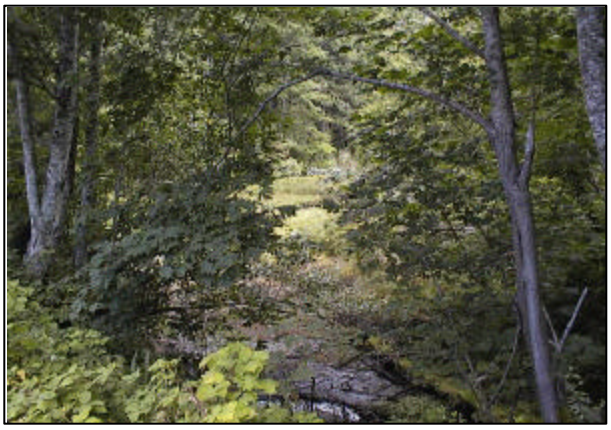
BUILDABLE LANDS ANALYSIS
1995-1999

KITSAP COUNTY



August 2002

Buildable Lands Analysis

Kitsap County

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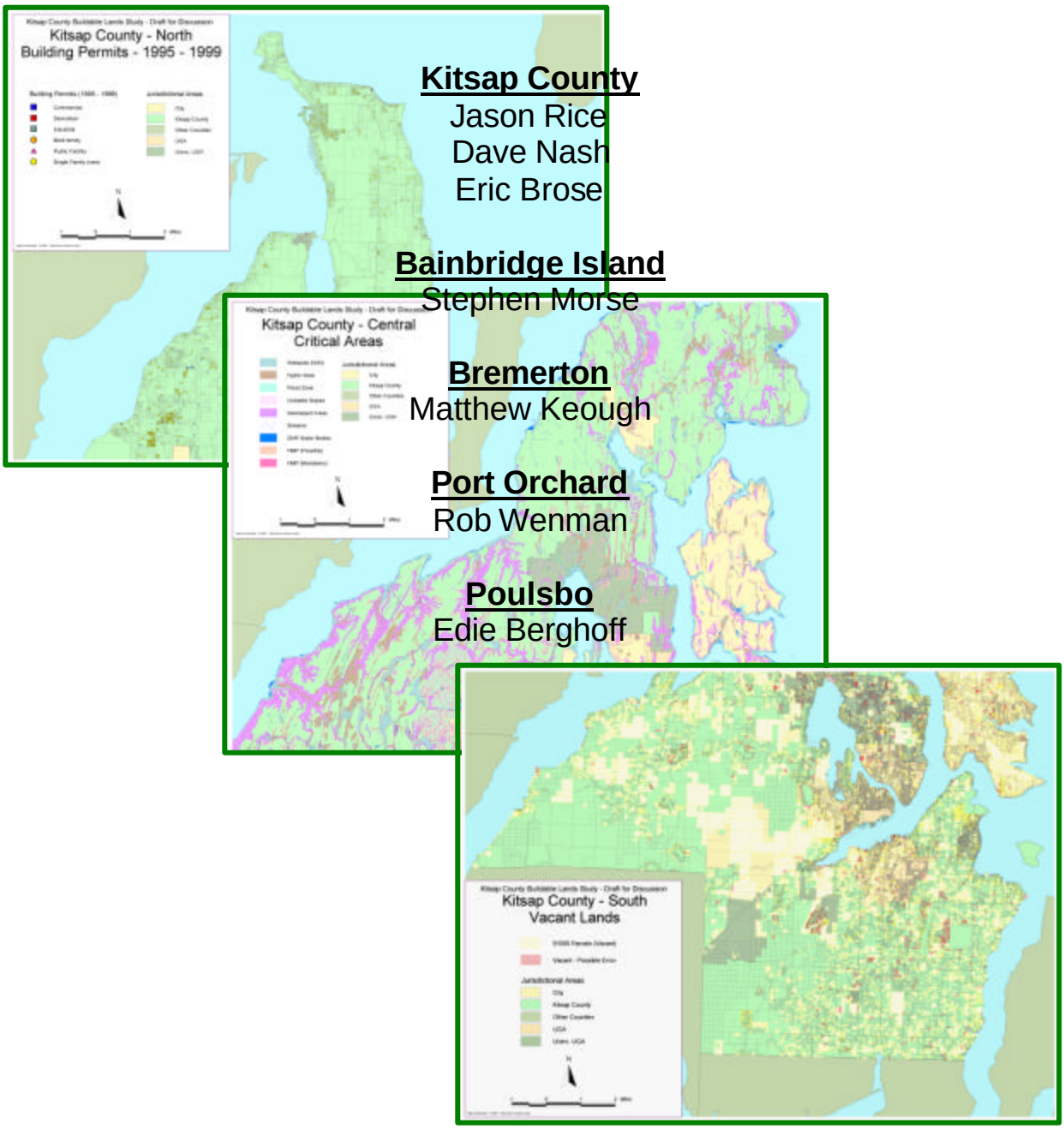

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Executive Summary

Why is the County preparing this report?

Kitsap County has prepared this report in response to requirements outlined in Washington State's 1990 Growth Management Act. More specifically, this report addresses a set of 1997 amendments to the act, which are referred to as the *Buildable Lands Program* (BLP). [1]

This report is the first required evaluation report for the BLP. It is due September 1, 2002, with periodic evaluation reports due each five years thereafter.

What is the Buildable Lands Program?

The BLP is a process for counties and their cities to monitor development trends with an eye toward growth management objectives. Planning and monitoring activities that stem from BLP include annual data collection, jurisdictional coordination, and updates to buildable lands inventories.

BLP requirements are framed around two central questions:

1) Are buildable lands within the county's Urban Growth Areas sufficient to accommodate future growth?
2) If not, what corrective measures are available to address the land need?

To answer the first question, counties must use 20-year projections for housing and employment to estimate growth expected for UGAs. Assumptions on future growth rates and densities should be based on development activity occurring during the most recent five-year period.

The second question is more qualitative. It may be addressed through policy changes, such as allowing a wider range of housing types/densities. If no other options exist, it may be addressed alternatively through a UGA amendment.

This report is:

- Prepared in response to the legislative requirement to address 6 key GMA questions.
- A snap-shot in time –shows development densities and land supply only through 1999.
- Generally indicative of whether land supply is adequate for forecasted demand.
- Intended to show whether the County and cities are achieving urban densities.
- Intended to reflect development trends in rural areas.

This report is not:

- A market analysis of economic conditions – it does not indicate number, size and availability of buildable lots; and does not include market factors affecting development.
- A predictor of where and when development activity may occur.
- Intended to be accurate at extremely small levels of geography – data analyzed is aggregated for analysis.

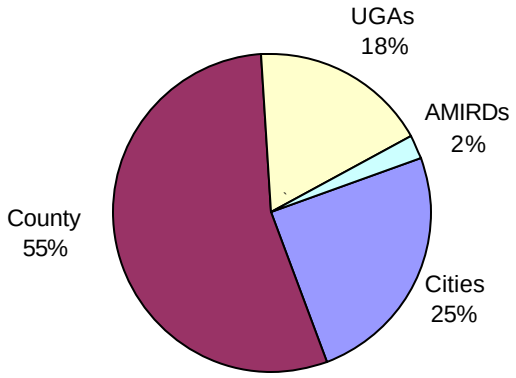
[1] The requirements are detailed in RCW 36.70A.215

- Intended to be a tool for comparison amongst communities – each jurisdiction has unique issues regarding implementation of comprehensive plans and varying development regulations that affect densities and development patterns.
- Able to reflect more recent changes in development regulations – it takes time for these to become apparent in the data.

What are the findings?

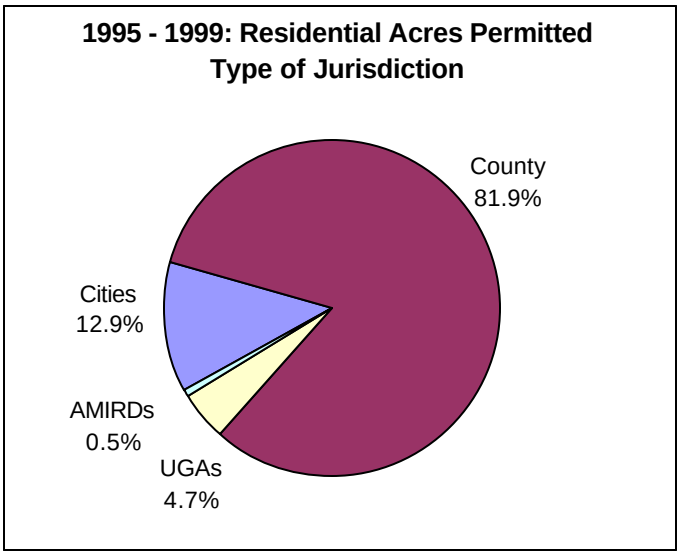
Residential development has been active in Kitsap County between 1995 and 1999, with a slight majority of all new residential permits issued in the rural unincorporated area. Cities have captured about one fourth of new residential permits, with UGAs close behind, followed by areas of more intense rural development (AMIRDs), which include Manchester Village, Port Gamble and Suquamish Village.

1995 - 1999: Residential Units Permitted
Type of Jurisdiction



In terms of land area, the vast majority of new residential land consumed is in the jurisdiction of rural unincorporated Kitsap County. This is due primarily to the lower rural development densities prescribed for that area. For most of Kitsap County's cities, development has been occurring either at, or close to, the densities outlined in their comprehensive plans and implementing ordinances.

1995 - 1999: Residential Acres Permitted
Type of Jurisdiction

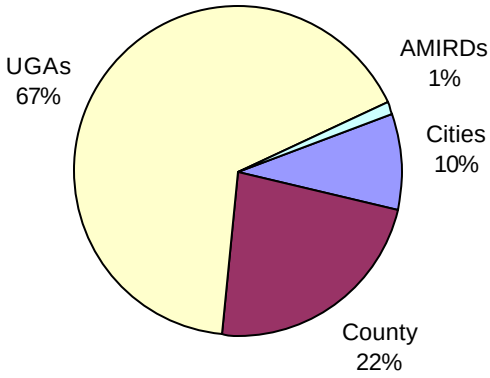


When looking at cities and their associated UGAs together, there appears to be sufficient land to accommodate projected growth, *should development continue to occur at densities roughly equivalent to those occurring between 1995-1999*. Individually, Bainbridge Island and Port Orchard appear to have adequate supply, while Bremerton and Poulsbo may not. For the city of Bremerton however, where zoning densities as high as 44 units per acre currently coexist with a lower relative demand, additional land may not be necessary or desirable. In the case of Poulsbo, the City has undergone a subarea planning effort to determine its future needs. This study also found that additional land would be available for all jurisdictions if future development averages closer to four (4) units per acre.

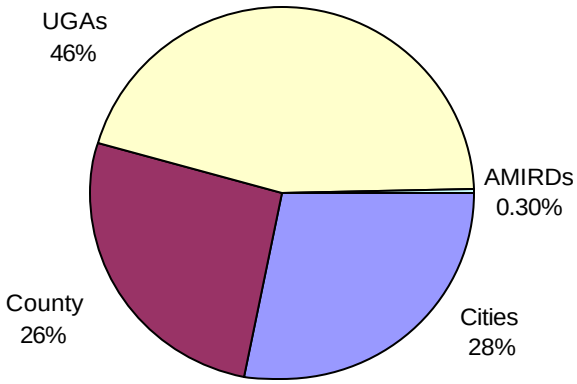
In rural unincorporated Kitsap County, development densities average approximately 1 unit per acre, which represents a midpoint between extremely rural and urban-style densities. One development constraint is the large number of smaller, nonconforming lots of record. Until these parcels are fully absorbed, the County may face obstacles in directing new growth towards urban areas.

This analysis, which is based largely on geocoded building permit data, has also found that about 4,000 acres of land have been absorbed for commercial and industrial uses during the 1995 – 1999 analysis period. While it has been beyond the scope of this study to trace specific uses and activities associated with these permits, research into development types (warehousing, retail, office), location, and number of employees, may help answer questions resulting from Comprehensive Plan commercial and industrial land need projections of 3,900 acres through 2012. Further study is recommended in order to address this possible discrepancy.

1995 - 1999: Commercial and Industrial Permits - Type of Jurisdiction



1995 - 1999: Commercial and Industrial Acres Permitted - Type of Jurisdiction



Approximately 46 percent of land with new commercial and industrial permits is inside of UGAs, with Silverdale, SKIA, Central Kitsap County and Port Orchard UGA using the bulk. Of the roughly 28 percent that went to cities, Bremerton's land base absorbed the vast majority. Finally, just over one quarter of the new commercial and industrial land base occurred in rural Kitsap County.

This analysis, which has relied on established employment density ratios and standards outlined in Kitsap County's comprehensive plan, indicates that Kitsap County has sufficient commercial and industrial land supply to accommodate projected employment growth.

II. Introduction

Growth Management Act

The Growth Management Act (GMA), enacted in 1990, set out 13 goals to guide local governments in comprehensive planning. Kitsap County and its jurisdictions are required to plan under GMA.

The GMA requires that local jurisdictions include the following elements in their comprehensive plans:

- "Early and continuous" involvement of citizens;
- Protection of natural resource industries;
- Protection of the environment and critical areas;
- Reduction of urban sprawl in rural areas;
- Adequate infrastructure to support urban development in an efficient manner;
- Protection of property rights from arbitrary and discriminatory actions;
- Timely and predictable permit processing;
- Retain open space and recreation opportunities;
- Encourage economic development;
- Encourage multimodal transportation systems;
- Provisions for public facilities and services are concurrent with development;
- Encourage historic preservation; and
- Encourage the availability of affordable housing for all economic segments of the population.

A central requirement of the GMA is for jurisdictions to establish Urban Growth Areas (UGAs). UGAs must have adequate land area and zoning designations to accommodate 20 years of projected urban growth. Geographically UGAs include existing incorporated towns and cities, as well as the unincorporated areas of the county that will accommodate the 20-year projected population.

