes are not available for digital analysis. The one exception is for short plat densities provided by the City of Everett.

The definition of single-family development includes more than just traditional detached homes. It also includes duplexes and segregated-lot condominiums. Townhouse condominium projects fitting this definition must have a separate lot for each dwelling unit. Some duplex-style condominium projects fitting this definition have two lots per building while others have one lot per building.

Duplexes are accounted for in the density analysis. By definition, they have two dwelling units on a single lot, and as a result, this report distinguishes between the number of dwelling units and the number of lots. Density analysis is provided from both the "number of dwelling units" and "number of lots" perspectives.

Most plats have a uniform comprehensive plan designation as well as zoning category. The few that do not are grouped in the designation and zoning that applies to the majority of the site.

"Source of land supply" information is found by researching assessor records for the use of each parent parcel that was subdivided. In most cases, data on land use and assessed values was documented. Where there were buildings, the building use, value, year built, and square footage was documented. If a building was demolished, then the land supply was redevelopment. If the building was retained as part of the plat, then the land supply was classified as partially-used.

Multi-Family, Non-Residential Development, and Mixed-Use Projects

Data on multi-family, non-residential, and mixed-use development comes from a building permit database maintained by PDS. Permits for individual buildings are grouped into projects. Total unit counts and/or square footage was verified using assessment data for apartments and non-residential buildings and recorded condominium maps for condos.

Information on proposed multi-family projects comes from a number of sources. Details on projects in the unincorporated areas come from the county's permit tracking system. Information on city projects was provided by the cities and supplemented with data made available by New Home Trends, Inc.

Only major non-residential projects are listed in the lists for pending projects. Smaller pending projects are too numerous and varied to be listed in a useful manner.

Gross site area for each project is based on the digital parcel coverage maintained by the County Assessor. In some cases, the gross (original) site area is larger than the current site area. This is due to dedication of a portion of the site for road widening purposes. When possible, the area of road dedications is calculated using geometry available on a site plan (e.g. a 5' wide dedication along a linear 100' section of right-of-way yields a 500 sq ft dedication). In cases where the geometry was prohibitively complex, tools available in Geographic Information Systems (GIS) were used to approximate the area of dedication with a high degree of accuracy.

Buildable site area is the gross site area minus protected critical areas and unbuildable easements, such as power lines. Many critical areas and easements are shown on condominium maps. In recent years, a recorded Critical Area Site Plan (CASP) has been a requirement for new development. CASPs include a map and square footage calculation for the protected areas. For projects permitted prior the CASP requirement, or with other constraints, PDS uses information provided by cities, digital aerial photographs and the Assessor's parcel base in GIS to locate and calculate the square footage of unbuildable areas.

Net site area is the buildable site area minus road dedications.

Residential densities and commercial/industrial intensities were calculated as follows. The number of multi-family units was divided by the gross, buildable and net residential acreage to obtain gross, buildable and net residential densities on a project-by-project basis. For commercial and industrial uses, development intensity was calculated as a floor area ratio (FAR) statistic. The FAR was derived on a project-by-project basis by dividing the square footage of usable employment space by the gross, buildable and net employment acres developed in order to obtain the gross, buildable and net FAR for each project. In mixed-use projects (projects with both residential and commercial uses in the same structure), both the residential density and commercial FARs are reported.

Several of the project sites are split by plan designation and/or zoning boundaries. The designation and zoning as reported represents the majority of the site, or in a few cases, what drove the unit yield even though it may have applied to a minority of the site.

"Source of land supply" information is found by researching assessor records for the use of each parcel or parcels that were developed. In most cases, data on land use and assessed values was documented. Where there were buildings, the building use, value, year built, and

square footage was documented. If a building was demolished, then the land supply was redevelopment. If the building was retained as part of then the land supply is infill.

NOTE: In some instances, the observed densities may no longer accurately represent future densities for a variety of reasons. There may be situations in some jurisdictions where recent development regulation or plan changes may alter future development densities. Changes to development regulations could result in higher densities than had been previously observed in the same zone, or vice versa. In these circumstances, and after discussion with city planning staff, the development history tables have been labeled with a column heading marked “assumed.”

