DRAFT

Whatcom County Land Capacity Analysis

For Permanent Housing and Employment Needs

Methodology

July 3, 2025

Whatcom County

Approved by:

_____ _____

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1. Introduction

Background and Purpose

The Growth Management Act requires Whatcom County and the cities to review and revise, if necessary, their respective comprehensive plans and urban growth areas (UGAs) by June 30, 2025 (RCW 36.70A.130). WAC 365-196-325(1)(a) states:

> RCW 36.70A.115 requires counties and cities to ensure that, taken collectively, comprehensive plans and development regulations provide sufficient capacity of land suitable for development within their jurisdictions to accommodate their allocated housing and employment growth, including the accommodation of, as appropriate, the medical, governmental, educational, institutional, commercial, and industrial facilities related to such growth, as adopted in the applicable countywide planning policies and consistent with the 20-year population forecast from the office of financial management. To demonstrate this requirement is met, counties and cities must conduct an evaluation of land capacity sufficiency that is commonly referred to as a "land capacity analysis."

This report outlines recommended methods to be used by the County and cities for conducting the Land Capacity Analysis in association with the 2025 comprehensive plan/UGA updates. The County and cities will work together to complete the Land Capacity Analysis.

Methods

The recommended methods in this report were informed by the following sources:

- **State Laws and Rules:** Applicable provisions from the Growth Management Act (RCW 36.70A) and the Washington Administrative Code (WAC 365-196).
- **State Guidelines:** The Department of Commerce's:
  - *Guidance for Updating Your Housing Element* (2023); and
  - Urban Growth Area Guidebook, Chapter 5 Land Capacity Analysis and Buildable Lands Program for Urban Growth Areas (2012).
- **Existing Land Capacity Analysis Methodology:** Whatcom County has a Land Capacity Analysis (LCA) Methodology that was used in the 2016 Comprehensive Plan updates.

- **Existing Whatcom County Review and Evaluation Program Methodology.** The County and cities developed a Review and Evaluation Program (Buildable Lands) Methodology in 2022. While the BLR and LCA have separate purposes, they have many analysis steps in common.
- **Technical Committee:** A technical committee with representatives of the County and each city met in 2023 to develop the Land Capacity Analysis methodology.
- **Public Hearing:** The Whatcom County Planning Commission held a public hearing on the draft Land Capacity Analysis Methodology on July 24, 2025. Notice of the hearing was published in the newspaper, posted on the County's website, sent to the County's e-mail list, and sent to stakeholders.

Organization of this Report

This report includes the following sections:

- **State Requirements:** Outlines the key requirements for a Land Capacity Analysis under state rules and where Whatcom County's and the cities' approach to meeting the requirements is documented.
- **Data Collection:** A recommended approach to gathering the necessary data for the Land Capacity Analysis.
- **Land Suitable for Development:** Recommended methods to complete the Land Capacity Analysis.
- **Reports and Implementation:** Dispute resolution and structure of the Land Capacity Analysis report.
- **Relationship to Buildable Lands Report:** Describes the relationship between Land Capacity Analysis and the *Buildable Lands Report 2022 Whatcom County Review and Evaluation Program*, July 7, 2022, revised February 27, 2023 (hereinafter "Buildable Lands Report").
- **Definitions:** Defines important terms used in this report.

2. State Requirements

2.1. Purpose of the Land Capacity Analysis

The Growth Management Act, at RCW 36.70A.070(2), indicates:

> . . . Each comprehensive plan shall include a . . . housing element ensuring the vitality and character of established residential neighborhoods that:
>
> > (a) Includes an inventory and analysis of existing and projected housing needs that identifies the number of housing units necessary to manage projected growth, as provided by the department of commerce, including:
> >
> > > (i) Units for moderate, low, very low, and extremely low-income households; and
> >
> > > (ii) Emergency housing, emergency shelters, and permanent supportive housing . . .
> >
> > (c) Identifies sufficient capacity of land for housing including, but not limited to, government-assisted housing, housing for moderate, low, very low, and extremely low-income households, manufactured housing, multifamily housing, group homes, foster care facilities, emergency housing, emergency shelters, permanent supportive housing, and within an urban growth area boundary, consideration of duplexes, triplexes, and townhomes;
> >
> > (d) Makes adequate provisions for existing and projected needs of all economic segments of the community. . .

Based upon the growth management population projection made for the county by the office of financial management, the county and each city within the county shall include areas and densities sufficient to permit the urban growth that is projected to occur in the county or city for the succeeding twenty-year period. . . (RCW 36.70A.110(2)).

Counties and cities that are required or choose to plan under RCW 36.70A.040 shall ensure that, taken collectively, adoption of and amendments to their comprehensive plans and/or development regulations provide sufficient capacity of land suitable for development within their jurisdictions to accommodate their allocated housing and employment growth, including the accommodation of, as appropriate, the medical, governmental, educational, institutional, commercial, and industrial facilities related to such growth, as adopted in the applicable countywide

> planning policies and consistent with the twenty-year population forecast from the office of financial management . . . (RCW 36.70A.115(1)).
>
> Each county that designates urban growth areas under RCW 36.70A.110 shall review, according to the schedules established in subsections (4) and (5) of this section, its designated urban growth area or areas, patterns of development occurring within the urban growth area or areas, and the densities permitted within both the incorporated and unincorporated portions of each urban growth area. In conjunction with this review by the county, each city located within an urban growth area shall review the densities permitted within its boundaries, and the extent to which the urban growth occurring within the county has located within each city and the unincorporated portions of the urban growth areas (RCW 36.70A.130(3)(a)).

The Washington Administrative Code (WAC) provides rules for implementing the Growth Management Act. With regard to the land capacity analysis, the WAC states:

> Counties and cities must complete a land capacity analysis that demonstrates sufficient land for development or redevelopment to meet their adopted growth allocation targets during the review of urban growth areas required by RCW 36.70A.130 (3)(a). See WAC 365-196-310 for guidance in estimating and providing sufficient land capacity (WAC 365-196-325(1)(b)).

In summary, the purpose of the Land Capacity Analysis is to review the capacity of land suitable for development to accommodate housing needs and employment growth in UGAs and compare that capacity to housing needs and employment growth projections. If there is not adequate capacity to accommodate projected housing needs or employment growth, increased densities and/or UGA expansions will be considered.

2.2. Required Elements

State rules allow for flexibility in local jurisdiction land capacity analysis methodologies, provided that counties and cities document the rationale for their choices. This section describes the most critical requirements, and identifies where Whatcom County's and the cities' approach to meeting each requirement can be found.

Data Collection

The program provides for collection of data on urban and rural land uses, development, zoning and development standards, environmental regulations

including critical areas, stormwater, shoreline, and tree retention requirements; and capital facilities to determine the quantity and type of land suitable for development, both for residential and employment-based activities. Data is collected in the Buildable Lands Report and follow-up data collection may be conducted for the Land Capacity Analysis at the discretion of each jurisdiction. The approach to collecting and sharing data between the County and cities is outlined in this report in **Section 3**.

Assumed Densities

The County and cities will develop assumed densities for each UGA for the land capacity analysis, within the range of densities set forth in the Whatcom County Comprehensive Plan, Chapter 2 (Goal 2P).

Evaluate Impact to Developable Land

Counties and cities will update the inventory of land available for development during the new 20-year planning period (through the year 2045). Counties and cities will also estimate how much land will be required to accommodate projected housing needs and employment growth. The updated developable land inventory is then compared to the land required to serve growth to determine if there is sufficient developable land to serve that growth. Whatcom County's and the cities' approach to this evaluation is described in **Sections 4.2-4.4**.

2.3. Relationship to Buildable Lands Report

While only select Washington counties and cities are subject to the Buildable Lands requirements, all counties and cities that are required or choose to plan under the Growth Management Act must complete a Land Capacity Analysis (LCA) as part of any periodic Comprehensive Plan update (*RCW 36.70A.115*). The purpose of an LCA is to determine if there is sufficient capacity for development within Urban Growth Areas (UGAs) during the 20-year planning period in the next comprehensive plan update. The purpose of the BLR is to evaluate the growth and development assumptions adopted in the existing countywide planning policies and comprehensive plans and compare them against actual growth. The BLR also includes an estimate of land capacity in the remaining portion of the existing 20-year planning period.

The methods used for the BLR are similar to those used for the LCA, but the planning horizons are different. The existing comprehensive plan planning horizon (for the BLR) is through the year 2036. The next comprehensive plan horizon (for the LCA) will extend through the year 2045. Additionally, the BLR generally used achieved densities to determine the amount of land

needed for the remaining portion of the 20-year planning period in the most recently adopted comprehensive plans (RCW 36.70A.215(3)(e)). In contrast, the LCA may use assumed densities (WAC 365-196-210(6) and WAC 365-196-300(2) and (3)). This report addresses the relationship between the Buildable Lands Report and the Land Capacity Analysis in **Section 6**.

3. Data Collection

3.1. Planning Period

The planning period for the 2025 comprehensive plan updates is through the year 2045. The Land Capacity Analysis will estimate land capacity and compare it to growth projections through the end of the planning period (2045) in support of the comprehensive plan and UGA updates.

3.2. Study Area Boundaries

The Land Capacity Analysis addresses UGAs (including land within city limits), UGA Reserves, and study areas that may be considered for UGA expansions.

3.3. Data Collection

Data Collection Overview

The County and each city are responsible for collecting key data on development in their jurisdiction. These data were inserted in Data Reporting Tools, which are spreadsheets intended to facilitate consistency across the jurisdictions, for 2016-2021 in support of the Buildable Lands Report. Jurisdictions may update the information in the Data Reporting Tools at their discretion. Whatcom County will gather data for unincorporated UGAs.

The County and cities will engage at key points to review work in progress. The County and cities may formalize arrangements for data sharing responsibilities through memorandums of understanding (MOUs), interlocal agreements, or other contracts. Alternatively, informal cooperative data sharing may continue without formal agreements, as in the past.

Types of Data to Collect

The following types of data have been collected by each jurisdiction in association with the Buildable Lands Report:

1. **Development activity** and other land use changes, including:
    - Building permits and plats

- Renovations, if adding capacity
- New construction – new units, new industrial space, new commercial space, and quantities of land developed
- Demolition data – units and space removed
- Annexations
- Changes to UGAs
- Changes to the amount of land zoned for residential, commercial, and industrial development

2. Changes to **zoning and development standards** which could impact future land capacity
3. Changes to **environmental regulations** which could impact future land capacity
4. Changes to **planned capital facilities** which could impact future land capacity
5. **Adopted reasonable measures**

The County and cities will use the data collected in the Buildable Lands Report and may, at their discretion, update some or all of this data for the Land Capacity Analysis.

3.4. Data Reporting Tools

With the assistance of CAI, the County and cities developed spreadsheet-based Data Reporting Tools for the jurisdictions to capture data between April 1, 2016 and March 31, 2021 in association with the Buildable Lands Report. Detailed guidance on how to use the tools was provided on the "Instructions" documents associated with the spreadsheets. Four separate Data Reporting Tools have been developed:

- City of Bellingham;
- Small Cities and UGAs (identical to City of Bellingham spreadsheet, except with fewer columns for data);
- Non-UGAs (simplified spreadsheet for rural and resource lands); and
- Countywide (addresses annexations, UGA expansions, and zoning map changes).