Jurisdictions implement their comprehensive plans through development regulations and standards, such as zoning ordinances, environmental ordinances and design standards. These regulations must be consistent with policies in the respective comprehensive plan and are subject to "continuing review and evaluation" by each jurisdiction (RCW 36.70A.130.)

Subsequent amendments to the GMA establish timelines for jurisdictions required to plan under the GMA to take action to review and, if needed, revise their plans and regulations to ensure that they comply with the GMA. For the six largest counties, additional requirements for measuring compliance require that those counties, and the jurisdictions within them, monitor land supply and urban densities to determine if there is adequate land supply to meet population and employment projections for each respective jurisdiction. This process is known as the Buildable Lands Analysis and the findings are the focus of this report.

Buildable Lands

In 1997, amendments to the GMA created a review and evaluation program that has come to be known as the Buildable Lands Program (BLP). The legislation requires that six urban counties and the cities within their boundaries assess land supply in relationship to comprehensive plan projections, assumptions and objectives. The six counties are Clark, King, Kitsap, Pierce, Snohomish and Thurston.

The goal of the program is to provide data, based on building permits, vacant lands and critical area inventories that will help in future planning efforts. The BLP looks at the actual development of residential, commercial and industrial lands from 1995 to 1999, and evaluates whether or not there is adequate land supply available to meet population and employment projections.

Kitsap County has been working on the data collection element of the program for several years. The evaluation of data looked at actual growth as compared to projected growth for residential, commercial and industrial lands.

Through the buildable land analysis, Kitsap County and the other buildable lands mandated counties will answer the following questions:

1. What is the actual density and type of housing that has been constructed in the Urban Growth Areas? Are urban densities being achieved?
2. How much land was actually developed for residential use, and based on this, how much land would be needed for residential development during the remainder of the 20-year planning period?
3. How much land was actually developed for commercial and industrial uses, and how much is needed for the 20-year planning period?
4. To what extent have capital facilities, critical areas and rural development affected the supply of suitable land?
5. Is there enough buildable land in each city and the county to accommodate population and employment projections?
6. Are there inconsistencies between actual and planned development?

III. Local Context

KITSAP COUNTY OVERVIEW

Size (Total Acres):	254,220
2,000 Population	230,200
Residential Acres	213,637
Commercial/Industrial Acres	7,628
Public/Exempt Lands	36,848
Critical Areas	44,491

Kitsap County and its jurisdictions comprise an area of approximately 400 square miles and a population of over 230,000. Surrounded by approximately 240 miles of saltwater shoreline, the growth and economic vitality of the county and its cities have historically been linked to the natural resources of Puget Sound.

The comprehensive plans for Kitsap County and each of its jurisdictions set out the geographical parameters and the context in which the implementation of the goals and policies can be analyzed and measured. Each of Kitsap County's incorporated cities has adopted comprehensive plans and zoning standards that reflect the unique characteristics of their communities. It is important to note that each city has distinct development patterns, pressures and goals that distinguish them from one another, and affect how they will each change over time. This analysis reflects each community independently and is not intended to compare one community against another.

The Kitsap County Buildable Lands Analysis addresses several jurisdictional designations identified in the Comprehensive Plan. These include the incorporated cities of Bainbridge Island, Bremerton, and Port Orchard; their related Urban Growth Areas (UGAs); the city of Poulsbo and the Poulsbo Joint Planning Area (JPA); the UGAs of Central Kitsap, Gorst, Kingston, McCormick Woods, and Silverdale; the villages of Port Gamble, Manchester, and Suquamish, and rural unincorporated Kitsap County.

Military Lands

Kitsap County's land use is heavily influenced by the United States Department of Defense. In total, military lands occupy 8,752 acres, which is approximately three (3) percent of total land in the County. Home of the Puget Sound Naval Shipyard, the Naval Submarine Base Bangor, the Naval Undersea Warfare Center Division Keyport and the Fleet and Industrial Supply Center, all contribute to the population and economics of Kitsap County.

There are over 56,000 active duty, family members and retired military personnel residing in the County. However, these numbers can fluctuate significantly. Between 2000 and 2001, the armed forces personnel in Kitsap County experienced a 16 percent increase. In the years between 1995 and 2000, the armed forces experienced an overall decline in personnel of 12 percent. In addition to military personnel, the Navy employs 16,000 civilians.

The Puget Sound Naval Shipyard is the largest naval shore facility in the Pacific Northwest and one of the State's largest industrial operations. It encompasses 179 acres and is adjacent to the north and east edges of the City of Bremerton. The Shipyard payroll, including both civilian and military work force, totals approximately $363 million annually.

The Naval Submarine Base Bangor encompasses 7,200 acres and is located approximately three miles from Silverdale. The base provides 1,318 residential dwelling units through a mix of apartments, townhouses and single-family homes.

The abundance of military lands is relevant to this study because the county and cities do not plan for nor control development within these bases. Additionally, while much of the housing for military personnel is provided on base, a large proportion of the military population chooses to live off base. As military populations fluctuate, this affects the supply and demand of both single and multi-family housing in the county.

Countywide Planning Context

Prior to the comprehensive planning efforts of Kitsap County and its jurisdictions, the GMA required that counties and cities establish framework policies to guide the development of each local comprehensive plan. In 1992, the Board of County Commissioners adopted the Kitsap countywide planning policies, developed through a multi-jurisdictional effort. Participants included: Kitsap Regional Council, City of Bainbridge Island, City of Port Orchard, Port Gamble S'Klallam Tribe, Kitsap County, City of Bremerton, City of Poulsbo and the Squamish Tribe.

The specific objectives of the County-wide Planning Policies that are relevant to the BLP include:

- Establish a process and criteria for designation of Urban Growth Areas.
- Promote of contiguous and orderly development.
- Ensure favorable employment and economic conditions in the county.

Key goals of the GMA and comprehensive plans are to identify areas that are most conducive to commercial, industrial and residential growth, and that can be economically served by public utilities. These areas should be designated as Urban Growth Areas (UGAs). The following planning policies guide and influence decisions:

- Areas designated for urban growth should be determined by the existing development pattern, residential densities, and the ability of the appropriate service provider to provide a full range of urban services.

- All UGAs shall be acknowledged in county and city comprehensive plans.

- Urban growth shall be encouraged within UGAs, and not permitted outside of an adopted UGA, except for new fully contained communities, as authorized by the Growth Management Act.

- Sufficient land must be included in the UGAs to accommodate a minimum 20- year population forecast.

- The Kitsap Regional Coordination Council shall review any proposed amendment to a UGA for consistency with regional policies prior to public hearings.

- Prior to amending a UGA, the County and respective City shall determine the capital improvement implications of the amendment to ascertain that a full range of urban services will be present within the forecast period.

The Kitsap County Comprehensive Plan (KCCP) was initially adopted in 1994 and was subsequently appealed. The Central Puget Sound Growth Management Hearings Board (Hearings Board) found the 1994 plan and its implementing ordinances invalid. Kitsap County was required to revise their plan for compliance with the Hearings Board's order and the GMA. In 1996, a revised plan was adopted by Kitsap County and again appealed. After addressing issues remanded back to the County from the 1996 Comprehensive Plan appeal, the Hearings Board upheld the plan and it was reinstated in May of 1998. During the five-year period in which the plan was under appeal, the county adopted interim land use and zoning regulations that allowed for development to continue in a limited fashion. While many of these land use and zoning regulations were similar to those ultimately adopted, this delay has resulted in the following:

- An evaluation period for the BLA that encompasses a mix of land use regulations and densities. Almost four (4) years of data is under the pre-Comprehensive Plan land use regulations with only one year of data under the adopted Plan regulations.

- In most cases, the total number of acres developed in each jurisdiction and within each zoning district is very small. This does not provide sufficient data to account for market fluctuations, and may not provide statistically accurate results.

- Since the plan was upheld in 1998, annual updates have occurred to the plan that include provisions for designating Forest Resource Lands, adopting the Suquamish Rural Village Subarea Plan, and designating Port Gamble as a Rural Historic Town. Development regulations such as zoning, critical areas and design standards have been, and continue to be, updated to implement the goals and policies of the comprehensive plan.

IV. Analysis Background

Kitsap County is the lead agency responsible for completion of the Buildable Lands Analysis for each jurisdiction within its boundaries. The County and cities have worked cooperatively to collect the data needed to conduct the analysis. This collaborative approach was achieved in part through the formation of a Technical Advisory Committee (TAC) comprised of representatives from each jurisdiction. This group met regularly throughout the data gathering and analysis phases of the project.

Data collection for the Kitsap County Buildable Lands Analysis began shortly after the passage of the BLA requirement by the Washington State legislature. Between 1995 and 2000 the County focused their efforts on setting up the necessary Geographic Information Systems (GIS) and developing the raw data needed to conduct the analysis.

In 2001 Kitsap County retained The Shea Group to complete the data collection, analysis, and produce the report. The Shea Group staff took the data compiled by the County and supplemented it with additional data from the County Assessor's office. Additional data was also collected form each of the jurisdictions. Quality control checks were done by providing each jurisdiction with maps that showed the building permits, demolition permits, critical areas, and zoning to be used in the analysis. The Shea Group staff met with each jurisdiction to discuss the maps and other data to ensure all parties were comfortable with the information being used in the analysis. Following review and acceptance of the data by the jurisdictions, the analysis portion of the project was begun.

Analysis of land use data is particularly challenging due to the ever-evolving state of most plans and regulations. Within most comprehensive plans are mandates to do further analysis or planning for certain areas or elements of the plan. This is particularly true for Kitsap County. Due to a number of appeals, Kitsap County did not have a valid adopted Comprehensive Plan until May of 1998. Because the County has a number of areas that have historic development patterns of near urban densities, the Comprehensive Plan could not adequately address each of them under the time constraints imposed by the Growth Management Act. Therefore, the County established joint planning areas to address unresolved issues related to land need for accommodating growth projections.

In the context of the Buildable Lands Analysis, the lack of specific sub-area plans for these more densely developed areas results in information that may not be applicable over time. If the zoning, density standards, or other characteristics of development change with the adoption of a sub-area plan, data reported in this analysis may not be comparable to that of future analysis.

It is important to keep in mind that comprehensive plans, zoning ordinances, and city limit lines are not static over the analysis period. Although each jurisdiction adopted a Comprehensive Plan, each plan has been updated annually. To track the nature of each update and include analysis of the changes within this report was unrealistic. Therefore, the information on allowed densities, city limits, and the like reflect the status of the codes and plans at the time the analysis was begun. Discussions with City and County staff indicate that the changes made to the codes over the analysis period are unlikely to affect the outcome of the analysis in a statistically significant manner.

V. The Questions

The Six Buildable Lands Program Questions

1. What is the actual density and type of housing that has been constructed in UGAs since the last comprehensive plan was adopted or the last five-year evaluation completed? Are urban densities being achieved within UGAs? If not, what measures could be taken, other than adjusting UGAs, to comply with the GMA?

2. How much land was actually developed for residential use and at what density since the comprehensive plan was adopted or the last five-year evaluation completed? Based on this and other relevant information, how much land would be needed for residential development during the remainder of the 20-year comprehensive planning period?

3. How much land was actually developed for commercial and industrial uses within the UGA since the last comprehensive plan was adopted or the last five-year evaluation completed? Based on this and other relevant information, how much land would be needed for commercial and industrial development during the remainder of the 20-year comprehensive planning period?

4. To what extent have capital facilities, critical areas, and rural development affected the supply of land suitable for development over the comprehensive plan's 20-year timeframe?

5. Is there enough suitable land in each county and its cities to accommodate the county-wide population growth for the remainder of the 20-year planning period (based on the forecast by the state Office of Financial Management and the subsequent allocations between the county and cities)?

6. Does the evaluation demonstrate any inconsistencies between the actual level of residential, commercial, and industrial development that occurred during the five-year review period compared to the vision contained in the county-wide planning policies and comprehensive plans and the goals and requirements of the GMA?

Following the analysis of the data to answer the six questions above, the final question should then be asked.

7. What measures can be taken that are reasonably likely to increase consistency during the subsequent five-year period, if the comparison above shows inconsistency?

The data and analysis used in the study:

- Provides information on densities and land supply at a fixed point in time;
- Are an indication of whether land supply is adequate for forecasted demand; and
- Are intended to show whether the County and cities are achieving urban densities within city limits and UGAs and development trends in rural areas.

Since "The Questions" and their respective answers are the heart of the Buildable Lands analysis, they are illustrated throughout this analysis in shaded boxes like this one. Questions addressed within each section are highlighted in bold text

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VI. Approach and Methodology

Interpreting the Questions – The Methodology

The discussion below provides additional detail on how each of the six questions have been interpreted, as well as the data collected and procedures used to investigate these questions. Specific tabulations for each jurisdiction are detailed in the section that follows. A summary of the findings from this analysis appears in **Chapter IX** of this report.

1. What is the density and type of housing that has been constructed in UGAs since the last comprehensive plan was adopted or the last five-year evaluation completed? Are urban densities being achieved within UGAs? If not, what measures could be taken, other than adjusting UGA's, to comply with the GMA?

This part of the study asks about recent residential development densities for cities and urban growth areas. It aims to gauge whether cities have made efforts to promote efficient land use within their urban growth areas.

Residential densities may be analyzed as either permitted densities or platted densities. This study looks at both. Permitted densities cover all units that received a building permit for new residential construction. This will show a more comprehensive picture of all land developed, though larger, non-conforming lots of record will lower the final density estimate. Platted densities, by contrast, include subdivisions that were committed to a specific lot size, whether or not development actually occurred on each separate parcel. These densities also incorporate land set aside as private open space or common area.

In order to collect information on permitted and platted developments, it was necessary to collect and geocode building permit information to specific parcels in Kitsap County. First, a database of residential building permits for new construction, including mobile homes, was collected from the County Assessor's Office. These permits were geocodes (or assigned to) their respective parcels. Where more than one permit was issued for the same parcel, information was added about the number of permits and each permit type (single family, mobile home, multi-family) occurring on that parcel. Finally, the zoning designation and density of each parcel was added to the data file, as were geographic area assignments (specific cities, UGAs). For shoreline parcels, the area of each tax lot that extends beyond the shoreline was subtracted from the parcel area. For more information on this part of this analysis, please see the memorandum in **Chapter XI**, the Technical Appendix.