Step 2: Buildable Lands Inventory

The buildable lands inventory was developed using parcel-level geographic information system (GIS) data created by Snohomish County for both incorporated and unincorporated areas. Parcel boundaries and associated data on parcel characteristics were established for the inventory by joining a January 2001 extract of Assessor parcel data with an April 2001 version of the countywide GIS parcel map (containing nearly 250,000 parcel records). Extensive checking and editing of the GIS parcel data throughout the remainder of 2001 was necessary to allow for proper land use analysis. County and city staff attempted to establish current land use as close as possible to the April 1, 2001 base year date for the buildable lands 2001-2012 land needs and 2001 land supply comparison. Use of March 2001 digital orthophotography to “ground-truth” the accuracy of the Assessor’s existing land use codes greatly facilitated this effort.

Baseline Date

The concept of using April 2001 as the base year date for the buildable lands inventory is an important one. The review and editing of the accuracy of the buildable lands inventory for all jurisdictions necessarily has to center on one particular date in order to be consistent across all jurisdictions. Since this parcel-level GIS clean-up work was conducted in 2001, and since the most recent state Office of Financial Management (OFM) population estimate for Snohomish County (up until July 2002) was as of April 1, 2001, April 2001 was chosen as the base date for representing what was built and occupied as of that date. Therefore, it also represents the date at which additional holding capacity for population and jobs were calculated. **All housing and commercial/industrial structures occupied as of that date were considered developed, while everything proposed, built or occupied after that date was counted as future capacity as of April 2001.**

Since April 2001, development has taken place on many of the parcels shown as representing additional capacity on the buildable lands inventory maps. Other parcels currently have pending applications for new construction. A few had unoccupied new construction in April 2001. In these situations (recent development and pending

applications since April 2001, and new but still unoccupied buildings as of April 2001), this report uses the actual development or pending application where this information is known for the capacity on a given parcel. Theoretical capacity estimates (based on historic observed densities for developable parcels in the same plan/zone designation) were developed for parcels without recent or pending future development. Total additional population and employment capacity for UGAs as of April 2001 is therefore estimated and compared with total additional forecasted population and employment growth for UGAs for the period 2001 – 2012 to determine whether additional capacity is available within UGAs to accommodate forecasted growth to the year 2012.

Parcel Data

The buildable lands analysis focuses solely on parcels within the UGAs. The County's GIS was used to select Assessor parcels that fell within a UGA boundary. For parcels that are split by the UGA boundary (due to UGA boundaries following natural features, roads, etc.), only the portions of parcels that were within the UGA boundary were evaluated for additional development potential.

Parcels within the UGA (in both incorporated and unincorporated portions) with potential capacity for additional development were categorized under three categories: vacant, partially-used, and redevelopable land.

Vacant. Parcels with improvement assessed values of less than \$10,000 were included in the first-pass of the vacant land definition. Review of the initial maps resulted in elimination of many parcels with low improvement assessed values but with uses unlikely to change (e.g., tax-exempt properties, cemeteries, etc.).

Partially-used. Parcels with improvement assessed values > \$10,000 (containing existing structures) that were of sufficient size to allow additional subdivision or development to occur, were considered partially-used parcels. Different criteria were applied to develop this classification:

For *single family residential uses*, parcels that were at least 2.5 times the lot size of a typical urban single family residential zone were considered potentially partially-used. In non-SW UGAs, a size threshold of at least 21,000 square feet was used, while in the SW UGA, the size threshold was lowered to at least 15,000 square feet to account for the more prevalent observed short-platting of lots of this size (and smaller) in these locations. In UGAs without sanitary sewer systems, the minimum size threshold, however, was raised to 31,250 square feet to account for the Health District requirement for larger sized lots when developed with septic systems. In all UGA locations, parcels with greater than \$250,000 improvement value per acre (expensive structures) were not considered for the partially-used analysis.

For *multi-family, commercial, industrial and mixed-uses*, an estimate of the existing building footprint size was derived using Assessor information on first floor square footage. This information was used to calculate the percentage of the lot covered by the existing structure so that surplus land could be considered for additional development. Parcels designated for multi-family use that had lot coverage percentages less than 15% were considered partially-used. Parcels designated for commercial, industrial or mixed-use development that were less than 2 acres in size were considered partially-used if the lot coverage percentage was less than 12%. Parcels designated for commercial, industrial or mixed-use development that were 2 acres in size or greater were considered partially-used if the lot coverage percentage was less than 25%.