Each jurisdiction filled out a Data Report Tool in association with the Buildable Lands program. The city data was maintained separately from the unincorporated UGA data (relating to development in the UGA, but outside city limits). This is because urban density development is anticipated within city limits, where public water and sewer are typically available. However, the cities in Whatcom County generally do not extend public water and sewer

for new developments prior to annexation. Therefore, urban residential development will generally not occur in the unincorporated UGAs associated with cities until annexation (except on existing platted lots). In fact, the County zoning typically limits new subdivisions in UGAs to a density of one dwelling/ten acres in urban residential zoning districts until public water and sewer are available.

The City of Bellingham and the Small Cities/UGA Data Reporting Tools included the following sections:

1. **Buildable Lands Summary:** UGA-level summary of new development during the Review and Evaluation Period and remaining growth to accommodate. Calculates achieved densities by city or UGA for comparison with planned densities in the comprehensive plan.
2. **Planned v. Achieved:** Comparison of planned and achieved densities by use and zoning designation, which resulted in useful information that may be considered by local jurisdictions in their next comprehensive plan update.
3. **Land Development Summary:** Development totals by use and zoning designation in terms of land developed and built area developed (Commercial/industrial square footage and residential units).
4. **Land Development Detail:** Detailed calculations for net area developed, achieved densities, and portion of developable area devoted to rights-of-way and other infrastructure by use and zoning designation.
5. **Building Permit Data:** Information on building permits that received a final inspection (i.e. construction has been completed) by development type (single family, multifamily, commercial, industrial, or mixed use).
6. **Plat Data:** Information on short plat, long plat, and binding site plan activity by development type (single family, multifamily, commercial, industrial, or mixed use).
7. **Planned Densities:** Planned densities by use for relevant zoning designations to provide a comparison against achieved densities. If planned densities have not been adopted for a certain area, this field may be left blank (or "N/A" may be inserted).
8. **Planned Capital Facilities:** Planned future capital facilities.
9. **Regulatory Updates:** Information on regulatory changes with potential to impact future land capacity. The regulatory update information for the unincorporated portion of city UGAs will be based upon (reference) the changes to city regulations, since these unincorporated areas will primarily be developed with urban land uses when city water and sewer become available after annexation.

10. **Reasonable Measures:** Tracks any adopted reasonable measures.

Jurisdictions may use existing data for 2016-2021 from the Data Reporting Tools or update their respective Data Reporting Tools, in whole or in part, to provide information for the Land Capacity Analysis.

4. Land Suitable for Development

The GMA states ". . . the county and each city within the county shall include areas and densities sufficient to permit the urban growth that is projected to occur in the county or city for the succeeding twenty-year period . . ." (RCW 36.70A.110(2)). Additionally, the GMA states that local comprehensive plans must identify sufficient land capacity for housing that is affordable to households in a variety of income ranges (RCW 36.70A.070(2)(c)). This section outlines necessary steps and recommended methods to complete a Land Capacity Analysis. The basic steps for cities and UGAs are as follows:

1. **Select Assumed Densities:** develop assumed densities for each UGA for the land capacity analysis, within the range of densities set forth in the Whatcom County Comprehensive Plan, Chapter 2 (Goal 2P).
2. **Assemble Net Developable Land Inventory:** update the supply of vacant, partially used, and under-utilized land which will be available for development during the planning period.
3. **Estimate Housing and Employment Capacity:** using the Land Capacity Analysis spreadsheets, which are intended to facilitate consistency across the jurisdictions, determine the housing and employment capacity of the current developable land inventory, based on assumed densities.
4. **Evaluate Land Capacity:** using the Land Capacity Analysis spreadsheets, compare housing needs and employment growth projections to current capacity determined in previous step and identify the potential capacity surplus or deficit.

If the analysis identifies deficits in land capacity, consider increased densities and/or UGA expansion to accommodate projected growth.

4.1. Review Assumptions and Achieved Densities

The Land Capacity Analysis takes into consideration a number of assumptions, including planned net density of new residential, commercial, and industrial development in cities and UGAs. Assumed densities are expressed in terms of dwelling units per net acre for residential development, and floor area ratios (FARs) for commercial and industrial development.

Develop Housing and Employment Assumptions

Calculating land capacity to accommodate housing needs requires assumptions about occupancy rates and average household size. These calculations, which convert population forecasts into housing unit forecasts, are accomplished through the Department of Commerce's Housing for All Planning Tool (HAPT), which determines future housing unit needs based on future household size and vacancy rates and a variety of other factors. Specifically, the State uses a household size of 2.33 in the HAPT spreadsheet for Whatcom County and a vacancy rate of 6% in the HAPT as detailed in Commerce's July 2023 guidebook "Establishing Housing Targets for Your Community (pp. 32 and 36)."[1]Calculating land capacity to accommodate employment growth requires the jurisdictions to make assumptions about occupancy rates and building square feet per employee. These assumptions are used to translate built commercial and industrial building area into an estimate of the number of employees that can be accommodated in that area. Separate building square feet per employee assumptions should be developed for commercial and industrial land uses.

The City of Bellingham has an existing data sharing agreement with the Washington State Employment Security Department (ESD) that provides the City with access to countywide employment data. Additionally, the Assessor's Office has provided commercial and industrial square footage statistics by parcel. Using this information, the City of Bellingham conducted an analysis and issued a *Technical Memo Estimating Square Feet Per Job for Commercial and Industrial Land*s *in Whatcom County – 2023 Update* (April 15, 2024), which produced the following estimates:

[1] https://deptofcommerce.app.box.com/s/chqj8wk1esnnranyb3ewzgd4w0e5ve3a

Exhibit 1.A. 2023 Whatcom County Sq Ft Per Job Summary by Individual Jurisdiction

Analsysis Area	Record Count (tax parcels)	Adjusted Mean Commercial Sq Ft/Job	Adjusted Mean Industrial Sq Ft/Job	Adjusted Median Commercial Sq Ft/Job	Adjusted Median Industrial Sq Ft/Job
Bellingham UGA	1,081	673	1,317	468	939
Birch Bay UGA *	40	675	-	722	-
Blaine UGA	55	983	1,630	723	856
Cherry Point UGA *	6	-	-	-	-
Columbia Valley UGA *	6	-	-	-	-
Everson UGA	29	637	1,212	612	1,166
Ferndale UGA	178	660	1,712	480	981
Lynden UGA	211	656	1,226	467	768
Nooksack UGA	12	734	685	726	685
Sumas UGA	19	467	779	418	541
Rural Areas	651	747	1,346	504	1,000
All Whatcom County	2,288	682	1,361	483	935

** The terms stipulated in the data access contract by ESD restrict sharing statistics that may violate employer confidentiality. Specifically, the "3/80" rule must be adhered to. This rule states that any statistical summary category must have no fewer than three employers, and that no single employer can represent more than 80% of the jobs in a category.*

Exhibit 1.B. 2023 Whatcom County Sq Ft Per Job Summary by Grouped Areas

Analsysis Area	Record Count (tax parcels)	Adjusted Mean Commercial Sq Ft/Job	Adjusted Mean Industrial Sq Ft/Job	Adjusted Median Commercial Sq Ft/Job	Adjusted Median Industrial Sq Ft/Job
Bellingham UGA	1,081	673	1,317	468	939
Small City UGAs	504	690	1,458	520	904
Non-City UGAs *	52	675	1,145	722	900
Small City & Non-City UGAs	556	689	1,430	526	902
All UGA Areas	1,637	677	1,363	480	927
Rural Areas	651	747	1,346	504	1,000
All Whatcom County	2,288	682	1,361	483	935

** Non-city UGAs include Birch Bay, Cherry Point, and Columbia Valley.*

Data sources: 2nd Quarter 2023 WA State Employment Security data and October 2023 W.C. Assessor's Bldg Details data.

The County and cities can use these statistics when developing employment density (square footage per employee) assumptions for commercial and industrial development.

Achieved Densities

The purpose of this step is to determine the actual density of residential and employment development that occurred recently. This step was completed for the Buildable Lands Report 2022 but may, at the discretion of the jurisdiction, be updated for the land capacity analysis associated with the comprehensive plan update. Calculations are expressed in terms of dwelling units per net acre for residential development and floor area ratios for commercial and industrial development. In **Section 4.3**, achieved net density data is considered as one factor when selecting the assumed densities that will be used to convert developable land into future housing and employment capacity for cities and UGAs. However, assumed residential densities for each UGA must be within the range of densities set forth in the Whatcom County Comprehensive Plan, Chapter 2 (Goal 2P).

Data Needed

- **Output from previous step:** Housing and employment assumptions.
- Development activity in each UGA from 2016-2021 (gathered with Data Reporting Tool, described in **Section 3.4**). Additional development activity from 2021 to the time of the analysis if the jurisdiction, chooses at its own discretion, to collect this data.

Steps

1. Each jurisdiction is responsible for gathering data on its development activity, as described in **Section 3** of this report.
2. The County gathered Data Reporting Tools with information from 2016-2021 from all jurisdictions as part of the Buildable Lands program. Jurisdictions may, at their discretion, update their Data Reporting Tools with more recent information for the Land Capacity Analysis. The Data Reporting Tools employ the following steps to arrive at achieved densities:
    2.1. Jurisdictions input parcel- and plat-level data on individual developments that occurred. The following details are required for each permit or plat record in order to calculate achieved densities:
        - Zoning designation and jurisdiction
        - Development type (single family, multifamily, commercial, industrial, or mixed use)
        - Gross site area

- Portions of sites to be removed from buildable area in cities and UGAs (critical areas, rights-of-way, other infrastructure, and other land for public purposes)
- New residential units
- Total building square footage for commercial, industrial, and mixed use development
- Year built

2.2. The tool calculates the net area on sites that have been developed in each zoning designation by use in cities and UGAs. This requires adding the gross area, in acres, and subtracting acreage dedicated to critical areas, rights-of-way, other infrastructure, and public purposes.

2.3. The tool adds the amount of development (units for residential uses or floor area for commercial and industrial uses) in each zoning designation by use.

2.4. Finally, achieved densities by use are calculated for each zoning designation using the calculations shown in **Exhibit 2.** Achieved densities are also calculated for each UGA.

Exhibit 2. Basic Achieved Density Calculations by Development Type

Development Type	Achieved Density Calculation
Residential - Single Family and Multifamily	Units / Net Acre
Commercial and Industrial	Floor Area / Net Site Area

Note: For mixed-use development, the site area is apportioned between residential and commercial uses based on the share of building square footage dedicated to each use.

3. The tool also calculates the portion of land dedicated to rights-of-way and infrastructure in cities and UGAs, to be applied in **Section 4.2.**, "Deductions for Future Infrastructure".