A comparison between both permitted and platted densities for each jurisdiction reveals two major trends. In some cases, platted densities are lower than permitted densities, primarily due to open space. The amount of land in a subdivision that is "set aside" as open space effectively reduces the average density. In other cases, platted densities may be higher than permitted densities. This is because platted density estimates do not include development on larger, non-conforming lots of record, which would lower the final estimate.

In this analysis, manufactured homes are considered single-family residences, and have been included in the final permitted density estimates.

The Buildable Lands guidelines encourage separate consideration of single-family and multi-family developments. While attached housing and mixed use housing are occurring with

somewhat more frequency across Kitsap County, single-family development is still largely the prevalent development pattern. In a number of cases, as shown in the separate tables for each jurisdiction that follow, multi-family development activity is low to non-existent. Residential development occurring in areas that allow some mixed-use development have also been included in the tabulations.

2. How much land was actually developed for residential use, and at what density, since the comprehensive plan was adopted or the last five-year evaluation completed? Based on this and other relevant information, how much land would be needed for residential development during the remainder of the 20-year comprehensive planning period?

This is an extension of the question above. It uses information gained in Question #1, as well as several other elements to estimate land need for each area of interest.

The most important of these elements are the allocated dwelling unit targets. Specific population targets through 2012 were established for each jurisdiction; however, population allocations outside of incorporated cities were aggregated 70% to urban growth areas and 30% to the rural county and rural areas. A detailed breakdown of calculations for population targets for specific UGAs follows.

The following table shows the 2000-2012 targets for cities and for the unincorporated area.

Summary of 1992 - 2012 Population Targets
2000 - 2012 Adjustment for County and Cities

Jurisdiction	1992 Pop Estimates from OFM	2000 Pop Estimates from OFM	KRCC 1992 - 2012 Forecasted Increase for County	(KRCC Expected 2012 Population)	Estimated 2000 - 2012 Remaining Target
COUNTY TOTAL	205,600	230,200	86,624	292,224	62,024
Incorporated	66,395	70,080	33,018	99,413	26,503
Bainbridge Is.	16,850	20,150	7,430	24,280	4,130
Bremerton[2]	38,990	36,160	19,152	58,142	19,152
Port Orchard	5,275	7,270	2,300	7,575	305
Poulsbo	5,280	6,500	4,136	9,416	2,916
Unincorporated	139,205	160,120	53,606	192,811	35,521
Unincorporated UGA - 70% of Unincorporated Total					24,865
Unincorporated Rural - 30% of Unincorporated Total					10,656

Following county policies, 70 percent of the county's target has been reserved for urban growth areas; the remaining 30 percent goes towards the rural county and rural areas. Specific UGA

[2] Note: The KRCC forecasted increase for Bremerton (1992 – 2012) is kept as the City's target. Bremerton's target is not increased due to the fact that population was lost between 1992 and 2000.

targets are based on comprehensive plan estimates, but are adjusted to meet the total UGA allocation. The table below shows how these targets have been allocated.

Allocation of UGA Population Target
Based on May 1998 Comprehensive Plan Estimates

Urban Growth Area	May, 1998 Comprehensive Plan Population Estimates	Percent of Total	New UGA Population Allocation
Bremerton UGA	3,268	12.1%	3,008
Central Kitsap UGA	7,398	27.4%	6,809
Gorst UGA	0	0.0%	0
Kingston UGA	1,700	6.3%	1,565
McCormick Woods UGA	2,905	10.8%	2,674
Port Orchard UGA	2,803	10.4%	2,580
Poulsbo JPA	3,864	14.3%	3,556
Silverdale UGA	4,910	18.2%	4,519
SKIA UGA	0	0.0%	0
Port Gamble Village *	170	0.6%	157
TOTAL	27,018	100.00%	24,865

Remaining "targets" for rural areas (because of their AMIRD status no *actual* population targets have been established) and the county are based on observed growth in these areas between 1995-1999.

Rural Areas with County Population Target
Based on the Distribution of New Growth

Unincorporated Areas	Growth in Units, 1995-99	Percent of Growth	Target
County	3,014	94.9%	10,113
Port Gamble Village *	-	-	
Manchester Village	94	3.0%	315
Suquamish Village	68	2.1%	228
TOTAL	3,176	100%	10,656

*Port Gamble Village is included in the UGA allocations since it was given a population allocation in the May 1998 Comprehensive Plan.

Additional assumptions are then made in order to convert these population targets into dwelling unit targets for each city, UGA and rural area. First, an assumption is made regarding the portion of the population target that may reside in single-family units vs. multi-family units. This is commonly referred to as the single family/multi-family split. The TAC discussed whether to use historical development patterns or individual jurisdiction single family/multi-family splits. Ultimately, the TAC decided to use the County comprehensive plan goals of 85 percent single family/15 percent multi-family.

Next, population estimates for both single family and multi-family residents are converted to dwelling unit estimates. For single-family units, 2.5 persons per household are assumed. For multi-family units, 1.8 persons per household are assumed. These estimates were reviewed and approved by TAC members during initial project discussions.

Finally, separate estimates for single family and multi-family dwelling units are converted into an estimate of net acres needed. This calculation uses the observed development patterns within each study area. For example, if an area is shown to need 1,000 single family dwelling units, and has developed at densities of 3.5 units per acre, the land need for single family units over the next 12 years is estimated to be approximately 285 net acres (1,000/3.5). These estimates are then adjusted upward to account for additional land that would be needed for streets and public facilities.

For the estimates above, platted densities are used over permitted densities, when available. Multi-family densities are applied from the observed permitted multi-family units. For some jurisdictions, no multi-unit development has occurred, and single-family densities are used in place. In addition, some rural areas had no development; county densities were used in place to estimate land need for these areas.

3. How much land was actually developed for commercial and industrial uses within the UGA since the last comprehensive plan was adopted or the last five-year evaluation completed? Based on this and other relevant information, how much land would be needed for commercial and industrial development during the remainder of the 20-year comprehensive planning period?

This question focuses on land needs for commercial and industrial areas. Kitsap County's 1998 comprehensive plan does not allocate target goals for specific cities. Kitsap Regional Coordinating Committee has met several times during the past few years, but has not yet established local employment targets at this point in time. Because of this, there are no non-residential targets for cities and counties.

The County's 1992-2012 employment targets have been adjusted to 2000 – 2012 with data from the Employment Security Department. The commercial/industrial land use splits by sector follow the method outlined in the County comprehensive plan. These targets are countywide targets only.

The estimate of employment land need also follows the Comprehensive Plan approach for square feet per employee estimates, floor area ratio estimates, and public facilities need estimates.

Vacant land supply for employment is estimated and shown similarly to vacant residential land. This analysis has produced a break down of non-residential vacant and underutilized acres as an indication of where new development may occur.

More detailed information on commercial and industrial land needs is included in a later section of this report.

4. To what extent have capital facilities, critical areas, and rural development affected the supply of land suitable for development over the comprehensive plan's 20-year timeframe?

This question points to those factors occurring both inside and outside of UGAs that may increase the amount of land needed, or that may impede efficient land use patterns.

Streets and right of way areas that accompany new development consume a great deal of land. This study assumes that new streets and capital facilities will increase the acreage required for new residential uses by approximately 35 percent.

Critical areas must also be taken into account in estimating land need. Rather than increasing estimates of land need to account for likely unbuildable areas, however, this study accounts for critical areas when looking at land supply. Using GIS, specific critical areas (which are detailed in the following response to Question #5) are removed from the supply of vacant and underutilized areas on a site-specific basis. This method gives a more accurate portrayal of whether sufficient *buildable* land exists to accommodate land need. Summary tables showing vacant and underutilized land estimates that appear for each study area indicate the amount of critical land that has been removed from vacant and underutilized areas.

Rural, low-density development also impedes land use efficiency, as it is often characterized by a more dispersed pattern of land use. To address this question, this study evaluated growth patterns in rural unincorporated Kitsap County apart from other study areas. Summary tables for the county, appearing at the end of the following section, generally indicate that lower development densities (averaging between ½ acre – 1 acre) are occurring in the County. A central issue concerning rural development is that much of it occurs on parcels that are smaller than the prescribed density standard for that zone, or "legacy lots". Until these lots are fully absorbed, the County may face some obstacles in its efforts to direct most of the new growth towards urban areas.

5. Is there enough suitable land in each county and its cities to accommodate the countywide population growth for the remainder of the 20-year planning period (based on the forecast by the state Office of Financial management and the subsequent allocations between the county and cities)?

This question focuses on determining how much vacant, buildable land exists that is appropriately zoned and planned for the land uses needed. County GIS and assessment information was used to answer this question.

Kitsap County uses a set of 5-digit land use codes. The code "91000" defines all undeveloped areas.[3] It was noted as this study began that some of the parcels in the county assessment database were incorrectly coded as "vacant" when they should have been coded as "common area", or "91100". Kitsap County GIS staff provided a file of such identified parcels, which were checked against the vacant lands database. Individual meetings with each city also allowed for local review and update of the vacant lands layer.

[3] The code "91000" is used specifically to denote undeveloped land. Other land use codes exist for areas such as "bare land removed from assessment", "non-common forest", "state forest", "tide lands", and "other undeveloped lands". Only those lands with the code "91000" have been included in these vacant land totals.

The definition of vacant lands used in this study does not characterize whether a property is on the market to be sold, or whether it is likely to become available on the marketplace at a given point in the future.

In this analysis, undeveloped parcels were first selected out. Properties that received a building permit between 1995-1999 were then removed from these parcels. In addition, tax-exempt properties were removed. Finally, Kitsap County has a number of shoreline parcels for areas underwater; these areas were also removed from vacant lands.

As a next step in the analysis, it is necessary to remove critical areas from the vacant areas above to arrive at vacant buildable areas.

In this study, critical areas have been defined as follows:

- *Unstable slopes (not including intermediate slopes)*
- *Flood zones*
- *Geohazard Areas*
- *National Wetlands Inventory wetlands (all except Bainbridge)*
- *Local Wetlands Inventory for Bainbridge Island*
- *Streams and associated Buffers (on each side), as follows:*
    - *Type 1 streams, 100-foot buffers*
    - *Type 2 streams, 100-foot buffers*
    - *Type 3 streams, 50-foot buffers*
    - *Type 4 streams, 50-foot buffers*
    - *Type 5 streams, 25-foot buffers.*
- *Shorelines*

In addition to vacant land, this study estimates the amount of developed land that may be likely to redevelop at higher densities in the future. To arrive at an estimate of total acres with redevelopment potential, parcels with a single-family land use code are selected. Residential redevelopment estimates will apply only to these parcels. Tax-exempt properties and mobile home areas are also excluded.

Redevelopment assumptions are based on a relationship between parcel sizes relative to their zoned density and building values, as follows:

- If parcel is 2x zoning size, it will only redevelop if building value is less than $100,000
- If parcel is 3x-4x zoning size, it only redevelop if building value is less than $250,000
- If parcel is >5x zoning size, it only redevelop is building value is less than $500,000
- Redevelopment won't occur if the building value is greater than $500,000.

This assumption is based on the idea that the larger the size of the parcel, the more market pressure may exist to absorb that land, particularly the undeveloped portion of the parcel. As parcel sizes increase, it will take a higher improvement value to prevent intensification of use. This is typically because higher value homes are associated with large parcel sizes.

In addition, because of the way in which Kitsap County defines vacant and developed lands (where tax lots are either fully vacant or fully developed), the process above acknowledges that part of the County's vacant land supply may already exist in larger parcels with significant undeveloped portions (i.e., through the process of partitioning). Critical areas (noted above) are removed from those lands identified as having redevelopment potential (above).

6. Does the evaluation demonstrate any inconsistencies between the actual level of residential, commercial and industrial development that occurred during the five-year review period compared to the vision contained in the county-side planning policies and comprehensive plans and the goals and requirements of the GMA?

This question gets to the heart of the entire buildable lands analysis. It is likely that the answer to it will differ for each planning area. It is also possible that general themes may emerge. Specific findings or inconsistencies summarized in **Chapter IX** of this report, Summary Findings and Conclusions.

Comments on Data Sources

The majority of data used in this analysis has been generated from Geographic Information Systems (GIS). In GIS, digital coordinate-based spatial data layers are used to represent real world features, such as tax lots, vacant and developed areas, wetlands and floodplains and zoning areas. Most of the data used in this study come from Kitsap County GIS.

Of course, electronic data representing real world features are rarely perfect. Data representing features like floodplains and tax lots will have some positional inaccuracies, which, in turn, will be reflected in numbers representing them. For a variety of reasons such as these, this study helps to point out general patterns, but is not intended to be accurate at extremely small levels of geography.

Supplemental information, such as land use classifications, subdivision plat records, and parcel-based assessor data, which was used in conjunction with the parcel base, comes from the Kitsap County Assessment department. Additional details on the data sources and methods are provided in the Technical Appendix (**Chapter XI**) of this report.

IV. Jurisdiction Findings

Cities
and
Associated Urban Growth Areas

Bainbridge Island

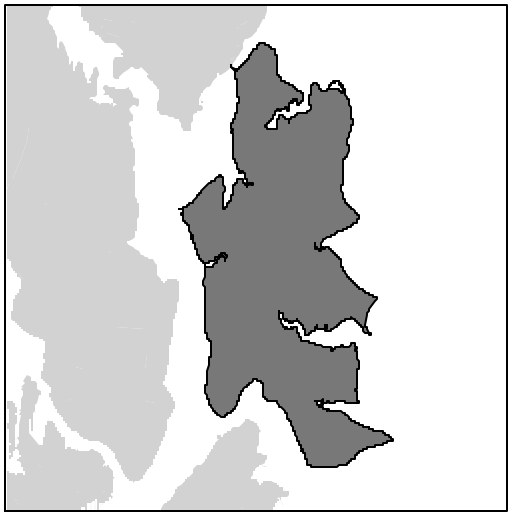
Bremerton
Bremerton UGA

Port Orchard
Port Orchard UGA

Poulsbo
Poulsbo JPA

City of Bainbridge Island

Size (Total Acres):	17,426
2,000 Population	20,150
Residential Acres	16,950
Commercial/Ind. Acres	255
Public/Exempt Lands	2,179
Critical Areas	3,860



The City of Bainbridge Island is in the eastern most part of Kitsap County, with Port Orchard Bay to its west, Port Madison Bay to its north and Puget Sound to its east. Access to Bainbridge Island is provided via the Agate Pass Bridge on the north end of the island or by Washington State Ferries that dock in Winslow.