Redevelopable. Included parcels with improvement assessed values > \$10,000 (containing existing structures) in which the structures were located on land that had the same or greater assessed value than that assigned to the structure. In these instances, the existing structures were assumed to be demolished, and a new, more intensive use based on the designation was calculated. Different improvement-to-land assessed value ratio thresholds were used based upon the type of redeveloped use and location in county:

For *single family residential uses*, existing structures that were valued at less than 50% of the land assessed value for the parcel (and which met the same size thresholds described above for partially-used single family residential uses) were considered potentially redevelopable. It was assumed that for parcels meeting this definition, the existing structure was demolished and the entire land area was resubdivided. This same improvement-to-land value threshold was applied countywide.

For *multi-family residential uses*, existing structures that were valued at less than 75% of the land assessed value for parcels in SW UGA locations, and less than 50% in non-SW UGA locations, were considered potentially redevelopable. It was assumed that for parcels meeting this definition, the existing structure was demolished and the entire land area of the parcel was redeveloped at higher densities.

For *commercial, industrial and mixed-use designations*, existing structures that were valued at less than 100% of the land assessed value for parcels in SW UGA locations, and less than 75% in non-SW UGA locations, were considered potentially redevelopable. It was assumed that for parcels meeting this definition, the existing structure was demolished and the entire land area of the parcel was redeveloped for higher intensity commercial, industrial or mixed-use development.

NOTE: The thresholds used to establish these categories were developed using information from the development history database described above. Specifically, information on the characteristics of previous uses prior to the residential, commercial and industrial development observed from 1995 through 2000 (e.g., previous improvement-to-land assessed value ratios; whether the development occurred on vacant, partially-used or redeveloped land) was collected and evaluated for the development of these thresholds.

Use of Critical Areas to Establish the Buildable Lands Inventory

Information on critical area features within UGAs that was in a GIS-format was gathered for the buildable lands analysis. This included the following features:

Slopes: 33% or greater, with 25 foot buffers at both the top and toe of slope. GIS data obtained from State DNR 1998 digital elevation model was the source for these data.

Wetlands: A merged version of the county's wetland inventory and the NWI inventory in GIS format was used. The combination of these two wetland datasets resulted in an overall increase in estimated wetlands when compared to one based solely on the county's inventory. Average buffer widths of 50 feet were calculated. In the UGAs where the county's wetland inventory had not been conducted, the NWI wetland data was supplemented by estimates of wetlands on hydric soils present in the UGA.

Streams: The DNR stream inventory in GIS format was used to apply different buffer widths to land associated with different DNR streams types. Type 1 and 2 streams received 100 foot buffers on both sides of the stream; type 3 streams received 50 foot buffers; type 4 received 25 foot buffers; and type 5 received 10 foot buffers.

Chinook salmon and bull trout habitat: In Scenario A, buffers for these ESA protected species of 150 feet on both sides of the streams/rivers were used. In Scenario B, that number was increased to 300 feet on either side of the stream, in recognition of the practical effect on development of the 150-foot habitat management zone.

Frequently flooded areas: Information on 100-year floodplain and floodway boundaries from FEMA maps in GIS format was used.

In general, the geographic definition of these features is based on the application of the county's critical areas regulations to the land features as represented in a GIS format. During the buildable lands inventory map review meetings with individual cities, city staff reviewed the critical areas overlay information for relative accuracy in depicting the application of the city's critical areas regulations to existing parcels.

In some cases, cities provided replacement critical areas data to better depict their inventoried critical area features. Specifically, two cities (Everett and Bothell) provided their own wetland + buffer and stream + buffer information to county staff in GIS format to instead use in the buildable lands analysis for their jurisdiction. Some cities provided additional paper map documentation of critical areas features (Granite Falls). In some cases, cities provided decision rules more tailored to their particular version of critical areas regulations. This was especially the case with cities having land within the 100-year floodplain that allowed development in these areas provided that new structures were built at a height that exceeded the 100-year flood elevation.