4.2. Assemble Net Developable Land Inventory

The Net Developable Land Inventory for UGAs (including land within city limits) and UGA Reserves consists of all land which, as of April 1, 2023, is vacant, partially used, or under-utilized that the jurisdictions anticipate will be available for development and served by infrastructure during the current planning period. This process includes the following steps, described in detail in the following sections:

- **Compile Gross Developable Land Inventory:** Identify parcels zoned for residential and employment development which are considered vacant, partially used, or under-utilized.
- **Deduct Critical Areas and Other Areas with Reduced Development Potential:** Remove the parcels and portions of parcels which are impacted by critical areas or other issues that, it is assumed, will not be developable during the planning period.
- **Deduct Land for Future Public Uses:** Remove any land already planned for future capital facilities and quasi-public uses.
- **Infrastructure Gaps:** Determine if there are infrastructure gaps that would prevent urban density development on vacant, partially used, and/or under-utilized lands over the planning period.
- **Deduct Land for Future Infrastructure:** Remove any land required for future infrastructure.
- **Local Jurisdiction Review:** Jurisdictions will review and make any needed adjustments to the developable land inventory.
- **Deduct Market Factor:** Apply a reasonable market factor to account for lands that are not likely to be available for development because of land owner preferences or other reasons not accounted in the previous deduction steps.
- **Calculate Net Developable Land:** The result once the market factor has been applied.

Compile Gross Developable Land Inventory

The purpose of this step is to identify all lands within UGAs, including lands within city limits, that are considered vacant, partially used, or under-utilized. These lands comprise the Gross Developable Land Inventory.

Data Needed

- GIS shapefile of Whatcom County Assessor's Office countywide parcel data. Shapefile must include the following attributes for each parcel:

    - Assessed improvement value
    - Assessed land value
    - GIS acreage per parcel
- GIS shapefiles from cities and the County including:
    - Boundaries for all UGAs and incorporated cities
    - Zoning for all jurisdictions (and city future zoning or land use designations for UGAs).
    - Critical areas deduction acreage per parcel
    - Dividing of split-zoned and split-jurisdiction parcels
- Compiled recent plat and permit activity data (gathered per **Section 3**).

Steps

1. Identify and remove parcels not classified for residential, commercial, or industrial uses.
2. Identify and remove parcels less than 2,400 square feet in size, unless specifically identified by the jurisdiction as developable land.
3. Identify and code parcels as vacant, partially used, or under-utilized. Use GIS processes and database queries to apply the definitional thresholds listed in **Exhibit 3**.

Exhibit 3. Criteria for Classifying Developable Land

Category	Parcel Zoning	Criteria for Classification
Vacant	All Residential, Commercial, Industrial	Improvement value less than $10,000
Partially Used	Single Family	Parcel size greater than three (3) times minimum allowed under zoning.[2] This may to lowered to between two (2) and three (3) times the minimum allowed under zoning at the discretion of the jurisdiction.

[2] This threshold accounts for parcels less than three times the minimum size that due to parcel configuration, location of existing development on the site, or other factors are not likely to be divided to their maximum potential, as suggested in Commerce's 2012 UGA Guidebook, p. 96.

Category	Parcel Zoning	Criteria for Classification
		Jurisdictions may propose to exclude parcels with current assessed improvement value > 93rd percentile[3] of jurisdiction improvement values if the parcel size is less than five acres
	Multifamily, Commercial, Industrial	Ratio between improvement value and land value less than 1.0[4] Jurisdictions can identify existing development, such as gas stations or uses that preclude significant development on the site, as fully developed when the ratio of improvement value to land value is less than 1.0. If identified as fully developed, the parcel will be subtracted from the inventory.
Under-Utilized	Single Family	N/A
	Multifamily	Parcels occupied by nonconforming single-family residential uses
	Commercial and Industrial	Parcels occupied by nonconforming residential uses or other nonconforming uses.

4. Cross-reference parcels classified as vacant, partially used, or under-utilized with local permit and plat data. Identify any parcels with multifamily permits, commercial/industrial permits and binding site plans, and preliminary and final plats that have not yet been constructed. This includes master planned projects that have not been completely built out but have received approval, as determined by the applicable jurisdiction, for a certain number of dwelling units or commercial/industrial square footage. Only projects that have received preliminary approval will be included in this list. These parcels should be set aside and classified as "pending", but not included in the gross developable land inventory. Pending capacity will be added to the final land capacity total in **Section 4.3**.

[3] The option to exclude parcels with high improvement values is meant to account for large single family parcels with high-end homes that are unlikely to be subdivided. The 93rd percentile threshold was determined by analyzing the distribution of housing values in the County and selecting a reasonable value that could be applied across all jurisdictions.

[4] The Department of Commerce's Buildable Lands Guidelines (2018) state ". . . When the value of the land is near or higher than the value of the improvement on the land, the property is generally going to be more favorable for redevelopment. . ." (p. 34).

5. Make adjustments for mobile homes. The primary concern is that some mobile home parks may show up as vacant if the mobile home value is not captured in the Assessor's improvement value data. Staff will use aerial imagery to truth check developable parcel designations in their respective jurisdictions against known areas with mobile home developments. If mischaracterized mobile home parks are identified, manually adjust the developable category designation in the land inventory database.
6. Partially used parcels in commercial and industrial zones may be split into fully developed and vacant portions for purposes of land capacity analysis.
7. Following this process, the remaining parcels classified as vacant, partially used, or under-utilized constitute the Gross Developable Land Inventory.

Deduct Critical Areas and Other Areas with Reduced Development Potential

In the next step of the process, subtract critical areas and other lands with reduced development potential from the Gross Developable Land Inventory. Each city will be responsible for determining and making spatial deductions from the developable land supply within their city limits and the associated UGA (the County may provide assistance for those jurisdictions that do not have in-house GIS capabilities). The County will be responsible for determining and making spatial deductions from the developable land supply within non-city UGAs.

Data Needed

- **Output from previous step:** Shapefile of parcels in Gross Developable Land Inventory.
- Critical areas GIS data relating to wetlands, rivers, streams, steep slopes, geologically hazardous areas, floodplains.
- Local critical area and shoreline buffers, identifying areas to be removed from buildable capacity.
- Information relating to naturally occurring asbestos.

Steps

1. Each jurisdiction will include the following types of critical areas and other undevelopable areas in the analysis:

   Wetlands

   The County and cities will use wetland inventories and buffers from their respective jurisdictions, as described below.

Streams and Rivers
The County and cities will use stream inventories and buffers from their respective jurisdictions, as described below.

Steep Slopes and Hazard Areas
The County and cities will subtract all areas with slopes greater than 35% or a percentage consistent with the jurisdiction's critical areas ordinance. Land impacted by alluvial fan hazard areas, where regulations restrict land division, will also be subtracted. For city UGAs, other hazard areas identified by the city may be subtracted. For non-city UGAs, other hazard areas identified by the County may be subtracted.

Floodplain
All land in the floodway will be removed from the inventory. All lands within 100-year floodplains of non-city UGAs will also be removed from the inventory. All lands within floodplains of city UGAs will be removed from the inventory where regulations would prohibit or significantly limit development, as determined by the applicable City. Determinations regarding floodplain and floodway deductions will be made by each jurisdiction based on current FEMA maps, but may be modified based upon consideration of updated floodplain modeling prepared by FEMA.

Naturally Occurring Asbestos
Land with documented naturally occurring asbestos will be removed from the inventory.

Other Undevelopable Areas
Deduct other areas, such as properties purchased through the floodplain acquisition program (buyout with FEMA and/or state funding), mitigations sites and old dump sites, that are not available or suited to development.

2. Deduct critical areas and other areas with reduced development potential for residential parcels. Critical area buffers will be deducted from the residential land supply unless the jurisdiction, based upon their knowledge of local codes and circumstances, determines that some of the buffers should be included in the residential land supply. For city UGAs, buffer distances will be based on city critical area regulations. For non-city UGAs, buffer distances will be based on County critical area regulations. Generalized critical area buffer assumptions may be applied to the developable land supply instead of site or project specific determinations for individual parcels, which are beyond the scope of the land capacity analysis (e.g. assumed buffers

based upon review of past development may be used in the land capacity analysis).

3. Deduct critical areas, critical area buffers, land use buffers and other areas with reduced development potential for commercial and industrial parcels. For city UGAs, buffer distances will be based on city critical area regulations. For non-city UGAs, buffer distances will be based on County critical area regulations. Generalized critical area buffer assumptions may be applied to the developable land supply instead of site or project specific determinations for individual parcels, which are beyond the scope of the land capacity analysis (e.g. assumed buffers based upon review of past development may be used in the land capacity analysis).
4. The resulting selection of developable parcels unconstrained by these areas will be used as the land base to calculate deductions for future public uses, future infrastructure and market factors.

Deduct Land for Future Public Uses

Next, parcels or acreage intended for public uses will be deducted from the developable land totals, including schools, police and fire stations, recreation facilities and open space, and regional stormwater facilities.

Data Needed

- **Output from previous step:** Shapefile of parcels in Gross Developable Land Inventory with critical areas removed.
- "Planned Capital Facilities" sections from Data Reporting Tools.
- Capital facilities plans for public facilities (water, sewer, stormwater, parks, schools) and public services (police, fire), particularly if they include plans for land usage and property acquisition.

Steps

1. Review "Planned Capital Facilities" from the jurisdiction's capital facility plans and Data Reporting Tool. Remove parcels identified for future capital facilities from the inventory. This should include any property already owned by public entities and designated for future expansion as well as any known public uses in master planned areas.
2. Identify any additional acreage for future capital facility purposes that should be deducted from the inventory that is not yet associated with specific parcels. Deduct these acreage totals manually from the inventory if within a jurisdiction's or special purpose district's proposed or approved capital facilities plan.

3. If appropriate, analyze ownership information for parcels in the developable land inventory and exclude those owned by public entities that will not likely accommodate housing or employment. This step may not be necessary if future public use parcels were already excluded when the first residential, commercial, and industrial parcels were selected.
4. In order to account for other future quasi-public uses (e.g. community centers, daycare centers, churches, etc.) apply a five percent (5%) deduction on developable land. The deduction should be applied to the Developable Land Inventory after critical areas are removed but before any other deductions for infrastructure or market factors.
5. During the local jurisdiction review process, adjustments to the 5% quasi-public uses deduction may be considered to account for local conditions and data availability.

Infrastructure Gaps

Assessment of land suitable for development will include identification of infrastructure gaps (including transportation, water, sewer, and stormwater) that could prevent assigned densities from being achieved. Local jurisdictions can rely on adopted capital facility plans when completing their assessment of land suitable for development. If these capital facility plans call for public facilities to be provided during the planning period to areas currently not served, these deductions should reflect the expected timing of these improvements. Additionally, if there are areas which are unlikely to be served by new infrastructure due to developer costs or other factors, deductions for these areas should be reflected in this step.

Data Needed

- **Output from previous step:** Shapefile of parcels in Gross Developable Land Inventory with previous deductions.
- Capital facility plans.

Steps

1. Each jurisdiction will review capital facilities plans to determine whether developable land in the UGA will likely be served by existing or planned infrastructure (including transportation, water, sewer, and stormwater facilities) within the planning period. In conducting this review, the jurisdiction will consider whether significant delays, funding lapses, or difficulties acquiring sufficient land for capital facilities may inhibit or prevent the service provider from supplying planned capital facilities to developable land within the planning period.