Until 1991, the majority of the island was unincorporated, with Winslow as the only incorporated city. Because of issues such as population growth, environmental concerns and local control, the entire island annexed into Winslow and the name was changed to the City of Bainbridge Island. With the entire island being incorporated, the City of Bainbridge Island is unique. Its boundaries comprise both a city and a UGA.

With a population of 20,740, the island community is predominantly rural. The primary commercial area is located in the Winslow area along the eastern central shore, near the ferry terminal. The City of Bainbridge is home to many commuters who work in the Seattle area and depend on ferries for commuting.

The City of Bainbridge Island adopted its comprehensive plan in September of 1994, incorporating the goals and requirements of the GMA. Since that time, less extensive annual updates have occurred to the plan. Development regulations such as zoning, critical areas and design standards have been, and continue to be updated to implement the goals and policies of the comprehensive plan.

Buildable Lands Questions

1. What is the actual density and type of housing that has been constructed in the Urban Growth Areas? Are urban densities being achieved?

2. How much land was actually developed for residential use, and based on this, how much land would be needed for residential development during the remainder of the 20-year planning period?

3. To what extent have capital facilities, critical areas and rural development affected the supply of suitable land?

4. Is there enough buildable land in each city and the county to accommodate population and employment projections?

5. Are there inconsistencies between actual and planned development?

6. What measures can be taken that are reasonably likely to increase consistency during the subsequent five-year period, if the comparison shows inconsistency?

Introduction

To address the questions posed in the Buildable Lands Program, the following tables were prepared, summarizing: permitted and platted densities, residential land need (based on population projections), and residential land supply.

Permitted Densities

Residential densities may be analyzed as either permitted densities or platted densities. This study looks at both. Permitted densities cover all units that received a building permit for new residential construction. This will show a more comprehensive picture of all land developed, though larger, non-conforming lots of record will lower the final density estimate. Platted densities, by contrast, include subdivisions that were committed to a specific lot size, whether or not development actually occurred on each separate parcel. These densities also incorporate land set aside as open space or common area.

The table below shows densities of permitted residential units occurring in Bainbridge between 1995 and 1999.

City of Bainbridge Island
Net Density of Residential Units Permitted: 1995 - 1999

Type	Zone	Description	Total Acres with Permits	New Housing Units	Density
SF	R-0.4	1 unit per 2.5 acres	659.94	299	.45
	R-1	1 unit per acre	278.51	222	0.80
	R-2	2 units per acre	195.12	247	1.27
	R-2.9	2.9 units per acre	29.13	80	2.75
	R-3.5	3.5 units per acre	28.97	123	4.25
	R-4.3	4.3 units per acre	7.44	25	3.36
	R-5	5 units per acre	-	-	-
	R-6	6 units per acre	.34	1	2.95
	R-8	8 units per acre	0.67	3	4.48
SF Total			1.200.12	1,000	0.83
MF	R-14	14 units per acre	.43	1	**2.33**
Total All Units			1,200.55	1,001	0.83

In addition to permits listed above, residential permits were issued within the mixed use zones. These are not included in the density calculations, due to the small sample size.

Platted Densities

A comparison of permitted and platted units reveals two major trends. In some cases, platted densities are lower than permitted densities, primarily due to open space. In other cases, platted densities are higher. This is because platted density estimates do not include development on larger, non-conforming lots of record. In Bainbridge Island, platted densities are higher than permitted densities. Gross residential platted densities are used to calculate land need.

City of Bainbridge Island
Density of Newly Platted Residential Parcels: 1995 – 1999

Zone	Description of Zone and Density	Gross Acres Platted	Acres in Common Areas [1]	Net Acres Platted	Lots Platted	Densities	
						Gross	Net
R-0.4	1 unit per 2.5 acres	116.75	70.12	46.63	52	0.45	1.12
R-1	1 unit per acre	35.98	4.95	31.03	38	1.06	1.22
R-2	2 units per acre	19.23	10.11	9.12	40	2.08	4.39
R-2.9	2.9 units per acre	18.07	6.19	11.88	37	2.05	3.12
R-3.5	3.5 units per acre	35.64	9.67	25.97	119	3.33	4.58
NSC	Neigh. Service Center	0.49	0	.49	9	18.37	18.37
TOTAL		226.16	101.04	125.12	295	**1.30**	2.36

[1] Includes all land with an assessment code, "91100".

Population/Dwelling Unit Target

The first step in estimating land need is to adjust the jurisdiction's allocated population target (1992-2012) to the 2000 base year. Details on this approach appear in **Chapter VI** of this report. The following table shows how the adjustment was made.

City of Bainbridge Island - 1992 – 2012 Population Target

KRCC Expected 2012 Population	2000 Population (from OFM)	2000 - 2012 Remaining Target
24,280	20,150	4,130

This population number is then converted into the dwelling unit targets for single-family, and multi-family. An 85/15 split was assumed, per the County's Comprehensive Plan. For single-family units, 2.5 persons per household are assumed. For multi-family units, 1.8 persons per household are assumed. Finally, separate estimates for single family and multi-family dwelling units are converted into an estimate of net acres needed. This calculation assumes that the platted density of the analysis period will continue through 2012.

City of Bainbridge Island – Summary of Land Need

2012 Pop Target	Single Family Units Needed	Multi-Family Units Needed	1995-1999 SF Density	1995-1999 MF Density	Net Buildable Acres Needed	Gross Buildable Acres Needed *
4,130	1,404	344	**1.30**	**2.33**	1,228	1,620
If future development occurs at an average density of 4 units per acre						577

***** This study assumes that new streets (17%) and public facilities (15%) will increase the acreage required for new residential uses.

Residential Buildable Land Supply

Land supply was determined by first looking at gross available vacant and underutilized land. Vacant lands include all undeveloped parcels that have never had residential permits issued on them. Underutilized lands are those areas that may be likely to redevelop at higher densities in the future. For more details regarding assumptions for redevelopment potential, see **Chapter**

VI, **Approach and Methodology**. To determine net available suitable lands, critical areas were removed. Specific critical areas removed are also noted in that chapter.

City of Bainbridge Island – Summary of Vacant and Underutilized Residential Lands
By Major Zoning Category

	Vacant Areas			Underutilized Areas			Total		
	Gross	Critical	Net	Gross	Critical	Net	Gross	Critical	Net
Single Family	3,846	859	2,986	1,997	346	1,651	5,842	1,205	4,637
Multi-Family	2	0	2	0	0	0	2	0	2
Mixed Use	38	19	19	0	0	0	38	19	19
Total	3,886	878	3,007	1,997	346	1,651	5,882	1,224	4,659

Note: Numbers in this table have been reported as whole numbers. Small differences in totals may occur due to rounding.

Comparing residential land need (1,620 acres) to available supply (4,659), it is evident that Bainbridge Island has sufficient buildable land to accommodate estimated 20-year growth. Should future development occur at a higher density averaging 4 units per acre, the City would be able to accommodate additional growth.

City of Bremerton

Size (Total Acres)	14,454
2000 Population	36,160
Residential Acres	7,330
Commercial/Industrial Acres	1,435
Public/Exempt Lands	9,239
Critical Areas	3,000

The City of Bremerton is in central Kitsap County, with extensive access from both land and water. As the largest incorporated city in Kitsap County with a population of 37,260, Bremerton is a diverse community that is significantly influenced by the military base and the ferry system.

The Puget Sound Naval Shipyard is the largest naval shore facility in the Pacific Northwest and one of the State's largest industrial operations. It encompasses 179 acres and is adjacent to the north and east perimeters of the City of Bremerton. The annual shipyard payroll, including both civilian and military work force is approximately 363 million. However, these numbers can fluctuate significantly. Between 2000 and 2001, the armed forces personnel in Kitsap County experienced a 16 percent increase. In the years between 1995 and 2000, the armed forces experienced an overall decline in personnel by 12 percent. In addition to military personnel, the Navy throughout the county employs 16,000 civilian personnel.

The Naval Base provides 870 residential units located in Jackson Park near the Naval Hospital, comprised of housing for 1,400 personnel and 41 officer units. Military housing is not subject to local land use and development regulations, however the type and number of housing units do have an effect on housing demand within the City limits (and beyond).

Buildable Lands Questions

1. What is the actual density and type of housing that has been constructed in the Urban Growth Areas? Are urban densities being achieved?

2. How much land was actually developed for residential use, and based on this, how much land would be needed for residential development during the remainder of the 20-year planning period?

3. To what extent have capital facilities, critical areas and rural development affected the supply of suitable land?

4. Is there enough buildable land in each city and the county to accommodate population and employment projections?

5. Are there inconsistencies between actual and planned development?

6. What measures can be taken that are reasonably likely to increase consistency during the subsequent five-year period, if the comparison shows inconsistency?

The main ferry terminal between Seattle and the Kitsap Peninsula is located in downtown Bremerton. The link to Seattle coupled with comparatively more economical real estate prices in Kitsap County results in a significant number of commuters living in Bremerton and the surrounding communities that travel to the greater Seattle area for employment.

The City of Bremerton adopted its comprehensive plan in April of 1995, incorporating the goals and requirements of the GMA. Since that time, less extensive annual updates have occurred to the plan. Development regulations such as zoning, critical area controls and design standards have been, and continue to be updated, to implement the goals and policies of the comprehensive plan.

Introduction

To address the questions posed in the Buildable Lands Program, the following tables were prepared, summarizing: permitted and platted densities, residential land need (based on population projections), and residential land supply.

Permitted Densities

Residential densities may be analyzed as either permitted densities or platted densities. This study looks at both. Permitted densities cover all units that received a building permit for new residential construction. This will show a more comprehensive picture of all land developed, though larger, non-conforming lots of record will lower the final density estimate. Platted densities, by contrast, include subdivisions that were committed to a specific lot size, whether or not development actually occurred on each separate parcel. These densities also incorporate land set aside as open space or common area.

City of Bremerton
Net Density of Residential Units Permitted: 1995 - 1999

Type	Zone	Description	Total Acres with Permits	New Housing Units	Density
SF	PUD	Planned Unit Dev.	-	-	-
	SF-1	1 - 3 units per acre	0.71	2	2.82
	SF-2	1 - 8 units per acre	16.48	26	1.58
	SF-3	3 - 8 units per acre	50.66	129	2.55
	DR	3 - 8 units per acre	1.53	7	4.58
Total SF			69.38	164	2.36
MF	CBR	8 - 18 units per acre	0.47	5	10.64
	MF	8 - 18 units per acre	20.73	213	10.27
	MR	8 - 44 units per acre	2.40	5	2.08
Total MF			23.60	223	**9.45**
Total All Units			92.98	387	4.16

Platted Densities

A comparison between both permitted and platted densities reveals two major trends. In some cases, platted densities are lower than permitted densities, primarily due to open space. In other cases, platted densities are higher. This is because platted density estimates do not include development on larger, non-conforming lots of record. In terms of the city of Bremerton, platted densities are higher than permitted densities. Gross residential platted densities are used to calculate land need.

City of Bremerton
Density of Newly Platted Residential Parcels: 1995 - 1999

Zone	Description	Gross Acres Platted	Acres in Common Areas [1]	Net Acres Platted	Lots Platted	Residential Densities	
						Gross	Net
SF-3	3 - 8 units/acre	4.27	0	4.27	11	**2.58**	2.58
MF	8 -18 units/acre	2.46	0.56	1.90	42	17.07	22.11
Total All Units		6.73	0.56	6.17	53	7.88	8.59

[1] Includes all land with an assessment code, "91100".

Population/Dwelling Unit Target

The first step in estimating land need is to adjust the jurisdiction's allocated population target (1992-2012) to the 2000 base year. Details on this approach appear in **Chapter VI** of this report. The following table shows how the adjustment was made.

In Bremerton's case, this calculation is conducted differently than for other jurisdictions. Because Bremerton lost population between 1992 and 2000, only the expected 1992-2012 increase of 19,152 is assigned to Bremerton. No additional units are assigned to make up for the population that was lost.

City of Bremerton - 1992 - 2012 Population Target Population Target		
KRCC Expected 2012 Population	2000 Population (from OFM)	2000 - 2012 Target
58,142	36,160	19,152

This figure is converted into targets for single-family and multi-family units. *For Bremerton, a 70/30 single family/multi-family split is used, which is based on city planning policies*. For single-family units, 2.5 persons per household are assumed; for multi-family units, 1.8 persons per household are assumed. Estimates for single family and multi-family dwelling units are converted into an estimate of net acres needed. This calculation assumes that the single-family platted density and multi-family permitted density will continue through 2012.

City of Bremerton – Summary of Residential Land Need

2012 Pop Target	Single Family Units Needed	Multi-Family Units Needed	1995-1999 SF Density	1995-1999 MF Density	Net Buildable Acres Needed	Gross Buildable Acres Needed
19,152	5,362	3,192	**2.58**	**9.45**	2,416	3,189
If future development occurs at an average of 4 units per acre						2,822

* This study assumes that new streets (17%) and public facilities (15%) will increase the acreage required for new residential uses by 32 percent.

Residential Buildable Land Supply

Land supply was determined by first looking at gross available vacant and underutilized land. Vacant lands include all undeveloped parcels that have never had residential permits issued on them. Underutilized lands are those areas that may be likely to redevelop at higher densities in the future. For more details regarding assumptions for redevelopment potential, see **Chapter VI**, **Approach and Methodology**. To determine net available suitable lands, critical areas were removed. Specific critical areas removed are also noted in that chapter.