The critical area features described above were then merged into a composite GIS layer that was then overlaid on parcels. This GIS overlay process was then used to deduct critical areas and buffer areas from the total gross area of the parcel, to arrive at an estimate of gross buildable acres within vacant, partially-used and redevelopable parcels. [Major utility easement corridors, such as power transmission lines and oil/gas pipelines, etc., have been identified on the first draft buildable lands inventory maps. The area associated with these features where they intersect vacant, partially-used and redevelopable parcels will also be deducted from the gross site area, in the same way that critical areas and buffers are deducted.]

Please note that the depiction of these features on these GIS parcel maps is for general analysis purposes only, specifically the development of the UGA-level buildable lands capacity estimates. They are not intended, nor are they at a sufficient level of detail and positional accuracy, to be used for a parcel-level determination of a parcel's actual development potential that would be obtained following submittal of a site-specific development application. In addition, the criteria used represent best approximations of what may be unbuildable in a typical situation. However, there are specific instances where these criteria would not automatically result in unbuildable area (e.g., 33% or greater slopes). These criteria should therefore be viewed as representing "average" situations. It should also be noted that critical areas regulations (for example, wetland or stream buffer sizes) vary by jurisdiction. The buffer widths used in this report are not meant to endorse any particular regulatory standards.

Removal of Major Utility Easements from the Buildable Lands Inventory

Another GIS data source for unbuildable land within UGAs was the Assessor's records on easements. Major utility easements (power transmission lines, oil and gas pipeline easements, etc.) were overlaid on parcels and the land area within parcels associated with the utility easement was deducted from the total acres to arrive at buildable acres. In order to avoid double-counting areas that were both critical areas and utility easements, the critical areas plus buffers were merged with utility easements first before overlaying on parcels.

Removal of Land Needed for New Transportation Arterials and other Capital Facilities Needs

Using GIS, land required for the rights-of-way for proposed new arterials, as identified on the County's current arterial circulation plan map (which includes both incorporated and unincorporated areas), was removed from the buildable lands inventory. In addition, during map review (see Step 4), parcels acquired or to be acquired for major public purposes (where known) were identified and removed from the buildable lands inventory. This included future school sites, parks and other municipal purposes uses.

Accounting for Unmapped Critical Areas

There is general consensus on the TAC that our existing GIS critical areas inventories are satisfactory for broad, areawide planning analysis, but that for site-specific purposes, these inventories are usually incomplete, especially with regard to smaller critical areas. There is acknowledgement that the information contained in these inventories best captures the larger critical area features, but that it is common during the more detailed site review at time of a project-level development application to uncover additional smaller critical area features not originally documented in the inventory. In order to account for unmapped critical areas in the buildable lands analysis, a 5% upward adjustment to total unbuildable acres when this calculation is performed at the parcel level was recommended. This is a generalized adjustment factor since the methodology described above includes utility easements within the total unbuildable acres stored at the parcel level.

Step 3: Capacity Calculations -- Assignment of Future Development Densities to the Buildable Lands Inventory

The third step of the buildable lands inventory mapping process involved the use of the observed densities by jurisdiction and designation as determined in the development history analysis. These observed residential densities (housing units per buildable acre) and commercial/industrial intensities (FARs per buildable acre) were applied to the buildable acres of land (gross acres minus critical areas and their buffers) within either vacant, partially-used or redevelopable parcels as determined above, to estimate additional housing unit and employment capacity potentially remaining per parcel. (See attached graphic comparing gross vs. buildable vs. net density calculations.) This information was mapped by parcel and is currently being reviewed for accuracy. (See Step 4.)

In most cities, zoning designations were used to predict future densities since it was determined to be the most reliable predictor of future residential densities and commercial/industrial intensities. In unincorporated areas however, the county's future land use (FLU) designations were used due to the frequent and continued likely rezoning of property from lower zoning categories to higher zoning categories within a plan designation prior to development of a property. Use of observed densities for County FLU designations

would thus incorporate the likely continued practice of rezoning to higher densities within the same FLU designation in the same way that was observed from 1995 through 2000.