2. If the jurisdiction determines that no infrastructure gaps exist because there likely will be adequate infrastructure to serve the developable land in the UGA within the planning period, this finding will be documented in the Land Capacity Analysis Report.
3. If the jurisdiction determines that infrastructure gaps exist because there will not likely be adequate infrastructure to serve certain developable parcels in the UGA, the jurisdiction will:
    a. Document the infrastructure gaps, including a map showing the area(s) with the infrastructure gaps. This documentation will be incorporated into the Land Capacity Analysis Report; and
    b. Identify the capital facility plans that need to be updated to address the infrastructure gaps and the timeline for updating these capital facility plans; and
    c. Identify areas already in capital facility plans that are waiting on developer infrastructure improvements and differentiate from gaps in publicly provided infrastructure; and
    d. Determine if the planned capacity of the land subject to infrastructure gaps should be reduced while the infrastructure gaps are being addressed. Determine, as appropriate, how much the planned capacity should be reduced for the planning period (2023-2045).

Deduct Land for Future Infrastructure (Rights-of-Way and Other Development Requirements)

Deductions for future infrastructure, including rights-of-way (ROW), stormwater facilities and other development requirements, will be based on the percentage of land dedicated to infrastructure in recent plats, permits, and/or developments. This percentage is calculated in the Data Reporting Tool, and is calculated after critical areas and land for future public uses are removed.

If there is insufficient data to calculate deduction for infrastructure, then standard deductions based on reasonable assumptions may be used.

Data Needed

- **Output from previous step:** Shapefile of parcels in Gross Developable Land Inventory with critical areas and future public uses removed.
- Results from recent development activity analysis – percentage of developable area (minus critical areas, associated open space and public uses) devoted to ROWs and other infrastructure.

Steps

1. Summarize acreage of developable land minus critical area and public use deductions by zoning designation for each UGA.
2. Analyze recent development activity to determine infrastructure percentage deduction factors by UGA (see **Section 4.1**). Jurisdictions may adjust these percentage factors based any recent code changes relating to infrastructure requirements.
3. Apply these deduction factors to the inventory of developable land unconstrained by critical areas to calculate the acreage deduction for infrastructure. The infrastructure deduction may be applied by UGA or by specific zoning designation depending on the quantity and quality of recent development activity data.

Local Jurisdiction Review

Local jurisdictions will review developable parcel designations and other deductions through communications and/or meetings, if necessary, between County and City staff. The number of communications and/or meetings will depend on the complexity of the jurisdiction's land supply issues.

Data Needed

- **Output from previous step:** Shapefile of parcels in Gross Developable Land Inventory with critical areas, future public uses, and future infrastructure removed.
- All other geospatial data used up to this point.

Steps

1. The County, in conjunction with the cities, will prepare maps for each UGA showing vacant, partially used, and under-utilized parcels overlaid on aerial imagery. Some larger UGAs may need to be presented in multiple maps.
2. Each jurisdiction will review the maps, along with tabular parcel data underlying the maps. If appropriate, County staff will meet with city staff to discuss issues such as any adjustments to developable land classification, critical areas, infrastructure deductions, public use deductions, density assumptions, market factor assumptions, and other jurisdiction-specific assumptions described elsewhere in this methodology.

   The range of additional issues that can be considered during the local jurisdiction review process include but are not limited to the following:

   - Critical areas not identified through GIS analysis

- Known interest or lack of interest in development or redevelopment of particular parcels/areas
- Parking and outdoor storage associated with adjacent uses
- Other associated/related uses spanning multiple parcels
- Irregular parcel shapes making development unlikely

Deduct Market Factor

The market factor is a final deduction to account for lands assumed not to be available for development during the planning period. It is expected that over the 20-year planning period some lands will be kept off the market due to speculative holding, land banking, and personal use, among other reasons.

The market factor assumptions referenced below were used in the *Whatcom County Land Capacity Analysis Detailed Methodology* (2015). Whatcom County and the cities conducted additional analysis to develop more refined local market factors, as described in the *Whatcom County Review and Evaluation Program Methodology*, February 10, 2022.

Data Required

- **Output from previous step:** Shapefile of parcels in Gross Developable Land Inventory with critical areas, future public uses, and future infrastructure removed, as reviewed and approved by the appropriate jurisdictions.
- Market factor assumptions.

Steps

1. Summarize acreage in the Developable Land Inventory by zoning designation, by land use (residential and commercial/industrial) and developable land designation (vacant, partially used, and under-utilized). This acreage should represent developable land after critical areas, infrastructure, and public uses have been deducted.
2. The base market factors listed below are consistent with those used in the 2016 UGA Review LCA, the Buildable Lands Report, and the State Department of Commerce's *Guidance for Updating Your Housing Element* (2023). During the local jurisdiction review process, the base market factors may be adjusted to account for local conditions and future plans. If market factors are adjusted, the final overall average market factor for a UGA should not exceed 25%, except where the jurisdiction has well-documented support for why a larger market factor is appropriate.

Start with the following default deduction factors to the developable acreage for each zoning designation:

- For vacant residential and commercial/industrial zones: 15% market factor
- For partially used and under-utilized residential and commercial/industrial zones: 25% market factor

3. Jurisdictions may use the "Analysis Method" steps in the *Whatcom County Review and Evaluation Program Methodology* Appendix B (p. 75) to inform market factor selection.
4. As a reference point, the overall average market factor for all developable land should be calculated for each UGA (total acres deducted based on market factor percentage divided by total acres in the Developable Land Inventory after critical areas, infrastructure, and public uses have been deducted).
5. A market factor may be applied to master planned projects by the jurisdiction.

Calculate Net Developable Land

After applying the market factor, the final acreage totals by zoning designation and UGA represent the updated Net Developable Land Inventory – the land expected to be available to accommodate future housing needs and employment over the planning period (through the year 2045).

4.3. Estimate Housing and Employment Capacity

In this step, the jurisdictions convert the Net Developable Land Inventory into housing and employment capacity. The final product is an estimate of the number of dwelling units and employees that can be accommodated in each UGA on developable land. Additionally, estimates of dwelling units by zoning designation will be produced to assess accommodation of housing needs by income level. This process includes the following steps, described in detail in the following sections:

- **Determine Assumed Future Densities**: Select assumed densities for future development for each zoning designation in the UGA over the 20-year planning period. Assumed densities may need to be modified if the Land Capacity Analysis shows a deficit of capacity and associated development regulation changes are needed to accommodate housing targets by income band and/or employment projections.

- **Determine Overall Housing Capacity:** Apply residential density assumptions to the residential Net Developable Land Inventory to estimate current capacity for new residential development in UGAs and UGA Reserves. Estimate additional capacity for accessory dwelling units.
- **Determine Capacity to Meet Housing Needs by Income Level:** Summarize residential land capacity by zone, categorize zones by allowed housing types and density level, relate zone categories to potential income levels served and housing types allowed, summarize capacity by zone category, and compare projected housing needs to capacity (*Guidance for Updating Your Housing Element*, Chapter 3 – Land Capacity Analysis, Washington Department of Commerce, August 2023).
- **Determine Employment Capacity:** Apply employment development density assumptions to the commercial and industrial Net Developable Land Inventory to estimate current capacity for new commercial and industrial development. Based on employee densities developed in **Section 4.1**, translate capacity for physical space into capacity for employees.

Determine Assumed Future Densities

The purpose of this step is to select appropriate assumed densities that are supported by analysis as being representative of how development might occur during the planning period.

WAC 365-196-210(6)states:

> "Assumed densities" means the density at which future development is expected to occur as specified in the land capacity analysis or the future land use element. Assumed densities are also referred to in RCW 36.70A.110 as densities sufficient to permit the urban growth that is projected to occur.

As part of the Land Capacity Analysis, local jurisdictions will develop assumed densities for each zoning designation to estimate the amount of land needed for growth over the 20-year planning period. For Whatcom County and the cities, the 20-year planning period for the 2025 comprehensive plan updates extends through the year 2045. Comprehensive plan designations and planned densities, zoning, and achieved densities, as calculated in **Section 4.1**, are factors that local governments consider when selecting assumed future densities. These density assumptions may need to be modified if the Land Capacity Analysis shows a deficit of capacity, and associated development regulations modified within UGAs and LAMIRDs to

accommodate the needed housing types and densities to meet housing targets by income band and/or employment projections.

- Within city limits, the city will determine assumed densities;
- Within a city UGA, the city will, in collaboration with the County, determine assumed densities; and
- Within a non-city UGA, the County will determine assumed densities.

Each city and the County will select assumed residential densities within each UGA that are consistent with Whatcom County Comprehensive Plan Goal 2P.

Determine Overall Housing Capacity

This section describes how to derive future housing growth capacity from the Net Developable Land Inventory in residential zones and the residential portion of mixed-used zones.

Data Needed

- The Net Developable Land Inventory of residential and the residential portion of mixed-use zones calculated under **Section 4.2.**
- Assumed future densities for residential and mixed-use zones.
- Whatcom County Assessor's Office data on numbers of dwelling units on partially used and under-utilized parcels.
- Parcels with pending residential capacity identified in **Section 4.2.**
- Data from the Washington State Office of Financial Management (OFM) and/or the US Census on occupancy rates and average household sizes.

Steps

Determine Total Dwelling Unit Capacity by Zoning Designation

1. Multiply residential acres from the Net Developable Land Inventory in each zoning designation by the assumed density (dwelling units/net acre) for each zoning designation. Only the residential portion of the mixed use acres will be included in this calculation. The result is the total dwelling unit capacity available in each zone before accounting for existing development on partially used and under-utilized parcels.

2. Remove existing units on partially used and under-utilized parcels by zoning designation from the totals from the previous step so that existing units are not counted as part of partially used or under-utilized parcel capacity.

3. In **Section 4.2**, parcels with pending developments were set aside. These parcels included preliminary or final plats, permits, and binding site plans for developments that have received preliminary approval but have not yet been constructed. Master planned projects that have not been completely built out but have received approval for a certain number of dwelling units are also included.

   The estimated capacity in these developments is more accurate than calculated theoretical capacity. Summarize total dwelling units in these pending developments by zone. Add these units to subtotal dwelling units from Step 2. The output will be total dwelling units of capacity available in each zone.

Calculate Total Occupied Dwelling Unit Capacity by Zoning Designation

1. Select occupancy rate assumptions for each UGA by using data from OFM and/or the US Census.[5]
2. Multiply the total dwelling units of capacity in each zoning designation by selected occupancy rate assumptions. The output will be total potential occupied dwelling units in each zone.

Estimate Capacity for Accessory Dwelling Units (ADUs)

Each jurisdiction will make an assumption about the number of ADUs that can be accommodated in the UGA. ADUs may take several forms, including new detached or attached units, or within the footprint of an existing structure. Jurisdictions may consider the following factors in estimating potential ADU capacity, while considering Commerce's *Guidance for Updating Your Housing Element* (August 2023) recommendation that ADU capacity not exceed 10 percent of total jurisdictional capacity:

- Lot size, existing building coverage compared to total lots upon which ADUs could be constructed, maximum allowable lot coverage, restrictive covenants that prohibit ADU construction, existing ADUs on the parcel, setbacks, parking requirements,

[5] Seasonal housing is considered vacant according to Census definitions. These housing units are not included in the occupied housing unit category and are not folded into Census calculations of average household size.

utilities, historic rates of ADU production and proposed regulatory changes in response to House Bill 1337 (passed by the State Legislature in 2023).