City of Bremerton - Summary of Vacant and Underutilized Residential Lands
By Major Zoning Category

	Vacant Areas			Underutilized Areas			Total		
	Gross	Critical	Net	Gross	Critical	Net	Gross	Critical	Net
Single Family	492	87	405	292	80	211	784	167	616
Multi-Family	42	7	36	15	1	13	57	8	49
Mixed Use	5	0	5	0	0	0	5	0	5
Total	540	94	446	306	82	224	846	175	670

Note: Numbers in this table have been reported as whole numbers. Small differences in totals may occur due to rounding.

In weighting land need (3,189) to land available land supply (670 acres), it appears that there is insufficient suitable residential land for forecasted population growth. Should future development occur at an average of 4 units per acre, some of this land need would be alleviated, though there will still be insufficient land to accommodate the forecasted growth.

General Findings

This analysis indicates that if Bremerton continues to develop in keeping with densities exhibited during the past five years, land need will greatly exceed supply. *However*, a number of special characteristics pertaining to Bremerton should be considered.

In the case of Bremerton, the findings of this analysis must be qualified on the basis that growth did not occur in Bremerton during this time period, unlike all other jurisdictions in Kitsap County. Demolitions outnumbered new permits, while the population of the city actually decreased. Development densities, as extrapolated here from the extremely limited building activity, are certainly not those of a growth scenario. These densities, based only on the 7 acres of platted new development during the time period, are unsuitable for determining growth needs of a city over 18,000 acres in size. As the designated Metropolitan Center of Kitsap County, it would not be appropriate to assume these densities as the expected development trend or to use them to determine the city's land needs.

Between 1992 and 2000, Bremerton's population actually *decreased* by approximately 2,800 persons. The 20,000 population growth originally allocated to Bremerton in 1990 assumed that directive growth polices would be set through a coordinated interjurisdictional process (This allocation was adjusted downward to 1992). Despite demonstrated capacity within the city, growth was drawn to the other jurisdictions, including unincorporated areas of the county (outside of UGAs). Population allocations increased for all other areas within the county, while Bremerton's allocation of predicted growth decreased.

The redevelopment opportunities and dynamics particular to Bremerton may not be fully captured in this region-wide analysis. Bremerton has more land (in actual acres and as a relative proportion) zoned for multi-family use than any other jurisdiction in Kitsap County, matched by the infrastructure to support a metropolitan intensity. While multi-family development has not been high in Kitsap County as a whole, Bremerton has had a higher amount of new activity for this housing type than other areas. Sizeable areas within the city's center, for example, contain parcels with zoning that can accommodate 44 units per acre and a building height of 120 feet. While this analysis considered redevelopable acres, it does not estimate units that can be gained from redevelopment activity.

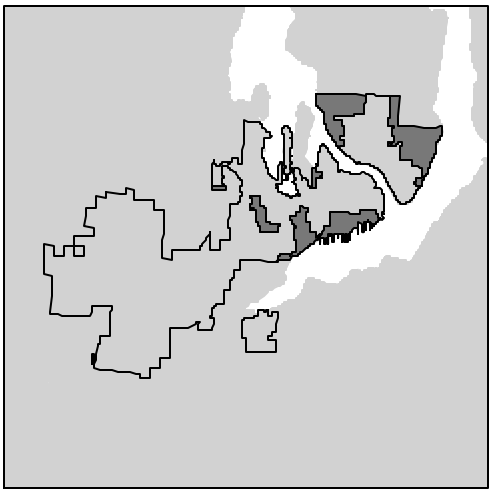
Permitted single-family development, particularly within the SF-2 and SF-3 zones, appears to be occurring at lower than targeted densities. The use of minimum densities, or a narrower range of permitted densities within each category, may help the city in providing a greater level of predictable densities in the development process.

In preparation for the city's current comprehensive plan, Bremerton conducted a local land use inventory and build-out analysis, which, similar to this analysis, reviewed existing development capacity throughout the city. The city concluded that city parcels, as currently zoned, can accommodate over 30,000 new residents, without need for additional acreage.

Bremerton is currently undertaking an update to its Comprehensive Plan, called "Shaping Bremerton", charged with proposing new mechanisms to direct desired and allocated growth into the city. County-wide designated centers, to concentrate new growth and provide for new development densities, will further advance higher densities in strategic locations.

Bremerton UGA

Size (Total Acres)	2,281
Residential Acres	2,420
Commercial/Industrial Acres	110
Public/Exempt Lands	266
Critical Areas	489



A requirement of the City of Bremerton's and Kitsap County's Comprehensive Plan is to designate urban growth areas and to establish goals and policies to ensure development in those areas is urban in nature and consistent with the GMA.

The Bremerton UGA contains approximately 2,281 acres and is comprised of several unincorporated pockets, primarily surrounding the eastern side of the city. The area to the west includes the Naval Shipyard. The UGA is currently developed with a mix of commercial, industrial and residential uses. While some of the UGA is already characterized with urban development, some areas remain rural.

Buildable Lands Questions

1. What is the actual density and type of housing that has been constructed in the Urban Growth Areas? Are urban densities being achieved?

2. How much land was actually developed for residential use, and based on this, how much land would be needed for residential development during the remainder of the 20-year planning period?

3. To what extent have capital facilities, critical areas and rural development affected the supply of suitable land?

4. Is there enough buildable land in each city and the county to accommodate population and employment projections?

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6. What measures can be taken that are reasonably likely to increase consistency during the subsequent five-year period, if the comparison shows inconsistency?

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Permitted Densities

Residential densities may be analyzed as either permitted densities or platted densities. This study looks at both. Permitted densities cover all units that received a building permit for new residential construction. This will show a more comprehensive picture of all land developed, though larger, non-conforming lots of record will lower the final density estimate. Platted densities, by contrast, include subdivisions that were committed to a specific lot size, whether or not development actually occurred on each separate parcel. These densities also incorporate land set aside as open space or common area.

Bremerton UGA
Net Density of Residential Units Permitted: 1995 - 1999

Type	Zone	Description	Total Acres with Permits	New Housing Units	Density
SF	UL	5 - 9 units per acre	54.53	108	1.98
	URS	Urb Res. (1 unit /10 ac.)	-	-	-
Total			54.53	108	1.98
MF	UH	19 - 24 units per acre	-	-	-
	UM	10 - 18 units per acre	-	-	-
Total			-	-	**-**
Total All Units			54.53	108	1.98

Platted Densities

A comparison between both permitted and platted densities reveal two major trends. In some cases, platted densities are lower than permitted densities, primarily due to open space. In other cases, platted densities are higher. This is because platted density estimates do not include development on larger, non-conforming lots of record. In terms of the Bremerton UGA, platted densities are higher than permitted densities. Gross residential platted densities are used to calculate land need**.**

Bremerton UGA
Density of Newly Platted Residential Parcels: 1995 – 1999

Zone	Description of Zone	Gross Acres Platted	Acres in Common Areas [1]	Net Acres	Lots Platted	Residential Densities	
						Gross	Net
UL	Urban Low Res.	1.23	0	1.23	5	4.07	4.07
Total Platted Units		1.23	0	1.23	5	**4.07**	4.07

[1] Includes all land with an assessment code, "91100".

Population/Dwelling Unit Target

The first step in estimating land need is to adjust the jurisdiction's allocated population target (1992-2012) to the 2000 base year. Details on this approach appear in **Chapter VI** of this report.

This population number is then converted into the dwelling unit targets for single-family, and multi-family. A 70/30 split was assumed, per the County's Comprehensive Plan. For single-family units, 2.5 persons per household are assumed. For multi-family units, 1.8 persons per household are assumed. Finally, separate estimates for single family and multi-family dwelling units are converted into an estimate of net acres needed. This calculation assumes that the platted density of the analysis period will continue through 2012.

Bremerton UGA: Summary of Residential Land Need						
2012 Pop Target	Single Family Units Needed	Multi-Family Units Needed	1995-1999 SF Density	1995-1999 MF Density	Net Buildable Acres Needed	Gross Buildable Acres Needed
3,008	842	501	**1.98**	**-**	678	895
If future development occurs at an average density of 4 units per acre						443

***** This study assumes that new streets (17%) and public facilities (15%) will increase the acreage required for new residential uses.

This area has met, and exceeded, the average density goal of 4 units per acre.

Residential/Buildable Land Supply

Land supply was determined by first looking at gross available vacant and underutilized land. Vacant lands include all undeveloped parcels that have never had residential permits issued on them. Underutilized lands are those areas that may be likely to redevelop at higher densities in the future. For more details regarding assumptions for redevelopment potential, see **Chapter VI**, **Approach and Methodology**. To determine net available suitable lands, critical areas were removed. Specific critical areas removed are also noted in that chapter.

Bremerton UGA: Summary of Vacant and Underutilized Residential Lands
By Major Zoning Category

	Vacant Areas			Underutilized Areas			Total		
	Gross	Critical	Net	Gross	Critical	Net	Gross	Critical	Net
Single Family	429	96	332	625	93	532	1,053	189	864
Multi-Family	11	2	9	8	2	6	19	4	15
Total	439	98	341	633	95	538	1,072	193	879

Note: Numbers in this table have been reported as whole numbers. Small differences in totals may occur due to rounding.

This analysis indicates that Bremerton's UGA is close to two times the amount of vacant buildable land needed (879/417 acres) to accommodate its growth allocation, should growth continue at recent densities.

Additional coordination between the City of Bremerton and Kitsap County will help to ensure that development standards and future land use patterns in the Bremerton UGA are consistent with local comprehensive planning efforts. UGA sizing should reflect the City's ability to accommodate allocated population within its current boundaries.

City of Bremerton and Bremerton UGA

This section provides some general insights on development densities that have occurred in the composite area of incorporated Bremerton and its urban growth area.

Summary of Composite Permitted Densities for Bremerton and Bremerton UGA			
	Units Permitted	Acres Permitted	Total Density
Single Family	272	123.92	2.20
Multi-Family	223	23.60	**9.45**
Total	495	147.51	3.36

Due to a single development occurring in the City of Bremerton, this composite area has had more multi-family dwelling units occurring during the past five years than single-family units.

Summary of Composite Platted Densities Bremerton and Bremerton UGA						
General Zone Type	Gross Acres Platted	Acres in "Common Areas"	Net Acres	Residential Lots Platted	Residential Densities Gross	Residential Densities Net
Single Family	5.50	0.00	5.50	16	2.91	2.91
Multi-Family	2.46	0.56	1.90	42	17.07	22.11
Total All Units	7.96	.56	7.40	58	7.29	7.84

Summary of Residential Land Need Bremerton and Bremerton UGA						
2012 Pop Target	Single Family Units Needed*	Multi-Family Units Needed*	1995-1999 SF Density	1995-1999 MF Density	Net Buildable Acres Needed	Gross Buildable Acres Needed**
22,160	6,204	3,693	**2.20**	**9.45**	3,211	4,238
If future development occurs at an average density of 4 units per acre						3,266

** For this area a 70/30 SF/MF split was used.*

*******This study assumes that new streets (17%) and public facilities (15%) will increase the acreage required for new residential uses.*

As noted above, these areas combined are close to meeting the urban density goal of 4 units per acre.

Summary of Vacant and Underutilized Acres by General Zoning Type			
Zoning Type	Vacant + Underutilized	Critical Areas	Net Buildable
Single Family	1,837	357	1,480
Multi-Family	76	12	64
Mixed Use	5	0	5
Total	1,918	369	1,549

City of Port Orchard

Size (Total Acres)	2,454
2000 Population	7,270
Residential Acres	1,305
Commercial/Industrial Acres	595
Public/Exempt Lands	415
Critical Areas	198

The City of Port Orchard is located in the southern part of Kitsap County.

With a population of 7,270, Port Orchard has a combination of commercial, industrial, urban residential and rural residential development. The primary commercial area is located along the waterfront of Sinclair Inlet. Main street shops, marinas and businesses all contribute to a vital downtown.

The City of Port Orchard adopted its comprehensive plan in June 1995, incorporating the goals and requirements of the GMA. Since that time, less extensive annual updates have occurred to the plan. Development regulations such as zoning, critical area controls and design standards have been, and continue to be, updated to implement the goals and policies of the comprehensive plan.

Buildable Lands Questions

1. What is the actual density and type of housing that has been constructed in the Urban Growth Areas? Are urban densities being achieved?

2. How much land was actually developed for residential use, and based on this, how much land would be needed for residential development during the remainder of the 20-year planning period?

3. To what extent have capital facilities, critical areas and rural development affected the supply of suitable land?

4. Is there enough buildable land in each city and the county to accommodate population and employment projections?

5. Are there inconsistencies between actual and planned development?

6. What measures can be taken that are reasonably likely to increase consistency during the subsequent five-year period, if the comparison shows inconsistency?

Introduction

To address the questions posed in the Buildable Lands Program, the following tables were prepared, summarizing: permitted and platted densities, residential land need (based on population projections), and residential land supply.

Permitted Densities

Residential densities may be analyzed as either permitted densities or platted densities. This study looks at both. Permitted densities cover all units that received a building permit for new residential construction. This will show a more comprehensive picture of all land developed, though larger, non-conforming lots of record will lower the final density estimate. Platted densities, by contrast, include subdivisions that were committed to a specific lot size, whether or not development actually occurred on each separate parcel. These densities also incorporate land set aside as open space or common area.

City of Port Orchard
Net Density of Residential Units Permitted: 1995 - 1999

Type	Zone	Description	Total Acres with Permits	New Units	Density
SF	R-4.5	4.5 units per acre	14.31	18	1.26
	R-8	8 units per acre	32.91	208	6.32
	RMH	Mobile Home (12 upa)	5.49	2	0.36
Total			52.71	228	**4.32**
MF	R-20	20 units per acre	20.30	57	2.81
Total			20.30	57	2.81
Total All Units			73.01	285	3.90

Platted Densities

A comparison between both permitted and platted densities reveals two major trends. In some cases, platted densities are lower than permitted densities, primarily due to open space. In other cases, platted densities are higher. This is because platted density estimates do not include development on larger, non-conforming lots of record. In terms of the city of Port Orchard, permitted densities are higher than gross platted densities. Gross residential platted densities are used to calculate land need.