In some unincorporated UGAs, an exception to the use of the County's future land use plan designation was warranted. This occurred in unincorporated UGAs where extension of city utilities (sewer, public water) is contingent on the proposed land use being consistent with the city's plan. In these cases, the city's future land use and the city's observed density for the proposed zoning was used for calculating additional capacity for parcels in the surrounding unincorporated UGA. This was the case in the unincorporated UGAs of Stanwood, Arlington, Marysville, Granite Falls, Snohomish, Monroe, and Sultan.

If there was no development history experienced within a designation between 1995 – 2000, city staff was consulted as to an appropriate and likely substitute future density assumption to use. These instances are labeled “assumed” in the development history summary tables. Similarly, if city or county staff indicated that conditions had changed sufficiently since the observed development history was obtained (i.e., development regulations had recently changed), making it unlikely that past densities would be the best indicator of future densities, the replacement densities by plan/zone designation were also labeled “assumed” in the development history tables.

Also, in some isolated instances, densities and FARs associated with current County zoning was determined to be more predictive than the more generalized future land use category. These situations were isolated to parcels in unincorporated UGAs with multi-family residential (MR), business park (BP), neighborhood business (NB), and rural conservation (RC) zoning.

Calculation of Additional Housing Unit and Population Capacity

When calculating additional residential capacity, the formula that applied observed densities by plan/zone to vacant, partially-used or redevelopable parcels, was performed on a parcel-by-parcel basis. Any fractional units that resulted from the parcel-level calculation of additional housing unit capacity was truncated (dropped). In addition, additional residential capacity was not assumed for parcels less than 3000 square feet in size. This resulted in the removal of many “sliver” parcels from the buildable lands inventory maps – parcels that are unlikely to develop due to their small size or irregular shape, and in which setback requirements are unlikely to be met.

An example of how this formula was performed at the parcel level is shown below. Assume that a parcel (whether vacant, partially-used or redevelopable) has an estimate of buildable area of 3.5 acres. Also, assume that the parcel is located in a single family residential zone in which there is an observed buildable density from 1995-2000 of 4.2 units per buildable acre. This would result in an estimate of 14 additional units for the parcel:

$$3.5 \text{ buildable acres} \times 4.2 \text{ units per buildable acre} = 14 \text{ units.}$$

Notice that the fractional amount of 0.7 units is dropped from the additional capacity estimate for the parcel. Also, for redevelopable parcels, any existing housing units on parcels that are assumed to be redeveloped (i.e., assumed to be demolished) are subtracted from the estimate of additional housing unit capacity.

Housing unit to population capacity estimates are then calculated based upon 96% occupancy rate and 2.9 average household size assumptions for single family detached zones, 96% occupancy rate and 2.5 average household size assumptions for single family attached zones, and 90% and 2.0 average household size assumptions for multi-family residential zones. These assumptions have been derived from review of 1990 Census data for Snohomish County (unfortunately, 2000 Census data by housing type is not yet available). The formula for this calculation is as follows:

$$\text{Additional population capacity} = \text{additional housing unit capacity} \times \text{occupancy rate} \times \text{average household size}$$

Continuing with the example above, 14 additional single family housing units x .96 occupancy rate x 2.9 average household size = an additional population capacity of 39 (with rounding).

When calculating additional residential capacity, vacant building lots were handled separately from the theoretical capacity calculations using observed densities by plan/zone. Instead, if a vacant residentially-designated parcel was at least 3000 square feet in size (a cut-off established to eliminate parcels that would probably be unlikely to meet setback requirements as described above), these parcels were counted as representing additional housing unit capacity, even though they may not meet the minimum lot size requirements of the current zone. It was assumed that these vacant building lots could obtain legal lot status for a residential building permit and thus should be counted. In addition, if these vacant residential building lots were recently platted (i.e., sometime over the past 10 years), then the additional capacity associated with these parcels (along with post-April 2001 development and pending development applications) were counted as a special subset of vacant capacity that would not be reduced for market reasons (i.e., the market availability reduction factor). These lots have been platted and are ready or will soon be ready to be developed – the question of whether the market will support their development has already been answered, making the market availability reduction factor unnecessary.