Calculate Total Housing Capacity by UGA and Outside UGAs

1. Select average household size assumptions for each UGA by using data from OFM and/or the US Census.
2. The local jurisdiction will categorize each zoning designation as either a single family zone or multifamily zone. The distinction between single family and multifamily zones is important because there are different occupancy rates and average household sizes for single family and multifamily development.
3. Multiply total occupied dwelling units in the single family and multifamily categories in each zone by average household size assumptions for these categories. Separately calculate the single family housing capacity and the multifamily housing capacity. Combine the single family, multifamily, and accessory dwelling unit housing capacities to obtain the total housing capacity within each UGA and the area outside UGAs.

Determine Capacity to Meet Housing Needs by Income Level

This section describes how to summarize land capacity by zone, categorize zones by allowed housing types and density level, relate zone categories to potential income levels and housing types served, summarize capacity by zone category, and compare projected housing needs to capacity. This process breaks down the capacity calculated in the previous step by the income bands that it can potentially serve, per recent changes to the GMA adopted by the State Legislature in 2021 (HB 1220), now codified in RCW 36.70A.070(2).

Note that income levels in this methodology are defined as a percentage of the Area Median Income, or AMI. This is also referred to as Median Family Income (MFI), and is a calculation published by the Department of Housing and Urban Development (HUD) for each county on an annual basis. The AMI represents "the median household income adjusted for household size," per RCW 36.70A.030, and is the same figure used to determine eligibility for subsidized housing based on household income. Because it is adjusted for household size and is calculated at a countywide level, the AMI is generally higher than the median income reported by the Census or American Community Survey. For more information, see p. 18 of the Commerce *Guidance for Updating Your Housing Element* (August 2023), or HUD's

Income Limits website at https://www.huduser.gov/portal/datasets/il.html. Throughout this section, income levels will be described as a percentage of this AMI figure.

Data Needed

- The housing capacity by zoning designation in each UGA.
- The housing capacity by zoning designation outside UGAs.

Steps

Categorize zones by allowed housing types and density level

1. Identify the housing types allowed in each zoning designation, including proposed zoning designation changes needed to accommodate housing targets by income band.
2. Identify the maximum density allowed in each zoning designation.
3. Assign one of the following generalized zone categories for each zoning designation: Low density, moderate density, low-rise multifamily, mid-rise multifamily, or high-rise/tower.

Relate zone categories to potential income levels served and housing types allowed

1. Identify typical housing types allowed in each zone category.
2. Identify lowest potential income level served by market rate housing in each zone category by analyzing current rent and housing price data in urban areas where available, and using Commerce assumptions where current rent and housing price data is not available or insufficient
3. Identify lowest potential income level served by housing with subsidies and/or incentives in each zone category.
4. Identify assumed affordability level for land capacity analysis in each zone category. In zone categories which allow a wide range of housing types which may be affordable to households of various income levels, use assumptions based on current or expected future mix of market-rate and subsidized units, current rents, housing price data, and/or existing and proposed policies (such as inclusionary zoning or, in cities, multi-family tax exemption with affordability requirements) to

estimate an appropriate split of future housing capacity across income bands in a given zone category.

5. Identify zone categories where housing with subsidies and/or incentives is not typically feasible at scale to make housing available at lower income levels than market rate housing.
6. Assign pending units (as identified in Section 4.2) to income category they will serve. If pending units are known to be in subsidized projects at a certain income level, they should be assigned to that income band. If pending units are market-rate, they should be assigned to the income band they will be expected to serve based on rents, housing prices, or Commerce guidance as described in Step 2 above.

Summarize capacity by zone category

1. Summarize the total unit capacity calculated in the previous step (including pending units) by zoning categories based upon income bands.

Determine Employment Capacity

This section describes how capacity to accommodate future employment growth is derived from the Net Developable Land Inventory for commercial and industrial zones and the commercial portion of mixed-used zones.

Data Needed

- The Net Developable Land Inventory of commercial, industrial, and mixed-use zones (see **Section 4.2).**
- Assumed Floor Area Ratio (FAR) values for future development in commercial, industrial, and mixed-use zones.
- Assumed square feet per employee (FTE) for commercial or industrial space (employment density).
- Whatcom County Assessor's Office data for partially used and under-utilized parcels.
- Parcels with pending commercial or industrial capacity identified in **Section 4.2.**

Steps

Determine Total Building Square Footage Capacity by Zone

1. Multiply commercial and industrial acres from the Net Developable Land Inventory in each zone (converted to square feet) by the assumed FAR for each zone. Only the commercial and industrial portions of the mixed use acres will be included in this calculation. The output will be the total building square footage capacity available in each zone before accounting for existing development on partially used and under-utilized parcels.
2. Summarize total existing commercial and industrial building square footage on partially used and under-utilized parcels by zone. Subtract this square footage from the totals from the previous step so that existing buildings are not counted as part of partially used or under-utilized parcel capacity.
3. In **Section 4.2**, parcels with pending developments were set aside. These parcels included commercial and industrial permits or binding site plans for developments that have received preliminary approval but have not yet been constructed. Master planned projects that have not been completely built out but have received approval for a certain amount of commercial/industrial square footage are also included. The estimated capacity in these developments is more accurate than calculated theoretical capacity. Summarize total commercial and industrial building square footage in these pending developments by zone. Add this square footage to the totals from Step 2. The output will be total commercial and industrial square footage capacity available in each zone.

Determine Total Occupied Square Footage by Zone

1. Multiply the total square footage capacity in each zone by a 95% occupancy rate assumption. The occupancy rate assumption can be adjusted based on current and accurate data provided by local jurisdictions (e.g. real estate market reports). The output will be total potential occupied commercial and industrial square footage in each zone.

Determine Total Employment Capacity by UGA

1. Aggregate the occupied commercial and industrial square footage capacity by zone into the two categories used in the future employment allocation process: Commercial and Industrial. **Exhibit**

3 in **Section 7** provides definitions for each category by North American Industry Classification System (NAICS) code.

2. Determine employment density (square footage of floor-space per employee) assumptions for future commercial and industrial development. Employment density will be based upon one of the following:
    a. The employment density selected by the local jurisdiction, provided that the density is based upon comprehensive plan policies, zoning, achieved employment densities or other relevant data.
    b. Employment densities derived from the City of Bellingham's *Technical Memo Estimating Square Feet Per Job for Commercial and Industrial Land*s *in Whatcom County* (October 20, 2020), which are shown in Exhibits 1.A and 1.B.
3. Divide the total occupied commercial and industrial square footage in each category by the employment density assumptions. The final output will be total employment capacity within each UGA.

4.4. Evaluate Land Capacity

The final step is to evaluate whether there is currently enough land capacity in UGAs to accommodate projected growth through the planning period (2023-2045). This includes the following steps:

- **Compare Land Capacity for Housing to Projected Housing Needs:** Compare land capacity for housing estimated in **Section 4.3** to the number of housing units needed. The housing units needed is based upon State Department of Commerce housing projections developed in accordance with RCW 36.70A.070(2)(a). Identify any inconsistencies.
- **Compare Employment Capacity to Projected Growth:** Compare the employment growth capacity estimated in **Section 4.3** to projected growth in employees. Identify any inconsistencies.

Compare Housing Capacity to Projected Housing Needs

This section describes how to determine if there is sufficient capacity in each UGA to accommodate projected housing needs in the 20-year planning period.

Data Needed

- Current 20-year housing needs, including projections in each UGA and projections for land outside UGAs.
- Land capacity for housing in each UGA, as calculated in **Section 4.3**, and land capacity for housing outside UGAs.

Steps

1. Compare projected aggregated housing needs in each zone category to current land capacity in each zone category to determine if there is sufficient capacity to accommodate housing needs at all income levels in each UGA. These calculations are accomplished in the Land Capacity Analysis spreadsheets. If there is not sufficient capacity, land use changes will be necessary to accommodate housing targets by income, including potentially rezoning to allow denser housing types which can accommodate households earning lower and/or moderate income levels.
2. Compare projected aggregated housing needs to current land capacity outside UGAs to determine if there is sufficient capacity to accommodate housing targets for areas outside UGAs.

Compare Employment Capacity to Projected Growth

This section describes how to determine if there is sufficient capacity in each UGA to accommodate projected employment growth in the 20-year planning period.

Data Needed

- Current 20-year employment projections by UGA.
- Land capacity for employment in each UGA, as calculated in **Section 4.3.**

Steps

1. Compare projected employment growth to be accommodated to current employment growth capacity for each UGA to determine if there is sufficient capacity to accommodate projected employment. This calculation is accomplished in the Land Capacity Analysis spreadsheets.

5. Reports and Implementation

5.1. Dispute Resolution Methods

Whatcom County's procedures for resolving disputes between jurisdictions are provided in Countywide Planning Policies R1 – R4. These methods are intended to address resolving any dispute related to implementing the Countywide Planning Policies, including those relating to the Land Capacity Analysis.

5.2. Land Capacity Analysis Report Structure

The Land Capacity Analysis Report should include the following content:

- **Executive Summary:** High level overview of projected growth to be accommodated and results from analysis.
- **Introduction:** Introduction to the document's purpose and content, with background on regulatory framework and local process.
- **Policy Framework:** Overview of Countywide Planning Policies, housing needs, and employment allocations.
- **Methods:** Overview of the analysis process and major assumptions, with reference to this Methodology for full detail.
- **Countywide Findings:** Summarize housing needs & employment growth, assumed densities, and land capacity to accommodate housing needs and employment growth.
- **Jurisdictional Profiles:** Summarize information relating to assumed densities, land supply, and land capacity for the 10 UGAs.
- **Infrastructure Gaps:** Each jurisdiction will document any infrastructure gaps in the UGA, including a map showing the area(s) with the infrastructure gaps. If there are infrastructure gaps, the jurisdiction will:
    - Identify the capital facility plans that need to be updated to address the infrastructure gaps and the timeline for updating these capital facility plans;
    - Identify areas already in capital facility plans that are waiting on developer infrastructure improvements and differentiate from gaps in publicly provided infrastructure;
    - Determine if the planned capacity of the land subject to infrastructure gaps should be reduced while the infrastructure gaps are being addressed; and

- Determine, as appropriate, how much the planned capacity should be reduced for the planning period, through the year 2045.

6. Land Capacity Analysis

6.1. Relationship Between BLR and LCA

The Buildable Lands Report (BLR) **looks back** to compare adopted development assumptions against actual development, and based on a review of the achieved densities and the amount of development that has taken place, determines if there is still sufficient capacity to accommodate growth through the remainder of the planning period for the last comprehensive plan (through the year 2036). This analysis is performed between comprehensive plan updates, and is intended to evaluate the performance of the comprehensive plans and identify any capacity issues that may need to be addressed in the next comprehensive plan updates.

The Land Capacity Analysis (LCA) **looks forward** to determine if there is sufficient capacity, based upon assumed densities, to accommodate new 20-year growth projections (through the year 2045) and housing needs in advance of the next comprehensive plan updates. Under state law, the LCA is used to inform updates of County and city comprehensive land use plans and development regulations required by *RCW 36.70A.130(1)* and the review of Urban Growth Areas required by *RCW 36.70A.130(3)*.