City of Port Orchard
Density of Newly Platted Residential Parcels: 1995 – 1999

Zone	Description of Zone and Density	Gross Acres Platted	Acres in Common Areas [1]	Net Acres	Lots Platted	Residential Densities	
						Gross	Net
R-4.5	4.5 units per acre	8.66	3.04	5.62	24	2.77	4.27
R-8	8 units per acre	52.46	21.27	31.19	187	3.56	6.00
Total All Units		61.12	24.31	36.81	211	**3.45**	5.73

[1] Includes all land with an assessment code, "91100."

Population/Dwelling Unit Target

The first step in estimating land need is to adjust the jurisdiction's allocated population target (1992-2012) to the 2000 base year. Details on this approach appear in **Chapter VI** of this report. The following table shows how the adjustment was made.

City of Port Orchard - 1992 - 2012 Population Target Population Target		
KRCC Expected 2012 Population	2000 Population (from OFM)	2000 - 2012 Remaining Target
7,575	7,270	305

***** This study assumes that new streets (17%) and public facilities (15%) will increase the acreage required for new residential uses.

This population number is then converted into the dwelling unit targets for single-family, and multi-family. An 85/15 split was assumed, per the County's Comprehensive Plan. For single-family units, 2.5 persons per household are assumed. For multi-family units, 1.8 persons per household are assumed. Finally, separate estimates for single family and multi-family dwelling units are converted into an estimate of net acres needed. This calculation assumes that the platted density of the analysis period will continue through 2012.

City of Port Orchard: Summary of Residential Land Need						
2012 Pop Target	Single Family Units Needed	Multi-Family Units Needed	1995-1999 SF Density	1995-1999 MF Density	Net Buildable Acres Needed	Gross Buildable Acres Needed
305	104	25	**3.45**	**2.81**	39	52
If future development occurs at an average density of 4 units per acre						43

Residential Buildable Land Supply

Land supply was determined by first looking at gross available vacant and underutilized land. Vacant lands include all undeveloped parcels that have never had residential permits issued on them. Underutilized lands are those areas that may be likely to redevelop at higher densities in the future. For more details regarding assumptions for redevelopment potential, see **Chapter VI, Approach and Methodology.** To determine net available suitable lands, critical areas were removed. Specific critical areas removed are also noted in that chapter.

City of Port Orchard: Summary of Vacant and Underutilized Residential Lands (with critical areas)
By Major Zoning Category

	Vacant Areas			Underutilized Areas			Total		
	Gross	Critical	Net	Gross	Critical	Net	Gross	Critical	Net
Single Family	334	130	205	323	103	219	657	233	424
Multi-Family	41	2	39	2	0	2	42	2	41
Mixed Use	1	0	1	0	0	0	1	0	1
Total	376	132	244	325	103	221	700	235	465

Note: Numbers in this table have been reported as whole numbers. Small differences in totals may occur due to rounding.

Port Orchard UGA

Size (Total Acres)	2,807
Residential Acres	2,065
Commercial/Ind. Acres	380
Public/Exempt Lands	511
Critical Areas	200

A component of the Port Orchard's and Kitsap County's Comprehensive Plan is to designate urban growth areas and to establish goals and policies to ensure development in those areas is urban in nature and consistent with the GMA.

The Port Orchard UGA contains approximately 2,807acres that are immediately adjacent to the current city limits.

Buildable Lands Questions

1. What is the actual density and type of housing that has been constructed in the Urban Growth Areas? Are urban densities being achieved?

2. How much land was actually developed for residential use, and based on this, how much land would be needed for residential development during the remainder of the 20-year planning period?

3. To what extent have capital facilities, critical areas and rural development affected the supply of suitable land?

4. Is there enough buildable land in each city and the county to accommodate population and employment projections?

5. Are there inconsistencies between actual and planned development?

6. What measures can be taken that are reasonably likely to increase consistency during the subsequent five-year period, if the comparison shows inconsistency?

Introduction

To address the questions posed in the Buildable Lands Program, the following tables were prepared, summarizing: permitted and platted densities, residential land need (based on population projections), and residential land supply.

Permitted Densities

Residential densities may be analyzed as either permitted densities or platted densities. This study looks at both. Permitted densities cover all units that received a building permit for new residential construction. This will show a more comprehensive picture of all land developed, though larger, non-conforming lots of record will lower the final density estimate. Platted densities, by contrast, include subdivisions that were committed to a specific lot size, whether or not development actually occurred on each separate parcel. These densities also incorporate land set aside as open space or common area.

Port Orchard UGA
Net Density of Residential Units Permitted: 1995 - 1999

Type	Zone	Description	Total Acres with Permits	New Housing Units	Density
SF	UL	5 - 9 units per acre	45.86	161	3.51
	UR	Urb Rest. 1 unit/10 ac.	4.91	79	16.09
Total			50.77	240	4.73
MF	UH	19 - 24 units per acre	1.44	5	3.47
	UM	10 - 18 units per acre	4.74	37	7.81
Total			6.18	42	**6.80**
Total All Units			56.95	282	3.90

Platted Densities

A comparison between both permitted and platted densities reveals two major trends. In some cases, platted densities are lower than permitted densities, primarily due to open space. In other cases, platted densities are higher. This is because platted density estimates do not include development on larger, non-conforming lots of record. In the Port Orchard UGA, permitted densities are higher than gross platted densities. Gross residential platted densities are used to calculate land need**.**

Port Orchard UGA
Density of Newly Platted Residential Parcels: 1995 – 1999

Zone	Description of Zone and Density	Gross Acres Platted	Acres in "Common Areas" [1]	Net Acres	Residential Lots Platted	Densities Gross	Densities Net
UL	5 – 9 units per acre	55.55	23.72	31.83	154	2.77	4.84
	Total Platted Units	55.55	23.72	31.83	154	**2.77**	4.84

[1] Includes all land with an assessment code, 91100.

Population/Dwelling Unit Target

The first step in estimating land need is to adjust the jurisdiction's allocated population target (1992-2012) to the 2000 base year. For UGAs, population allocations were calculated based on the total UGA allocation, then applied based on a percent of that total allocation. The population allocation for the Port Orchard UGA is 2,580 (for more detail on population allocations, see the earlier chapter on Approach and Methods. Details on this approach appear in **Chapter VI** of this report. The following table shows how the adjustment was made.

This population number is then converted into the dwelling unit targets for single-family, and multi-family. An 85/15 split was assumed, per the County's Comprehensive Plan. For single-family units, 2.5 persons per household are assumed. For multi-family units, 1.8 persons per household are assumed. Finally, separate estimates for single family and multi-family dwelling units are converted into an estimate of net acres needed. This calculation assumes that the platted density of the analysis period will continue through 2012.

Residential Land Need

Port Orchard UGA: Summary of Residential Land Need						
2012 Pop Target	Single Family Units Needed	Multi-Family Units Needed	1995-1999 SF Density	1995-1999 MF Density	Net Buildable Acres Needed	Gross Buildable Acres Needed
2,580	877	215	**2.77**	**6.80**	348	459
If future development occurs at an average density of 4 units per acre						420

***** This study assumes that new streets (17%) and public facilities (15%) will increase the acreage required for new residential uses.

Residential/Buildable Land Supply

Land supply was determined by first looking at gross available vacant and underutilized land. Vacant lands include all undeveloped parcels that have never had residential permits issued on them. Underutilized lands are those areas that may be likely to redevelop at higher densities in the future. For more details regarding assumptions for redevelopment potential, see **Chapter VI**, Approach and Methodology. To determine net available suitable lands, critical areas were removed. Specific critical areas removed are also noted in that chapter.

Port Orchard UGA: Summary of Vacant and Underutilized Residential Lands By Major Zoning Category									
	Vacant Areas			Underutilized Areas			Total		
	Gross	Critical	Net	Gross	Critical	Net	Gross	Critical	Net
Single Family	330	72	258	338	34	304	668	106	562
Multi-Family	6	0	6	7	0	7	13	0	13
Total	336	72	264	345	34	312	681	106	575

Note: Numbers in this table have been reported as whole numbers. Small differences in totals may occur due to rounding.

City of Port Orchard and Port Orchard UGA

This section provides some general insights on development densities that have occurred in the composite area of incorporated Port Orchard and its UGA.

The following table shows permitted densities for single family and multi-family units on the aggregate level.

Summary of Composite Permitted Densities for Port Orchard and Port Orchard UGA			
	Units Permitted	Acres Permitted	Total Density
Single Family	468	103.49	4.52
Multi-Family	99	26.48	**3.74**
Total	567	129.97	4.36

Summary of Composite Platted Densities Port Orchard and Port Orchard UGA					
Gross Acres Platted	Acres in "Common Areas"	Net Acres	Residential Lots Platted	Residential Densities	
				Gross	Net
116.67	48.03	68.64	365	**3.13**	5.32

Summary of Residential Land Need for Port Orchard and Port Orchard UGA						
2012 Pop Target	Single Family Units Needed	Multi-Family Units Needed	1995-1999 SF Density	1995-1999 MF Density	Net Buildable Acres Needed	Gross Buildable Acres Needed
2,885	980	240	**3.13**	**3.74**	377	498
If future development occurs at an average density of 4 units per acre						403

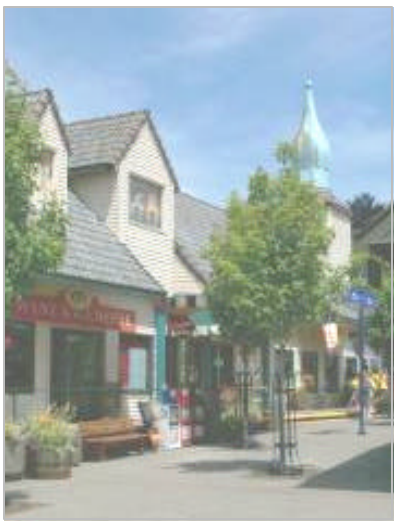
***** This study assumes that new streets (17%) and public facilities (15%) will increase the acreage required for new residential uses.

This area is close to meeting the urban density goal of 4 units per acre.

The table below shows total vacant and underutilized acres at the aggregate level. This reflects vacant and underutilized acres existing as of January 1, 2000.

Summary of Vacant + Underutilized Acres by Zoning Type			
Zoning Type	Vacant and Underutilized	Critical	Net Buildable
Single Family	1,325	339	986
Multi-Family	56	2	54
Mixed Use	1	0	1
Total	1,381	341	1,041

City of Poulsbo



Size (Total Acres)	2,084
2000 Population	6,500
Residential Acres	1,155
Commercial/Industrial Acres	345
Public Lands	366
Critical Areas	178

The City of Poulsbo has a long and rich history, which it wishes to preserve. Poulsbo is a tourist, economic and social center located in north Kitsap County at the crossroads of State Highways 3, 305, and 307/104. Poulsbo's historic downtown draws tourists year round. Commercial and business parklands are in various stages of developing. North Kitsap School District's administration and high school are located in Poulsbo in addition to the future site of the Olympic Community College's branch campus. Major military facilities Subbase Bangor and Keyport are within five miles, and the state highways provide access to the Hood Canal Bridge and Olympic Peninsula, Kingston and Edmonds, Bainbridge Island and Seattle, and Bremerton, Port Orchard and Tacoma.

With a population of 6,500, Poulsbo's development is characteristically urban. A significant number of residential and commercial developments have been processed during the 1995 through 1999 review period.

The City of Poulsbo adopted its comprehensive plan in June 1994, incorporating the goals and requirements of the GMA. Since that time, the City has annually updated its plan. Development regulations such as zoning, critical area controls and design standards have been, and continue to be, updated to implement the goals and policies of the city comprehensive plan, GMA, and the changing needs of the community.

Buildable Lands Questions

1. What is the actual density and type of housing that has been constructed in the Urban Growth Areas? Are urban densities being achieved?

2. How much land was actually developed for residential use, and based on this, how much land would be needed for residential development during the remainder of the 20-year planning period?

3. To what extent have capital facilities, critical areas and rural development affected the supply of suitable land?

4. Is there enough buildable land in each city and the county to accommodate population and employment projections?

5. Are there inconsistencies between actual and planned development?

6. What measures can be taken that are reasonably likely to increase consistency during the subsequent five-year period, if the comparison shows inconsistency?

Kitsap County's 1998 Comprehensive Plan designated the Joint Urban Planning Area (JUPA) analyzed in this report and identified the need to undertake a joint planning process to finalize Poulsbo's UGA. This joint planning process culminated in approval of the Poulsbo UGA Sub Area Plan by both jurisdictions in early 2002. The sub area plan will be incorporated into the county and city comprehensive plans during the 2002 yearly updates. The adopted UGA for Poulsbo is significantly different from the JUPA analyzed in this report; however, the basis for both reports is population capacity analysis consistent with the county comprehensive plan.

For the purpose of designating a UGA for Poulsbo a capacity analysis was performed and is included in the Poulsbo subarea plan. The subarea plan analysis is an update to that performed for this buildable lands report. Corrections to data within Poulsbo are incorporated in the subarea plan, which assumes complete build out at the highest zoned densities within the current Poulsbo city limits. The Poulsbo Comprehensive Plan and other studies identify variables specific to Poulsbo and vicinity. The subarea plan incorporates these variables and a critical areas review creating a local picture of Poulsbo growth and accommodating needs specific to Poulsbo.

Introduction

To address the questions posed in the Buildable Lands Program, the following tables were prepared, summarizing: permitted and platted densities, residential land need (based on population projections), and residential land supply.

Permitted Densities

Residential densities may be analyzed as either permitted densities or platted densities. This study looks at both. Permitted densities cover all units that received a building permit for new residential construction. This will show a more comprehensive picture of all land developed, though larger, non-conforming lots of record will lower the final density estimate. Platted densities, by contrast, include subdivisions that were committed to a specific lot size, whether or not development actually occurred on each separate parcel. These densities also incorporate land set aside as open space or common area.