Some questions have arisen regarding the depiction of additional residential capacity in commercial zones. Generally, most commercial zones in the County and in most cities allow residential development as a permitted use. Review of the development history summary tables for most commercial zones will quickly reveal this. Consequently, to the extent that commercial zones have been used for new residential development (almost always multi-family development) since 1995, these observed residential densities have been applied to commercial zones to predict future residential development potential in commercial zones.

Calculation of Additional Employment Capacity

When calculating additional employment capacity, the formula that applied observed densities by plan/zone to vacant, partially-used or redevelopable parcels, was performed on a parcel-by-parcel basis. Any fractional employees that resulted from the parcel-level calculation of additional employment capacity was truncated (dropped). Specifically, the formula works as follows:

$$\text{Additional employment capacity} = (\text{buildable acres} \times \text{employment sector FAR} \times 43560 / \text{square feet per employee by sector})$$

Employment sector FARs (floor area ratios) are the observed values calculated by plan and zone designation in the development history summary reports. There are distinct FARs for development observed in the following employment sectors:

- Manufacturing (MANU)
- Wholesale, Transportation, Communications, Utilities (WTCU)
- Retail (RET)
- Finance, Insurance, Real Estate, Services (FIRES)
- Government/Education (GOVED)

Buildable acres are converted to square feet in the formula by multiplying by 43560 (the number of square feet in an acre). The result is then divided by the assumed number of square feet per employee by employment sector:

- MANU = 500 square feet per employee
- WTCU = 833 square feet per employee
- RET = 600 square feet per employee
- FIRES = 395 square feet per employee
- GOVED = 300 square feet per employee

These estimates were derived from research previously conducted in Snohomish County, in cooperation with the Snohomish County Economic Development Council (1985 Snohomish County Business and Industrial Land Survey, updated in 1995 as the Employment Land Capacity Analysis for Unincorporated Snohomish County). This information was also compared with recent estimates published by the Institute of Transportation Engineers and was found to compare favorably.

An example of how this formula was performed at the parcel level is shown below. Assume that a parcel (whether vacant, partially-used or redevelopable) has an estimate of buildable area of 3.5 acres. Also, assume that the parcel is located in a commercial zone in which

there is an observed FAR of .20 (ratio of usable employment space built to land area built upon) for retail uses during the 1995 – 2000 period.

Additional employment capacity = (buildable acres x employment sector FAR x 43560 / square feet per employee by sector)

Additional employment capacity = (3.5 acres x .20 FAR x 43560 / 600 square feet per retail employee)

Additional employment capacity = 50 employees

Notice that the fractional amount of 0.82 employees is dropped from the additional capacity estimate for the parcel. Also, for redevelopable parcels, any existing employment estimated based on the square footage of existing commercial and industrial structures on the parcel that are assumed to be redeveloped (i.e., assumed to be demolished) are subtracted from the estimate of additional employment capacity using a standard average of 500 square feet per employee.

Capital Facilities Analysis

An assessment of sewer availability within UGAs was also conducted. In some areas, the lack of sanitary sewer planning or presumed availability over the remaining portion of the GMA planning period resulted in the preclusion of further subdivision in some unincorporated UGA locations. This was due to the County's requirement to connect to sanitary sewers for subdivision approval within unincorporated UGAs. These areas included the northwest portion of the Monroe UGA, an area east of 35th Ave SE in the SW UGA not within a sewer district area, and a portion of the Picnic Point area in the SW UGA. In these areas, subdivision as a means of creating additional residential capacity was not modeled. Individual single family residential building permits on vacant building lots was modeled. (It should be noted however, that some development in urban unincorporated areas is possible using septic systems, though the circumstances allowing such systems are limited.)