While the BLR and LCA serve different statutory purposes and use different planning horizons, some of the methods and data sources required are similar. However, the Buildable Lands Report does not reflect the land capacity for the 2025 comprehensive plan updates given current GMA provisions, some of which have been amended in the last several years (including HB 1110 applicable to Bellingham and HB 1220). Additionally, the BLR generally used achieved densities to determine the amount of land needed for the remaining portion of the 20-year planning period in the most recently adopted comprehensive plans (RCW 36.70A.215(3)(e)). In contrast, the LCA may use assumed densities (WAC 365-196-210(6) and WAC 365-196-300(2) and (3)). Therefore, the land capacity results from the 2025 comprehensive plan update processes will likely be different than the land capacity results from the Buildable Lands Report.

7. DEFINITIONS

Land Use Categories

Mixed-use: Developments incorporating both residential and non-residential uses.

Residential: Includes single-family and multifamily development.

Commercial: Includes the commercial uses listed in **Exhibit 4** below.

Industrial: Includes the industrial uses listed in **Exhibit 4** below.

Exhibit 4. Suggested Industry Classifications for Employment Allocation Process

Commercial	Industrial
Accommodations (NAICS 721)	Construction (NAICS 23)
Administrative and Support and Waste Management and Remediation Services (NAICS 56)	Manufacturing (NAICS 31-33)
Arts, Entertainment, and Recreation (NAICS 71)	Transportation and Warehousing (NAICS 48-49)
Educational Services (NAICS 61)	Utilities (NAICS 22)
Finance and Insurance (NAICS 52)	
Information (NAICS 51)	
Healthcare and Social Assistance (NAICS 62)	
Management of Companies and Enterprises (NAICS 55)	
Other Services (NAICS 81)	
Professional, Scientific, and Technical Services (NAICS 54)	
Public Administration (NAICS 92)	
Real Estate and Rental and Leasing (NAICS 53)	
Food Service and Drinking Places (NAICS 722)	
Retail Trade (NAICS 44-45)	

Note: NAICS stands for North American Industry Classification System.

Development Status Categories

Vacant: Property with little or no building improvements (see **Exhibit 3** for detailed criteria).

Under-Utilized: Property zoned for a more intensive use than that which currently occupies it, such as a single-family home on commercially zoned land (see **Exhibit 3** for detailed criteria).

Partially Used: Property occupied by a use consistent with zoning but containing enough land to be further subdivided or developed without need of rezoning, such as a single-family home on a very large lot (see **Exhibit 3** for detailed criteria).

Fully Developed: Property that is assumed to have no further development capacity during the current planning period.

Other Terms

Achieved Density: Density of residential development (dwelling units per net acre for UGAs) and commercial/industrial development (net FAR for UGAs) achieved by development in the recent past.

Assumed Density: Assumption of residential density (dwelling units per net acre) and commercial/industrial development (net FAR) expected on developable land over the 20-year planning period.

Average Household Size: The average number of people per occupied housing unit (this is the same definition used by the U.S. Census).

City UGA: Land within a city and the associated unincorporated UGA.

Data Reporting Tool: Spreadsheet jurisdictions use to report development data required for the Buildable Lands Report and calculate achieved densities. Described in **Section 3.4.**

Developable Parcels or Developable Land: All parcels that are classified as vacant, partially used, or under-utilized.

Employment Density: The average amount of floor-space required to accommodate an employee. For the purposes of this study, expressed as square feet per employee.

Floor Area Ratio (FAR): Total building square footage divided by lot square footage.

Gross Developable Land Inventory: Total area of developable parcels before deductions for critical areas, public uses, infrastructure, and market factors are taken into account.

Housing Needs: The number of housing units that must be accommodated in the planning period (including units for moderate, low, very low, and

extremely low-income households) based upon State Department of Commerce projections pursuant to RCW 36.70A.070(2)(a). Housing needs account for both existing unmet needs and accommodating new population growth.

Land Capacity Analysis: Spreadsheet-based analysis jurisdictions use to estimate the housing and employment capacity of the current developable land inventory and compare this capacity to housing needs and employment growth projections.

Market Factor: The estimated portion of developable land which will not be available for development or redevelopment during the 20-year planning period. The market factor recognizes that not all developable land will be put to its maximum use because of owner preference, cost, stability, quality, and location.

Net Density: The density of development, expressed as either residential units per acre or commercial/industrial floor area ratio, calculated based on Net Developable Land Inventory.

Net Developable Land Inventory: Total area of developable parcels after deductions for critical areas, public uses, infrastructure, and market factors are taken into account.

Net Plat Area: Total area of plats after deductions for critical areas, public uses, and infrastructure are taken into account.

Net Site Area: Total area of commercial, industrial and multifamily development sites after deductions for critical areas, public uses, and infrastructure are taken into account. Site area will sometimes not be equal to parcel area (e.g. when multiple buildings are on one parcel).

Non-City UGAs: The Birch Bay, Columbia Valley, and Cherry Point UGAs.

Unincorporated UGA: Any UGA or portion of a UGA that is not within city limits. Unincorporated UGAs are under the County's jurisdiction, but may be annexed by the adjacent city or incorporate in the future.

APPENDIX A. GIS DATA

Countywide tax parcel boundaries are maintained by Whatcom County Assessor and City of Bellingham. Accuracy codes for linework are assigned for all of Bellingham and its unincorporated UGA – about 63% of linework is "high" accuracy or +/- 1 foot, about 25% is "medium-high" or +/- 5 feet, about 6% is "medium-low" or +/- 10 feet, the remaining 6% is either "low" or "unknown" accuracy. Zoning boundaries are primarily tied to parcel boundaries and reflect their accuracy levels. For Bellingham, utility infrastructure layers (water, sewer, storm) mains and connected facilities are mapped with GPS and are generally accurate to better than 1-foot accuracy. All mapped wetland delineations are digitized from wetland consultant reports or records of survey. Wetland recon surveys are of varying accuracy and typically relate to specific year's aerial imagery. Accuracy can vary +/- 1 foot to _+/- 10 feet with respect to imagery. Just as important for wetland data is the age of the survey – as time passes drainage patterns change. Generally, wetland delineations and recon surveys that are 10+ years old should be treated as approximate boundaries at best (Federal NWI wetland data which is 40+ years old and originated with 1:24,000 scale mapping will not be used by Bellingham for Land Capacity Analysis work going forward. Slope delineations are based on 2022 LiDAR terrain data which is vertically accurate to +/- 5cm in non-forested areas and +/- 14cm in forested areas. Shoreline and stream data for Bellingham are based on Aerial, LiDAR, and storm utility data and are generally accurate to +/- 3 feet. Data for tree canopy cover and height is derived from 2022 LiDAR and 2021 and 2023 aerial imagery data. Employment data from WA State Employment Security Department is provided through a license agreement to Bellingham and is summarized at the UGA geography level to maintain confidentiality agreement standards.

Small Cities and Whatcom County

GIS data for zoning is considered accurate across the jurisdictions. The utility infrastructure and environmental layers for the small cities and Whatcom County are of varying levels of accuracy.

Critical area regulations are based on site-specific analysis, often conducted when an application is submitted. GIS wetland layers have a variety of sources with varying degrees of accuracy. Under the Methodology, jurisdictions would identify and map infrastructure gaps.

Appendix B. Bellingham UGA – Supplemental Methods

Purpose

This appendix outlines specific notable data, values, and factors in the City of Bellingham's land capacity analysis that align with the steps described in the Whatcom County Land Capacity Methodology. It also describes additional steps that go beyond the standard outlined in the County methodology to account for Washington State regulatory requirements specifically applicable to Bellingham.

LCM Section 4.2

This section outlines the steps to assemble the net developable land inventory. These steps align with and follow the process described in the countywide methodology. Detail is provided to show discretionary choices Bellingham has made in the application of these analysis steps related to best available data, unique market conditions, land use regulations and patterns.

- Compile Gross Developable Land Inventory

  Bellingham's analysis updated the Geographic Information System (GIS) land inventory from the 2022 Buildable Lands Analysis by incorporating changes in land division, ownership, and development status using Whatcom County Assessor's property data, City building permit data, aerial imagery, and related GIS spatial data. Zoning information was also updated to reflect amendments to the Bellingham Municipal Code (BMC) Title 20 approved since 2021.

- Deduct Critical Areas and Other Areas with Reduced Development Potential

  Bellingham's analysis includes deductions for environmental constraints (critical areas) for all developable land including all residential, commercial, and industrial zones. Deductions were based on the best-available data in the City's GIS system following criteria set out in BMC 16.55. Wetlands were buffered with 150-foot buffers based on a composite of all mapped wetland delineations, and wetland reconnaissance inventories from 2015, 2003, and 1992. National Wetland Inventory (NWI) data from the 1980's was not used due to the relatively complete coverage by more recent/accurate studies). In addition, deductions were made using a staff-generated potential wetlands layer derived from color-infrared imagery and LiDAR data to fill gaps across properties where access limitations prevent on-the-ground mapping of connected wetland systems. Other critical areas layers used include steep slopes (from LiDAR data), FEMA floodways and floodplains (2019 data), and regulated shoreline, stream, and riparian corridors. Shorelines were buffered using adopted Shoreline Master Program development setbacks designated for each reach. Stream and riparian buffers were based on distances specified for each reach in BMC Table 16.55.500(A). Overall deductions for critical areas and buffers impact about 55% of gross developable land.

Deductions were also made to account for estimated impacts to buildable land related to Bellingham's landmark tree protection ordinance passed in May and revised in July 2024 (Ord 2024-07-022). This ordinance protects trees 36 inches or greater in diameter at breast height (with exception for Cottonwood species) or meeting other landmark tree criteria. Most landmark trees have yet to be mapped so the actual impact on buildable lands is unknown. To estimate the impacts of tree protection, LiDAR data was used to select trees taller than 100' as representative of trees likely to have landmark tree status. This is just an estimate as many trees in this height range could be less or more than 36 inches in diameter at breast height, could be Cottonwood species trees, or could qualify based on other landmark tree criteria.

The LiDAR data shows citywide (including the unincorporated UGA) there are more than 150,000 trees taller than 100'. Canopy for these trees covers about 2,788 acres. The selection comprises about 106,500 conifers (71%) and about 43,500 deciduous trees (29%). Heights range between 100 and about 250 feet with an average value of about 130 feet. Average individual tree canopy area is about 800 square feet or a diameter of about 32 feet.

For purposes of the analysis, the tree canopy extent associated with the selected trees was assumed to be equivalent to the root-protection area that could impact development potential. The tree protection impacts were quantified for each parcel classified as vacant, partially-developed, or underutilized for the areas outside mapped critical areas or buffers (to avoid double-counting area already deducted for critical areas).

The overall deduction of buildable land for tree protection is as follows:

Percent of net buildable land deducted	
Vacant land	= 21%
Partially-developed land	= 6%
Underutilized land	= 3%
Combined impacts	= 15%

- Deduct Land for Future Public Uses

Capital infrastructure plans (Parks Recreation and Open Space Plan, utilities, etc.) were used to determine future buildable land needs. A total of 91 acres (8.6% of buildable area) of net buildable area was deducted for future playgrounds, sport courts, parking lots, pump stations, etc.