City of Poulsbo
Net Density of Residential Units Permitted: 1995 - 1999

Type	Zone	Description	Total Acres with Permits *	New Housing Units	Density
SF	LDR	5 units per acre	71.06	359	5.05
	*MDR**	*10 units per acre*	*0.18*	*1*	*5.55*
Total			71.06	359	5.05
MF	HDR	14 units per acre	14.85	12	0.81
Total			14.85	12	**0.81**
Total All Units			85.91	371	4.32

* Some sites are less than 1 acre; numbers have been rounded for calculation. The MDR units were omitted from these calculations on purpose, as they were additional units placed on an already-developed property.

Platted Densities

A comparison between both permitted and platted densities reveals two major trends. In some cases, platted densities are lower than permitted densities, primarily due to open space. In other cases, platted densities are higher. This is because platted density estimates do not include development on larger, non-conforming lots of record. In Poulsbo, platted densities are higher than permitted densities. Gross residential platted densities are used to calculate land need**.**

City of Poulsbo Density of Newly Platted Residential Parcels: 1995 – 1999							
Zone	Density	Gross Acres Platted	Acres in Common Areas [1]	Net Acres	Lots Platted	Residential Densities Gross	Net
LDR	5 units/acre	82.18	19.28	62.90	303	3.69	4.82
Total Platted Units		82.18	19.28	62.90	303	**3.69**	4.82

[1] Includes all land with an assessment code, "91100".

Population/Dwelling Unit Target

In order to estimate land need, several steps are taken. First, it is important to determine the remaining allocated population between 2000 and 2012:

City of Poulsbo - 1992 - 2012 Population Target Population Target		
KRCC Expected 2012 Population	2000 Population (from OFM)	2000 - 2012 Remaining Target
9,416	6,500	2,916

This population number is then converted into the dwelling unit targets for single-family, and multi-family. An 85/15 split was assumed, per the County's Comprehensive Plan. For single-family units, 2.5 persons per household are assumed. For multi-family units, 1.8 persons per household are assumed. Finally, separate estimates for single family and multi-family dwelling units are converted into an estimate of net acres needed. This calculation assumes that the platted density of the analysis period will continue through 2012.

City of Poulsbo: Summary of Residential Land Need						
2012 Pop Target	Single Family Units Needed	Multi-Family Units Needed	1995-1999 SF Density	1995-1999 MF Density	Net Buildable Acres Needed	Gross Buildable Acres Needed
2,916	991	243	**3.69**	**0.81**	569	751
If future development occurs at an average density of 4 units per acre						407

***** This study assumes that new streets (17%) and public facilities (15%) will increase the acreage required for new residential uses.

Residential/Buildable Land Supply

Land supply was determined by first looking at gross available vacant and underutilized land. Vacant lands include all undeveloped parcels that have never had residential permits issued on them. Underutilized lands are those areas that may be likely to redevelop at higher densities in the future. For more details regarding assumptions for redevelopment potential, see **Chapter VI**, **Approach and Methodology**. To determine net available suitable lands, critical areas were removed. Specific critical areas removed are also noted in that chapter.

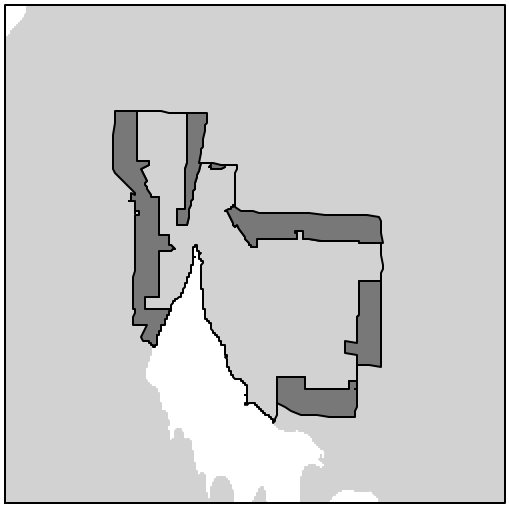
City of Poulsbo: Summary of Vacant and Underutilized Residential Lands
By Major Zoning Category

	Vacant Areas			Underutilized Areas			Total		
	Gross	Critical	Net	Gross	Critical	Net	Gross	Critical	Net
Single Family	192	10	181	187	9	177	378	20	359
Multi-Family	68	9	59	67	12	56	136	21	115
Mixed Use	196	3	193	0	0	0	196	3	193
Total	456	22	434	254	21	233	710	44	667

Note: Numbers in this table have been reported as whole numbers. Small differences in totals may occur due to rounding.

This analysis indicates that, if the City continues to develop at densities similar to those occurring during the past five years, additional land may be needed to accommodate the city's growth allocation to the year 2012 (751 acres are needed; 667 acres are available).

Poulsbo JPA



Size (Total Acres)	1,000
Residential Acres	840
Commercial/Industrial Acres	75
Public Lands	29
Critical Areas	152

A component of Poulsbo's and Kitsap County's Comprehensive Plans is to designate urban growth areas and to establish goals and policies to ensure development in those areas is urban in nature and consistent with the GMA.

The Poulsbo Joint Urban Planning Area consists of approximately 1000 acres of unincorporated land surrounding the current city limits. This area is zoned at 1 dwelling unit to 10 acres to preserve the area for development, as efficiencies of development are higher for larger lots with fewer structures.

Kitsap County's 1998 Comprehensive Plan designated the Joint Urban Planning Area (JUPA) analyzed in this report and identified the need to undertake a joint planning process to finalize Poulsbo's UGA. This joint planning process culminated in approval of the Poulsbo UGA Sub Area Plan by both jurisdictions in early 2002. The Sub Area Plan will be incorporated into the County and City comprehensive plans during the 2002 yearly updates. The adopted UGA for Poulsbo is significantly different from the JUPA analyzed in this report; however, the basis for both reports is population capacity analysis consistent with the County Comprehensive Plan.

Buildable Lands Questions

1. What is the actual density and type of housing that has been constructed in the Urban Growth Areas? Are urban densities being achieved?

2. How much land was actually developed for residential use, and based on this, how much land would be needed for residential development during the remainder of the 20-year planning period?

3. To what extent have capital facilities, critical areas and rural development affected the supply of suitable land?

4. Is there enough buildable land in each city and the county to accommodate population and employment projections?

5. Are there inconsistencies between actual and planned development?

6. What measures can be taken that are reasonably likely to increase consistency during the subsequent five-year period, if the comparison shows inconsistency?

For the purpose of designating a UGA for Poulsbo a capacity analysis was performed and is included in the Poulsbo Sub Area Plan. The Sub Area Plan analysis is an update to that performed for this buildable lands report. Corrections to data within Poulsbo are incorporated in the Sub Area Plan which assumes complete build out at the highest zoned densities within the current Poulsbo city limits. The Poulsbo Comprehensive Plan and other studies identify variables specific to Poulsbo and vicinity. The Sub Area Plan incorporates these variables and a critical areas review creating a local picture of Poulsbo growth and accommodating needs specific to Poulsbo.

Introduction

To address the questions posed in the Buildable Lands Program, the following tables were prepared, summarizing: permitted and platted densities, residential land need (based on population projections), and residential land supply.

Permitted Densities

Residential densities may be analyzed as either permitted densities or platted densities. This study looks at both. Permitted densities cover all units that received a building permit for new residential construction. This will show a more comprehensive picture of all land developed, though larger, non-conforming lots of record will lower the final density estimate. Platted densities, by contrast, include subdivisions that were committed to a specific lot size, whether or not development actually occurred on each separate parcel. These densities also incorporate land set aside as open space or common area.

Poulsbo JPA
Net Density of Residential Units Permitted: 1995 - 1999

Type	Zone	Description	Total Acres with Permits	New Housing Units	Density
SF	URS	Urb Res - 1 unit/10 ac.	34.90	43	1.23
Total Units Permitted			34.90	43	**1.23**

Platted Densities

There were no platted parcels in the Poulsbo JPA during the analysis period.

Population/Dwelling Unit Target

The first step in estimating land need is to adjust the jurisdiction's allocated population target (1992-2012) to the 2000 base year. For UGAs, population allocations were calculated based on the total UGA allocation, then applied based on a percent of that total allocation. The population allocation for the Poulsbo JPA is 3,556. Details on this approach appear in **Chapter VI** of this report. The following table shows how the adjustment was made.

This population number is then converted into the dwelling unit targets for single-family, and multi-family. An 85/15 split was assumed, per the County's Comprehensive Plan. For single-family units, 2.5 persons per household are assumed. For multi-family units, 1.8 persons per household are assumed. Finally, separate estimates for single family and multi-family dwelling

units are converted into an estimate of net acres needed. This calculation assumes that the platted density of the analysis period will continue through 2012.

Poulsbo JPA: Summary of Residential Land Need

2012 Pop Target	Single Family Units Needed	Multi-Family Units Needed	1995-1999 SF Density	1995-1999 MF Density	Net Buildable Acres Needed	Gross Buildable Acres Needed
3,556	1,209	296	1.23	1.23	1,224	1,615
If future development occurs at an average density of 4 units per acre						497

*This study assumes that new streets (17%) and public facilities (15%) will increase the acreage required for new residential uses by 32 percent.

Residential/Buildable Land Supply

Land supply was determined by first looking at gross available vacant and underutilized land. Vacant lands include all undeveloped parcels that have never had residential permits issued on them. Underutilized lands are those areas that may be likely to redevelop at higher densities in the future. For more details regarding assumptions for redevelopment potential, see **Chapter VI, Approach and Methodology**. To determine net available suitable lands, critical areas were removed. Specific critical areas removed are also noted in that chapter.

Poulsbo JPA: Summary of Vacant and Underutilized Residential Lands
By Major Zoning Category

	Vacant Areas			Underutilized Areas			Total		
	Gross	Critical	Net	Gross	Critical	Net	Gross	Critical	Net
Single Family	240	47	193	0	0	0	240	47	193
Total	240	47	193	0	0	0	240	47	193

Note: Numbers in this table have been reported as whole numbers. Small differences in totals may occur due to rounding.

City of Poulsbo and Poulsbo JPA

This section provides some general insights on development densities that have occurred in the composite area of incorporated Poulsbo and its Joint Planning Area.

The following table shows permitted densities for single family and multi-family units on the aggregate level.

Summary of Composite Permitted Densities for Poulsbo and Poulsbo Joint Urban Planning Area			
	Units Permitted	Acres Permitted	Total Density
Single Family	402	105.96	3.79
Multi-Family	12	14.85	**0.81**
Total	414	120.81	3.43

Summary of Composite Platted Densities Poulsbo and Poulsbo Joint Urban Planning Area					
Gross Acres Platted	Acres in "Common Areas"	Net Acres	Residential Lots Platted	Residential Densities	
				Gross	Net
82.18	19.28	62.90	303	**3.69**	4.82

Summary of Residential Land Need for Poulsbo and Poulsbo JUPA						
2012 Pop Target	Single Family Units Needed	Multi-Family Units Needed	1995-1999 SF Density	1995-1999 MF Density	Net Buildable Acres Needed	Gross Buildable Acres Needed
6,472	2,200	539	**3.69**	**.81**	1,262	1,665
If future development occurs at an average density of 4 units per acre						904

***** This study assumes that new streets (17%) and public facilities (15%) will increase the acreage required for new residential uses.

The table below shows total vacant and underutilized acres at the aggregate level. This reflects vacant and underutilized acres existing as of January 1, 2000.

Summary of Vacant + Underutilized Acres by Zoning Type			
Zoning Type	Vac + Underutilized	Critical	Net Buildable
Single Family	618	67	552
Multi-Family	136	21	115
Mixed Use	196	3	193
Total	950	91	860

Urban Growth Areas

Central Kitsap

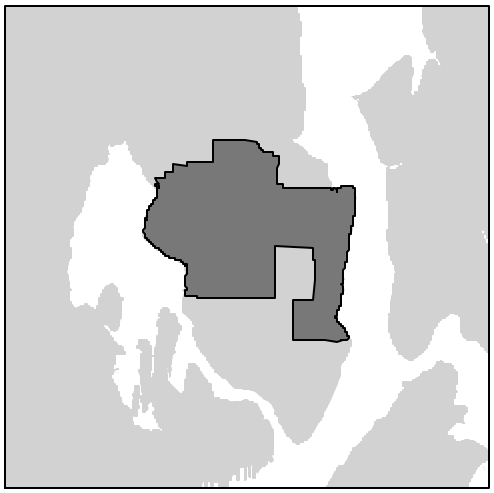
Gorst

Kingston

McCormick Woods

Silverdale

Central Kitsap UGA



Size (Total Acres)	5,723
Residential Acres	4,120
Commercial/Industrial Acres	295
Public Lands	329
Critical Areas	617

The Central Kitsap UGA includes the Tracyton and Illahee areas. The majority of this UGA is characteristically urban. The Central Kitsap UGA developed primarily at urban densities and uses prior to adoption of the GMA.

Introduction

To address the questions posed in the Buildable Lands Program, the following tables were prepared, summarizing: permitted and platted densities, residential land need (based on population projections), and residential land supply.

Permitted Densities

Residential densities may be analyzed as either permitted densities or platted densities. This study looks at both. Permitted densities cover all units that received a building permit for new residential construction. This will show a more comprehensive picture of all land developed, though permits issued on larger, non-conforming lots of record will lower the final density estimate. Platted densities, by contrast, more accurately reflect current density standards. Subdivisions platted during the analysis period were therefore included in the density analysis whether or not development actually occurred on each separate parcel.

Buildable Lands Questions

1. What is the actual density and type of housing that has been constructed in the Urban Growth Areas? Are urban densities being achieved?

2. How much land was actually developed for residential use, and based on this, how much land would be needed for residential development during the remainder of the 20-year planning period?