Additional scenario testing and evaluation will be conducted with areas under transportation *concurrency* requirements and in the "*development phasing overlay*" (DPO) area of Lake Stevens. The calculations based on Scenario A (the SCT methodology) includes a second set of numbers that describe the effect of concurrency and the DPO on land availability in certain UGAs. For the DPO, two sets of numbers, one showing the total capacity of the Lake Stevens UGA, and one showing the reduced capacity if the DPO were never to be lifted (i.e., a worst case scenario) are shown. For areas affected by concurrency problems (roads in "arrears" under the County concurrency mechanism), Scenario A shows two sets of numbers. The first is the total capacity of the UGA area regardless of concurrency problems. The second set of numbers is for those UGAs where the concurrency problem may exist for a portion of the UGA area, potentially for as long as the remaining portion of

the planning period (out to 2012). Neither set includes a reduction for those concurrency problem areas that are more likely to be resolved well within the planning period. Areas at risk for concurrency problems (i.e., 172nd St in Arlington/SR 531) should be monitored and the report updated as necessary. Scenario B (the County Council methodology) takes an alternative approach by reducing 75% of capacity in all UGA areas affected by concurrency problems (see below).

Step 4: Quality Assurance/Quality Control Process -- Map review

Following the calculation of additional residential and employment capacity by parcel, this information was mapped and subject to city and county staff review (one-on-one meetings with the cities), as well as public review (Master Builders, Association of Realtors, Buildable Lands Open House comments). In many cases, the calculated capacity estimates obtained by following the logic above were not likely to be realized for a variety of reasons (recently acquired public purpose land, incorrect current land use information was used in the GIS). In these situations, the calculated capacity estimates were overridden with more accurate information following county and city staff review. In some cases, this updating was accomplished through the exchange of electronic files with city staff (Everett, Mukilteo, Marysville, Lynnwood). Information on known projects under review was also obtained during this process and was used to override the calculated estimates of additional capacity for the associated properties.

The March 2001 digital orthophotography (aerial photography) overlaid on the GIS parcel base was extensively used to “ground truth” the parcel map information as of April 2001. The aerial imagery for all parcels within the UGA (city and unincorporated areas) that showed additional residential or employment capacity was viewed to ensure accuracy. Parcels that were visibly developed using this process were removed from the buildable lands inventory.

Step 5: Reductions for Uncertainty

Miscellaneous Public Purpose Reduction

During map review, parcels acquired or to be acquired for major public purposes (where known) were identified and removed from the buildable lands inventory. This included future school sites, parks and other municipal purposes uses. This also included the removal of land needed for future rights-of-way for proposed new transportation arterials during Step 2 (buildable lands inventory) portion of the analysis. However, this process did not result in all future public purposes uses being accounted for. Other miscellaneous public purpose uses that would have been missed in this review process include churches, day care facilities, pre-schools, private schools, jails, skateboard parks, small-scale institutional and municipal uses (water storage facilities, etc.).

Scenario A uses a 5% figure as endorsed by the TAC as a catch-all uncertainty reduction necessary for land not available for development because of: potential new regulations requiring larger detention ponds, potential need for regional or local stormwater facilities, potential need for transmission line, utility, or road or rail rights-of-way, potential need of land for public or institutional uses like police/fire stations, churches, water supply storage facilities, wastewater treatment and pump stations, landfills and transfer stations, cemeteries, libraries, daycares, small parks or open space, municipal offices, and other uses where we do not today have a specific map coverage to use (consistent with Section 2.5.4 on page 5-37 of the Procedures Report).

In Scenario B, this reduction factor has been adjusted to 10% based on testimony made during the County Council review process. This reduction is made here at Step 5, just prior to the market availability reduction factor. Where specific information on future land needs in these categories was available, those parcels were removed from the parcel inventories and calculations.

Market Availability Reduction Factor

After a reasonable estimate has been made of parcels within a UGA that have remaining development potential, one of the last steps in calculating additional capacity is to apply the market availability reduction factor. This step is intended to address the fact that not all developable land will be available for development over the GMA planning timeframe since not all landowners are willing to develop their property for a variety of reasons (investment, future expansion, personal use). The state publications on “Providing Adequate Urban Area Land Supply” (1992) and the “Buildable Lands Program Guidelines” (2000) both recommend that the methodologies “assume that a certain percentage of vacant, under-utilized, and partially-used lands will always be held out from development.”