Note: Development capacity associated with recent Greenways program land purchases has been removed from the Land Capacity Analysis. Specifically for four tax parcels

totaling approximately 66 acres located in the South Yew Street UGA Reserve area purchased by the City in February 2025; and five tax parcels totaling approximately 112 acres located in the City between Squalicum Creek and the Mt Baker Highway purchased by the City in October 2024.

- Account for Infrastructure Gaps

  Capital facility plans were used to determine which areas of buildable land in the city and unincorporated Urban Growth Area (UGA) are currently missing one or more critical infrastructure elements (roads, water, sewer, fire service, etc.) that are prerequisites for development. For areas where these missing elements are identified as necessary but currently not funded in a capital improvement plan, or are identified as being provided by development, proportional deductions have been made to buildable land. These deductions range from 30% to 75% of net buildable area and represent anticipated timelines for completion of these facilities as they are funded, designed, and then constructed during the planning period. The combined deductions impact 16% of citywide net buildable land area.

- Deduct Land for Future Infrastructure

  As vacant land is developed in the city and UGA new roads, stormwater facilities and related infrastructure also will be developed. Bellingham's deductions to buildable lands for these facilities are based on observed patterns of development and vary by zoning type. They range from 0% in Urban Villages, to 10% in residential multi, commercial and industrial zones, and 24% in residential single zones.

- Local Jurisdiction Review

  In addition to the analysis of buildable vacant, partially-developed, and underutilized land, Bellingham building permit data was used to identify pending residential, commercial, and industrial development projects that have had permits issued but are still under construction, or are still in the review process and recent residential plats with developable vacant lots that have all infrastructure in-place. The future housing units and commercial or industrial square footage associated with these permits or lots are included in the land capacity analysis as pending development. Because the property owner or developer intent to complete the projects are indicated by their action or status, no market factor is deducted from these pending development totals.

  Future housing and commercial and industrial square footage associated with adopted institutional master plans (WWU, WCC, BTC, PeaceHealth, Airport) and selected urban village master plans that include phasing plan elements have also been included in a separate master plan development category. For these master plans, only development phases that fall within the 2025-2045 planning horizon are included. The capacity estimates for specific master plan areas include market factor deductions for

anticipated challenges related to mandated environmental cleanup in the Waterfront District, and the difficulties of developing in areas on and adjacent to the historic brownfield/landfill in the Old Town District.

- Deduct Market Factor

  The market factors developed for Bellingham's land capacity analysis are arranged in a tiered system corresponding to general assumptions connected to complexities involved in development and the relative return or benefit to property owners and developers. The market factors assigned to each tier are as follows:

Vacant higher density/intensity	= 20%
Vacant lower density/intensity	= 25%
Partially-developed higher density/intensity	= 25%
Partially-developed lower density/intensity	= 30%
Underutilized higher density/intensity	= 30%
Underutilized lower density/intensity	= 35%

  A technical memo explaining the details of Bellingham's market factor analysis can be found here: https://maps.cob.org/resources/images/pcd/BellinghamMarketFactor_TechnicalMemo_Seept10th2021.pdf

- Calculate Net Developable Land (as per methodology)

LCM Section 4.3

This section outlines the steps to convert net developable land into future housing and employment capacity. The steps with expanded detail relate specifically to how Bellingham has estimated development capacity for accessory dwelling units (ADUs) and middle-scale housing forms required by WA State House Bills 1337 and 1110. House Bill 1110 in particular applies to Bellingham, but not other jurisdictions in Whatcom County and as such, the methodology steps outlined below are unique to Bellingham.

Vacant, Partially Used, and Underutilized

For vacant, partially used, and underutilized buildable lands after deductions for critical areas, buffers, tall trees, infrastructure gaps, future public uses, quasi-public uses, and infrastructure:

Using values from table below, deduct appropriate market factor and using proposed residential density or commercial and industrial FAR assign future single unit, middle,

multi unit residential or commercial or industrial square footages as shown by percentage allocation. For single unit residential capacity add percentage that adds an ADU as indicated.

Development assumptions used for Vacant, Partially Used, and Underutilized buildable lands (after deductions for critical areas, buffers, tall trees, infrastructure gaps, future public uses, quasi-public uses, and infrastructure)

Proposed Zoning	Vacant Market Factor	Partially Used Market Factor	Underutilized Market Factor	Percent Single Unit Housing	Parcent Middle Housing	Percent Multi Unit Housing	Percent Commercial	Percent Industrial	Percent Single Unit that adds ADU	Proposed Residential Density (units/acre)	Proposed Commercial or Industrial FAR
R1	20%	25%	30%	25%	74%	0%	1%	0%	20%	8.712	0.40
R2	20%	25%	30%	10%	30%	58%	2%	0%	20%	12.103	0.40
R3	20%	25%	30%	0%	0%	95%	5%	0%	0%	17.424	0.40
C	20%	25%	30%	0%	0%	50%	50%	0%	0%	17.424	0.40
C/I	20%	25%	30%	0%	0%	34%	66%	0%	0%	17.424	0.40
C/I/R3	20%	25%	30%	0%	0%	50%	30%	20%	0%	17.424	0.40
I	20%	25%	30%	0%	0%	0%	25%	75%	0%	-	0.25
IN	20%	25%	30%	0%	0%	25%	75%	0%	0%	17.424	0.40
IN/R3	20%	25%	30%	0%	0%	0%	100%	0%	0%	17.424	0.40
RW	20%	25%	30%	100%	0%	0%	0%	0%	0%	6.050	0.00
AO	20%	25%	30%	0%	0%	0%	50%	50%	0%	-	0.25
UV*	20%	25%	30%	0 to 25%	0 to 75%	0 to 100%	0 to 50%	0 to 100%	0%	0 to 69.696	0 to 3.5

* See "UV FARs to Resid Densities" tab for worksheet showing relationship of modeled residential densities in urban villages to allowed floor area ratios (UV zones and land use areas do not have specific assigned residential densities).

- R1 Zones are all existing residential single zones (except those in Lake Whatcom Watershed) and the few low-density residential multi zones. Assumed to allow single unit, ADUs, as well as middle housing types at minimum density of 8.712 units per acre (5,000 sq ft per unit) as well as some small scale commercial services.

- R2 Zones are all residential multi medium-density zones. Assumed to allow limited residential single, middle housing, ADUs, and multi unit housing at a minimum density of 12.103 units per acre (3,600 sq ft per unit) as well as some small scale commercial services.

- R3 Zones are all residential multi high-density zones. Assumed to allow multi unit residential at a minimum density of 17.424 units per acre (2,500 sq ft per unit) as well as some small scale commercial services.

- C Zones are all commercial zones. Assumed to allow a mix of multi unit residential at a minimum density of 17.424 units per acre (2,500 sq ft per unit) as well as commercial uses.

- C/I Zones are all commercial/industrial zones. Assumed to allow a mix of multi unit residential at a minimum density of 17.424 units per acre (2,500 sq ft per unit) as well as commercial and industrial uses.

- C/I/R3 Zones are all commercial/industrial/residential multi zones. Assumed to allow a mix of multi unit residential at a minimum density of 17.424 units per acre (2,500 sq ft per unit) as well as commercial and industrial uses.

- I Zones are all industrial zones. Assumed to allow a mix of industrial and some commercial uses.

- IN Zones are all institutional zones. Assumed to allow some multi unit residential at a minimum density of 17.424 units per acre (2,500 sq ft per unit) as well as commercial uses (taking institutional forms).

- IN/R3 Zones are all institutional/residential multi zones. The single example is assumed to develop as institutional rather than have a residential component.

- RW Zones are all residential zones within the Lake Whatcom Watershed. This low-density zone is assumed to develop with just single unit housing at a density of 6.05 units per acre (7,200 sq ft per unit) and prioritizes protection of Bellingham's municipal water supply.

- AO Zone is the airport operations zone. This special zone focuses on the aviation uses for the airport and is assumed to allow a mix of commercial and industrial uses.

- UV Zones are the urban village zones. These mixed-use zones include land use subareas allowing a variety of medium and high-density residential and mixed commercial and industrial uses. They are regulated through a FAR system ranging up to 3.5 FAR. Residential densities associated with these FARs are estimated to range from 0 to 69 units per acre.

Pending

Including approved or preliminary plats, and permits in application, under review or issued but not yet completed.

The Pending category includes about 450 total records as of June 2023. See "Notes" and "PermitNo" fields (columns BC and BD) on "Master LCA Table - Parcels" tab. Some pre-application records have been included where sufficient documentation is present to establish intended nature and scale of proposed development. Fully-serviced vacant lots in recent but partially-completed plats (with utilities, curb/gutter/sidewalk) are also included in this category regardless of whether a permit has been applied for. These lots are very likely to be built upon during the planning period and do not match with the

modeling assumptions for other vacant or partially-serviced land that still needs land use enablement.

No market factors are deducted from the pending development capacity category.

Master Plan

Including institutional master plans, the airport master plan, and urban village master plans with phasing elements that fall within the 2023-2045 planning period.

Includes future residential, commercial, and industrial capacity documented in adopted institutional master plans for the Bellingham International Airport, the PeaceHealth/St Joseph's Hospital campus, Western Washington University, Whatcom Community College, Bellingham Technical College, and significant portions of the Waterfront and Barkley district urban village plan areas.

Institutional square footage for academic and health-care related uses in these plans allocated to the future commercial square footage category.

Estimated future square footage or housing unit totals have been proportionally allocated based on percentage of development phase(s) that fall within 2023-2045 planning period.

See "Notes" field (column BC) on "Master LCA Table - Parcels" tab for specific totals included. Where appropriate, square footage and housing totals have been proportionally allocated across parcels within a master plan area.

Also includes estimated housing and commercial square footage associated with plan/diagram for the Caitac USA owned portion of the North Bellingham UGA Reserve area.

No market factors are deducted from the master plan development capacity category.

Developed

For land for land previously classified as fully developed (in 2022 Buildable Lands Analysis) that now has additional development capacity related to residential zoning reform bills for ADUs and Middle Housing passed by WA State in 2023

The following steps describe the process for modeling combined capacity for ADUs enabled by House Bill 1337 and Middle Housing (duplex, triplex, fourplex, fiveplex, sixplex, townhome, cottage, etc.) enabled by House Bill 1110 on parcels previously

classified as fully developed in the 2022 Buildable Lands Analysis. Bellingham adopted revised ADU regulations in 2023 (Ordinance 2023-08-22) allowing up to two ADUs per lot in all residential zones outside the Lake Whatcom Watershed. Interim Middle Housing regulations were adopted for all residential areas (outside Lake Whatcom Watershed) in May 2025 (Ordinance 2025-05-008). These interim regulations allow up to four housing units per lot, or up to six if two are affordable housing. Additionally, the interim regulations provide bonus capacity if existing housing on a property is retained by not counting the existing home, or any units created within it against the 4 or 6 additional allowed units. There are a variety of approaches available to property owners to achieve additional capacity through either the ADU and/or middle housing regulations. Therefore, these steps use a data-driven approach to derive how much available space exists on each developed lot, and how many potential housing units could be accommodated within that available space. Once a total is established, a percentage are allocated as middle housing types, and a percentage as ADU types:

1. Assume that the maximum allowable lot coverage will be 65% for all development including building footprints, driveways, decks and other impervious area. This will leave 35% of the area as open space with landscaping or permeable paving. As a reference point, open space requirements for the Infill Toolkit regulations vary by housing type between 30% and 40%. Townhomes are the most-commonly built form and require 30% open space.

2. Subtract 150% of square footage area covered by existing building footprint areas (from GIS data) for each developed lot which will include mapped footprints for house and any garages or other accessory buildings. The extra 50% accounts for area covered by existing driveways, patios, and decks.

3. Subtract land mapped as critical areas or associated buffers.

4. Subtract land mapped for trees taller than 100 feet as a placeholder for potential root protection areas for landmark trees with base height diameters 36” or greater.

5. Assume new ADUs or middle housing units will have 1,250 square foot footprint per unit. Do not count fractional units (round down). The 1,250 square foot footprint is assumed to include 5’ setbacks on all sides. This would leave space for a building footprint of about 625 square feet which could be an ADU, a 2-3 story 1,500 square foot townhome, or a variety of other infill housing forms.

6. Assume a new citywide minimum density (maximum lot size) in the “R1” zone (former RS zones) of 5,000 square feet. For developed lots that have estimated remaining net developable areas greater than 10,000 square feet (after subtracting mapped critical areas and buffers and areas covered by trees taller

than 100 feet) assume creation of an additional lot that can accommodate up to 4 or 6 additional middle housing units.

7. Apply a multiplier of +10% to aggregate future unit capacity to account for owners that decide to divide existing housing units into multiple units. For example, a basement or attic ADU, a single-unit converted to a duplex, etc. Bellingham's recently adopted interim middle housing regulations include a bonus by not counting new units created within the envelope of the existing home against the 4-6 additional allowed units (to incentivize retention of existing housing structures).

8. Assume 30% of estimated potential middle housing is not built due to existing restrictive covenants. Available mapping for restrictive covenants related to historic instances racial "red-lining" from the University of Washington shows that about 15% of platted land for single-unit housing restricts or prohibits other housing forms. This mapping is incomplete.

9. Assume 25% of estimated potential middle housing is built during planning period. Assume 75% does not get built due to property owner choice to build less than what is allowed or not build at all, lack of financing, or other related factors.

10. Assume 33% of middle housing takes the form of ADUs and 67% is built as middle housing forms.

LCA Formulas for ArcGIS Pro

Vacant Land

Residential Single = (((!GrossDevSqFt! - (!CriticalAreasSqFt!+!TreesGE100FtTallSqFt! + !FuturePubUseSqFt! + !InfraGapsSqFt!)) * (1-(!QuasiPubUseDed! + !InfrastructureDed! + !VacantMktFactor!)))*!MixUsePctInSingleFamilyUse!)/(43560/!ProposedResidentialDensity!)

Follow-up calc to reset null and negative values to zero.

Middle Housing = (((!GrossDevSqFt! - (!CriticalAreasSqFt!+!TreesGE100FtTallSqFt! + !FuturePubUseSqFt! + !InfraGapsSqFt!)) * (1-(!QuasiPubUseDed! + !InfrastructureDed! + !VacantMktFactor!)))*!MixUsePctInMiddleHsg!)/(43560/!ProposedResidentialDensity!)

Follow-up calc to reset null and negative values to zero.

Residential Multi = (((!GrossDevSqFt! - (!CriticalAreasSqFt!+!TreesGE100FtTallSqFt! + !FuturePubUseSqFt! + !InfraGapsSqFt!)) * (1-(!QuasiPubUseDed! + !InfrastructureDed! + !VacantMktFactor!)))*!MixUsePctInMultifamilyUse!)/(43560/!ProposedResidentialDensity!)

Follow-up calc to reset null and negative values to zero.

ADUs

Select not = “RW”
!FutureSingleFamilyUnits! * 0.20

Commercial = (((!GrossDevSqFt! - (!CriticalAreasSqFt!+!TreesGE100FtTallSqFt! + !FuturePubUseSqFt! + !InfraGapsSqFt!)) * (1-(!QuasiPubUseDed! + !InfrastructureDed! + !VacantMktFactor!)))*!MixUsePctInCommercialUse!)*!ProposedFAR!

Follow-up calc to reset null and negative values to zero.

Industrial = (((!GrossDevSqFt! - (!CriticalAreasSqFt!+!TreesGE100FtTallSqFt! + !FuturePubUseSqFt! + !InfraGapsSqFt!)) * (1-(!QuasiPubUseDed! + !InfrastructureDed! + !VacantMktFactor!)))*!MixUsePctInIndustrialUse!)*!ProposedFAR!

Partially Used Land

No Residential in this category as all are now considered developed and have additional capacity that will be derived using HB 1110 methodology.

Commercial = (((!GrossDevSqFt! - (!CriticalAreasSqFt!+!TreesGE100FtTallSqFt! + !FuturePubUseSqFt! + !InfraGapsSqFt!)) * (1-(!QuasiPubUseDed! + !InfrastructureDed! + !PartUsedMktFactor!)))*!MixUsePctInCommercialUse!)*!ProposedFAR!

Follow-up calc to reset null and negative values to zero.

Industrial = (((!GrossDevSqFt! - (!CriticalAreasSqFt!+!TreesGE100FtTallSqFt! + !FuturePubUseSqFt! + !InfraGapsSqFt!)) * (1-(!QuasiPubUseDed! + !InfrastructureDed! + !PartUsedMktFactor!)))*!MixUsePctInIndustrialUse!)*!ProposedFAR!

Follow-up calc to reset null and negative values to zero.

Underutilized Land

Residential Single = (((!GrossDevSqFt! - (!CriticalAreasSqFt!+!TreesGE100FtTallSqFt! + !FuturePubUseSqFt! + !InfraGapsSqFt!)) * (1-(!QuasiPubUseDed! + !InfrastructureDed! + !UnderutilMktFactor!)))*!MixUsePctInSingleFamilyUse!)/(43560/!ProposedResidentialDensity!)

Follow-up calc to reset null and negative values to zero.

Middle Housing = (((!GrossDevSqFt! - (!CriticalAreasSqFt!+!TreesGE100FtTallSqFt! + !FuturePubUseSqFt! + !InfraGapsSqFt!)) * (1-(!QuasiPubUseDed! + !InfrastructureDed! + !UnderutilMktFactor!)))*!MixUsePctInMiddleHsg!)/(43560/!ProposedResidentialDensity!)

Follow-up calc to reset null and negative values to zero.

Residential Multi = (((!GrossDevSqFt! - (!CriticalAreasSqFt!+!TreesGE100FtTallSqFt! + !FuturePubUseSqFt! + !InfraGapsSqFt!)) * (1-(!QuasiPubUseDed! + !InfrastructureDed! + !UnderutilMktFactor!)))*!MixUsePctInMultifamilyUse!)/(43560/!ProposedResidentialDensity!)

No ADUs

Commercial = (((!GrossDevSqFt! - (!CriticalAreasSqFt!+!TreesGE100FtTallSqFt! + !FuturePubUseSqFt! + !InfraGapsSqFt!)) * (1-(!QuasiPubUseDed! + !InfrastructureDed! + !UnderutilMktFactor!)))*!MixUsePctInCommercialUse!)*!ProposedFAR!

Follow-up calc to reset null and negative values to zero.

Industrial = (((!GrossDevSqFt! - (!CriticalAreasSqFt!+!TreesGE100FtTallSqFt! + !FuturePubUseSqFt! + !InfraGapsSqFt!)) * (1-(!QuasiPubUseDed! + !InfrastructureDed! + !UnderutilMktFactor!)))*!MixUsePctInIndustrialUse!)*!ProposedFAR!

Follow-up calc to reset null and negative values to zero.

GIS SQL selection formulas and calculations for net ADU and Middle Housing capacity on developed lots (capacity in addition to existing single unit). Note – calculations are reductive in nature so must be executed in the order listed:

Selection 1:
PMH_Flag = 1 And ((((Shape_Area * ExistLotCoverPct)*1.5) + 1250)/(Shape_Area-(CriticalAreasSqFt+TreesGE100FtTallSqFt)))<0.65

Calculation: NetMiddleHousingCapacity = 1

Selection 2:
PMH_Flag = 1 And ((((Shape_Area * ExistLotCoverPct)*1.5) + 2500)/(Shape_Area-(CriticalAreasSqFt+TreesGE100FtTallSqFt)))<0.65

Calculation: NetMiddleHousingCapacity = 2

Selection 3:
PMH_Flag = 1 And ((((Shape_Area * ExistLotCoverPct)*1.5) + 3750)/(Shape_Area-(CriticalAreasSqFt+TreesGE100FtTallSqFt)))<0.65

Calculation: NetMiddleHousingCapacity = 3

Selection 4:
PMH_Flag = 1 And ((((Shape_Area * ExistLotCoverPct)*1.5) + 5000)/(Shape_Area-(CriticalAreasSqFt+TreesGE100FtTallSqFt)))<0.65

Calculation: NetMiddleHousingCapacity = 4

Selection 5:
PMH_Flag = 1 And ((((Shape_Area * ExistLotCoverPct)*1.5) + 6250)/(Shape_Area-(CriticalAreasSqFt+TreesGE100FtTallSqFt)))<0.65

Calculation: NetMiddleHousingCapacity = 5

Selection 6:
PMH_Flag = 1 And ((((Shape_Area * ExistLotCoverPct)*1.5) + 7500)/(Shape_Area-(CriticalAreasSqFt+TreesGE100FtTallSqFt)))<0.65

Calculation: NetMiddleHousingCapacity = 6

Selection 7:
PMH_Flag = 1 And ((((Shape_Area * ExistLotCoverPct)*1.5) + 8750)/(Shape_Area-(CriticalAreasSqFt+TreesGE100FtTallSqFt)))<0.65

Calculation: NetMiddleHousingCapacity = 7

Selection 8:
PMH_Flag = 1 And ((((Shape_Area * ExistLotCoverPct)*1.5) + 10000)/(Shape_Area-(CriticalAreasSqFt+TreesGE100FtTallSqFt)))<0.65

Calculation: NetMiddleHousingCapacity = 8

Selection 9:
PMH_Flag = 1 And ((((Shape_Area * ExistLotCoverPct)*1.5) + 11250)/(Shape_Area-(CriticalAreasSqFt+TreesGE100FtTallSqFt)))<0.65

Calculation: NetMiddleHousingCapacity = 9

Selection 10:
PMH_Flag = 1 And ((((Shape_Area * ExistLotCoverPct)*1.5) + 12500)/(Shape_Area-(CriticalAreasSqFt+TreesGE100FtTallSqFt)))<0.65

Calculation: NetMiddleHousingCapacity = 10

Selection 11:
PMH_Flag = 1 And ((((Shape_Area * ExistLotCoverPct)*1.5) + 13750)/(Shape_Area-(CriticalAreasSqFt+TreesGE100FtTallSqFt)))<0.65

Calculation: NetMiddleHousingCapacity = 11

PMH_Flag = 1
Calculation: FutureMiddleHsgUnits = (((!PotentialMiddleHousing! * 1.10)*0.70)*0.25)*0.67

PMH_Flag = 1
Calculation: FutureADUs = (((!PotentialMiddleHousing! * 1.10)*0.70)*0.25)*0.33