The 1992 state guidebook acknowledges that “information about land availability is difficult to obtain and confirm.” However, some suggestions were provided that were used by Snohomish County jurisdictions during 1993-95 when the original land capacity analyses were developed for the first UGA sizing process under GMA. In the 1992 state publication, survey research by the Real Estate Research Corporation was cited that indicated that in high demand suburban areas, over half of the vacant landowners anticipated putting their land on the market for development within 5 years. Within 10 years, the percentage rose to 77%. For partially-used and under-utilized land, the report cites an analysis of King County plats in high demand suburban areas that concluded that up to 70% of partially-used and under-utilized land could be considered likely to be made available for development at greater densities within 20 years.

Based on this research, many Snohomish County jurisdictions (including Snohomish County for unincorporated urban areas) in their 1993-95 land capacity analysis applied a 15% market availability reduction factor for vacant land, and at least a 30% market availability

reduction factor for partially-used and redevelopable land. An appeal of Snohomish County's UGA sizing criteria to the Growth Management Hearings Board in 1995 (*Sky Valley v. Snohomish County*) that contended that these market reduction factors were too high, resulted in a Board decision that upheld the use of these market reductions factors by the County as reasonable and appropriate under the GMA. The Board's decision was also subsequently upheld on appeal to Superior Court. Scenario A uses the 15% and 30% reduction factors.

The TAC believed these reduction factors were generally consistent with the results obtained by the City of Marysville from a survey of Marysville area property owners in 1993. Results from the survey indicated that 28% of the owners of vacant and partially-used properties "did not consider their land available for development now, or within the next twenty years." In addition, current buildable lands work underway among jurisdictions in King County has resulted in the use of market availability reduction factors for cities that are generally in the 5-15% range for vacant land and 10-20% range for redevelopable land. The remaining unincorporated portions of the King County UGA used generally higher percentages than the cities, however, when the city and county results were combined, an overall market reduction factor of 20% for both vacant and redevelopable parcels in the UGA resulted for residential parcels, and 13% overall for commercial and industrial parcels in the UGA.

Consistent with testimony received by the County Council during its review process, Scenario B uses a 30% reduction factor for vacant lands, and a 40% reduction factor for partially-used lands and redevelopable lands, subject to subsequent revision should affirmative UGA-specific data be forthcoming.

Concurrency Arrearage Reduction Factor for Scenario B

Scenario B uses a concurrency arrearage reduction factor. This factor is defined to be the probability that lands subject to a concurrency arrearage not listed on a 6-year CIP or TIP will not be developed by 2012. Consistent with testimony provided to the County Council, this factor was set at 75%, subject to subsequent revision should UGA-specific affirmative data become available. This reduction factor was processed arithmetically in a manner analogous to the processing of the market availability reduction factor.

Updated 2012 UGA Population Allocations for Scenario B

The existing growth targets appear in Appendix B to the CPP. These were adopted in 1995 on the basis of the 1992 OFM county population forecast of 714,244 for 2012. That, however, is no longer the OFM forecast for county population for 2012. The most recent OFM county population forecast for 2012 was issued in January of 2002. The most recent OFM forecast was used to generate the updated population and employment allocations in Scenario B.

The updated population and employment allocations in Scenario B do not represent a formal change to the existing growth targets. Changing those targets would require amending the CPPs.

The March 2002 OFM county population forecast for 2012 gives a *county population range* running from a low of 692,254 to a high of 815,942. Each UGA's *Estimated 2001 Population* appears at column 3 of the table "Comparison of 2001 Population Estimates, 2012 Population Targets and Population Capacity." Applying each UGA's percentage proportion of OFM's April 2002 total county population estimate for 2001 (618,000, per OFM website) to this low and high gives a 2002-based *forecast range* for 2012 for each UGA.

Projecting each UGA's *2001 Estimated Population* linearly forward to 2012 using the growth rate determined by that UGA's population growth from 1992 to 2001 yields a *UGA population projection for 2012*, which is, in the case of every UGA, either inside the *forecast range* or entirely above it.

To remain compliant with the legal rule that county population projections are to adhere to OFM forecasts, we obtain objectively rational *updated 2012 UGA allocations* by allocating to each UGA its *UGA population projection for 2012* if that projection falls inside the UGA's *forecast range*, and by allocating to each UGA the *top* of the *forecast range* if the *UGA population projection for 2012* lies above the entire *forecast range*.

This methodology is shown in the table entitled "Computation of Updated 2012 UGA Allocations", and attached hereto as Appendix A.