3. To what extent have capital facilities, critical areas and rural development affected the supply of suitable land?

4. Is there enough buildable land in each city and the county to accommodate population and employment projections?

5. Are there inconsistencies between actual and planned development?

6. What measures can be taken that are reasonably likely to increase consistency during the subsequent five-year period, if the comparison shows inconsistency?

Central Kitsap UGA Net Density of Residential Units Permitted: 1995 - 1999					
Type	Zone	Description	Total Acres with Permits	New Units	Density
SF	UL	5 - 9 units per acre	95.18	251	2.64
		Urban Restricted	56.22	48	0.85
Total			151.40	299	1.97
MF	UH	19 - 24 units per acre	22.50	14	0.62
	UM	10 - 18 units per acre	40.56	27	0.67
	UM-JPA	10 - 18 units per acre	-	-	-
Total			63.06	41	**0.65**
Total All Units			214.46	340	1.41

Platted Densities

A comparison between both permitted and platted densities reveals two major trends. In some cases, platted densities are lower than permitted densities, primarily due to open space. In other cases, platted densities are higher. This is because platted density estimates do not include development on larger, non-conforming lots of record. In the Central Kitsap UGA, platted densities are higher than permitted densities. Gross residential platted densities are used to calculate land need**.**

Central Kitsap UGA Density of Newly Platted Residential Parcels: 1995 – 1999							
Zone	Density	Gross Acres Platted	Acres in Common Areas [1]	Net Acres	Lots Platted	Residential Densities	
						Gross	Net
UL	Urban Low Residential	65.03	30.29	34.74	248	3.81	7.14
UM	Urban Medium Residential	3.44	0.35	3.08	28	8.14	9.09
UR	Urban Restricted	14.69	5.26	9.42	71	4.83	7.54
Total Platted Units		83.16	35.90	47.24	347	**4.17**	7.34

[1] Includes all land with an assessment code, "91100".

Population/Dwelling Unit Target

The first step in estimating land need is to adjust the jurisdiction's allocated population target (1992-2012) to the 2000 base year. For UGAs, population allocations were calculated based on the total UGA allocation, then applied based on a percent of that total allocation. The population target for Central Kitsap UGA is 6,809 persons. Details on this approach appear in **Chapter VI** of this report. The following table shows how the adjustment was made.

This population number is then converted into the dwelling unit targets for single-family, and multi-family. An 85/15 split was assumed, per the County's Comprehensive Plan. For single-family units, 2.5 persons per household are assumed. For multi-family units, 1.8 persons per household are assumed. Finally, separate estimates for single family and multi-family dwelling units are converted into an estimate of net acres needed. This calculation assumes that the platted density of the analysis period will continue through 2012, and that multi-family will remain constant.

Central Kitsap UGA: Summary of Residential Land Need						
2012 Pop Target	Single Family Units Needed	Multi-Family Units Needed	1995-1999 SF Density	1995-1999 MF Density	Net Buildable Acres Needed	Gross Buildable Acres Needed
6,809	2,315	567	**4.17**	**0.65**	1,427	1,883
If future development occurs at an average density of 4 units per acre						951

Residential Buildable Land Supply

Land supply was determined by first looking at gross available vacant and underutilized land. Vacant lands include all undeveloped parcels that have never had residential permits issued on them. Underutilized lands are those areas that may be likely to redevelop at higher densities in the future. For more details regarding assumptions for redevelopment potential, see **Chapter VI**, **Approach and Methodology**. To determine net available suitable lands, critical areas were removed. Specific critical areas removed are also noted in that chapter.

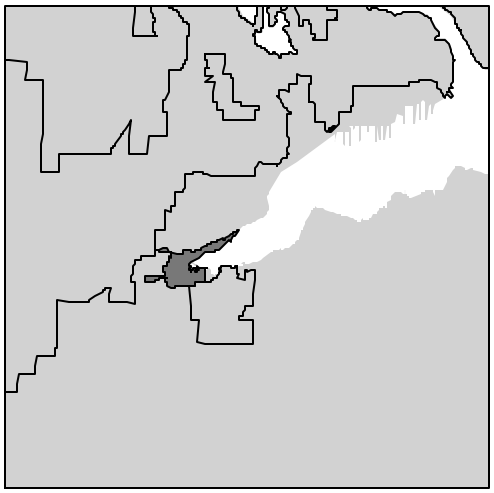
Central Kitsap UGA: Summary of Vacant and Underutilized Residential Lands
By Major Zoning Category

	Vacant Areas			Underutilized Areas			Total		
	Gross	Critical	Net	Gross	Critical	Net	Gross	Critical	Net
Single Family	724	174	550	593	56	538	1,317	230	1,087
Multi-Family	23	0	23	29	1	28	52	1	51
Total	747	174	572	622	56	566	1,369	231	1,138

Note: Numbers in this table have been reported as whole numbers. Small differences in totals may occur due to rounding.

Gorst UGA

Size (Total Acres)	178
Residential Acres	0
Commercial/Industrial Acres	129
Public/Exempt Lands	23
Critical Areas	43



The Gorst UGA is primarily a commercial and industrial area at the junction of State Highway 3 and State Highway 16. The Gorst UGA is included in the City of Bremerton Urban Joint Planning Area.

No residential land needs analysis was done for this UGA.

Data and findings regarding commercial and industrial lands and employment is included in **Chapter VIII** of this report, Industrial and Commercial Lands.

Kingston UGA

Size (Total Acres)	744
Residential Acres	539
Commercial/Industrial Acres	110
Public/Exempt Lands	42
Critical Areas	133

The Kingston UGA is in the eastern most part of northern Kitsap County. The Kingston area is accessed via the Washington State Ferry system on the Kingston/Edmonds route and via State Highway 104. With the ferry link to Edmonds, Kingston serves as the gateway for thousands of annual visitors to the Olympic Peninsula. It is also home to a number of people who commute to King County daily.

The Kingston UGA is considered as the social and economic center of the north end of the Kitsap Peninsula. Kingston is characterized primarily by rural development with a commercial area located adjacent to the ferry terminals.

Buildable Lands Questions

1. What is the actual density and type of housing that has been constructed in the Urban Growth Areas? Are urban densities being achieved?

2. How much land was actually developed for residential use, and based on this, how much land would be needed for residential development during the remainder of the 20-year planning period?

3. To what extent have capital facilities, critical areas and rural development affected the supply of suitable land?

4. Is there enough buildable land in each city and the county to accommodate population and employment projections?

5. Are there inconsistencies between actual and planned development?

6. What measures can be taken that are reasonably likely to increase consistency during the subsequent five-year period, if the comparison shows inconsistency?

Introduction

To address the questions posed in the Buildable Lands Program, the following tables were prepared, summarizing: permitted and platted densities, residential land need (based on population projections), and residential land supply.

Permitted Densities

Residential densities may be analyzed as either permitted densities or platted densities. This study looks at both. Permitted densities cover all units that received a building permit for new residential construction. This will show a more comprehensive picture of all land developed, though larger, non-conforming lots of record generally lower the final density estimate. Platted densities, by contrast, more accurately reflect current density standards. Subdivisions platted during the analysis period were therefore included in the density analysis whether or not development actually occurred on each separate parcel because they give a clearer picture of how development is occurring under current regulations and development standards.

Kingston UGA Net Density of Residential Units Permitted: 1995 - 1999					
Type	Zone	Description	Total Acres with Permits	New Housing Units	Density
SF	UL	5 - 9 units per acre	28.94	69	2.38
Total			28.94	69	2.38
MF	UH	19 - 24 units per acre	-	-	-
	UM	10 - 18 units per acre	.74	3	4.05
Total			.74	3	**4.05**
Total All Units			29.68	72	2.43

* Site is less than 1 acre; numbers have been rounded for purposes of calculation

Platted Densities

A comparison between both permitted and platted densities reveals two major trends. In some cases, platted densities are lower than permitted densities, primarily due to open space. In other cases, platted densities are higher. This is because platted density estimates do not include development on larger, non-conforming lots of record. In terms of the Kingston UGA, platted densities are higher than permitted densities. Gross residential platted densities are used to calculate land need**.**

Kingston UGA Density of Newly Platted Residential Parcels: 1995 – 1999							
Zone	Density	Gross Acres Platted	Acres in "Common Areas" [1]	Net Acres	Lots Platted	Residential Densities	
						Gross	Net
UL	Urban Low Res.	8.39	0.47	7.92	21	2.50	2.65
Total Platted Units		8.39	0.47	7.92	21	**2.50**	2.65

[1] Includes all land with an assessment code, "91100", land in public utilities and designated open space

Population/Dwelling Unit Target

The first step in estimating land need is to adjust the jurisdiction's allocated population target (1992-2012) to the 2000 base year. For UGAs, population allocations were calculated based on the total UGA allocation, then applied based on a percent of that total allocation. The population allocation for the Kingston UGA is 1,565. Details on this approach appear in **Chapter VI** of this report. The following table shows how the adjustment was made.

This population number is then converted into the dwelling unit targets for single-family, and multi-family. An 85/15 split was assumed, per the County's Comprehensive Plan. For single-family units, 2.5 persons per household are assumed. For multi-family units, 1.8 persons per household are assumed. Finally, separate estimates for single family and multi-family dwelling units are converted into an estimate of net acres needed. This calculation assumes that the platted density of the analysis period will continue through 2012, and that multi-family will remain constant.

Kingston UGA: Summary of Residential Land Need						
2012 Pop Target	Single Family Units Needed	Multi-Family Units Needed	1995-1999 SF Density	1995-1999 MF Density	Net Buildable Acres Needed	Gross Buildable Acres Needed
1,565	532	130	**2.50**	**4.05**	245	323
If future development occurs at an average density of 4 units per acre						219

***** This study assumes that new streets (17%) and public facilities (15%) will increase the acreage required for new residential uses.

Residential/Buildable Land Supply

Land supply was determined by first looking at gross available vacant and underutilized land. Vacant lands include all undeveloped parcels that have never had residential permits issued on them. Underutilized lands are those areas that may be likely to redevelop at higher densities in the future. For more details regarding assumptions for redevelopment potential, see **Chapter VI**, **Approach and Methodology**. To determine net available suitable lands, critical areas were removed. Specific critical areas removed are also noted in that chapter.

Kingston UGA: Summary of Vacant and Underutilized Residential Lands
By Major Zoning Category

	Vacant Areas			Underutilized Areas			Total		
	Gross	Critical	Net	Gross	Critical	Net	Gross	Critical	Net
Single Family	130	28	102	55	6	49	185	34	151
Multi-Family	29	2	27	10	2	8	39	4	35
Total	159	30	129	66	8	57	224	38	187

Note: Numbers in this table have been reported as whole numbers. Small differences in totals may occur due to rounding.

According to this analysis, 323 acres of suitable residential land are needed to accommodate the population projections; only 187 acres or land are available. This would indicate a shortfall of suitable buildable land in the Kingston UGA. The County is currently reviewing the UGA in a separate SubArea Plan. A new UGA boundary is expected to result from that analysis and public process.

McCormick Woods UGA

Size (Total Acres)	1,755
Residential Acres	1,690
Commercial/Industrial Acres	0
Public/Exempt Lands	2
Critical Areas	232

McCormick Woods UGA is located within the South Kitsap Urban Joint Planning Area. McCormick Woods and Campus Station were permitted under the Performance Based Development standards. The area encompasses a planned community that hosts a golf course, residential areas, and open spaces. The Performance Based Development approval limited the total number of residential units to 1587, despite its current Comprehensive Plan designation of Urban Low 5-9 units per acre. To date, the residential portion of McCormick Woods is approximately fifty percent built out.

In 2002 the Kitsap County Commissioners acted to expand the UGA and allow a more mixed use development pattern than that envisioned under the previously approved Performance Based Development. Although the previous approval was for an almost entirely single family residential pattern, the newly approved vision will include some higher density housing options. During the analysis period, however, development within the area was almost exclusively single family.

Buildable Lands Questions

1. What is the actual density and type of housing that has been constructed in the Urban Growth Areas? Are urban densities being achieved?

2. How much land was actually developed for residential use, and based on this, how much land would be needed for residential development during the remainder of the 20-year planning period?

3. To what extent have capital facilities, critical areas and rural development affected the supply of suitable land?

4. Is there enough buildable land in each city and the county to accommodate population and employment projections?

5. Are there inconsistencies between actual and planned development?

6. What measures can be taken that are reasonably likely to increase consistency during the subsequent five-year period, if the comparison shows inconsistency?

Introduction

To address the questions posed in the Buildable Lands Program, the following tables were prepared, summarizing: permitted and platted densities, residential land need (based on population projections), and residential land supply.

Permitted Densities

Residential densities may be analyzed as either permitted densities or platted densities. This study looks at both. Permitted densities cover all units that received a building permit for new residential construction. This will show a more comprehensive picture of all land developed, though permits issued on larger, non-conforming lots of record will likely lower the final density estimate. Platted densities, by contrast, more accurately reflect current density standards. Subdivisions platted during the analysis period were therefore included in the density analysis whether or not development actually occurred on each separate parcel.

McCormick Woods UGA Net Density of Residential Units Permitted: 1995 – 1999					
Type	Zone	Description	Total Acres with Permits	New Housing Units	Density
SF	UL	5 - 9 units per acre	49.12	166	3.38
Total All Units			49.12	166	3.38

Platted Densities

A comparison between both permitted and platted densities reveals two major trends. In some cases, platted densities are lower than permitted densities, primarily due to open space. In other cases, platted densities are higher. This is because platted density estimates do not include development on larger, non-conforming lots of record. Net residential platted densities are used to calculate land need in the McCormick Woods UGA due to the unique nature of its approval and development patterns.

McCormick Woods UGA Net Density of Newly Platted Residential Parcels: 1995 – 1999						
Zone	Density	Gross Acres Platted	Acres in Common Areas [1]	Lots Platted	Residential Densities	
					Gross	Net
UL	5 – 9 units per acre	82.10	54.88	120	1.46	4.41
Total Platted Units		82.10	54.88	120	1.46	4.41

[1] Includes all land with an assessment code 91100.

Population/Dwelling Unit Target

The first step in estimating land need is to adjust the jurisdiction's allocated population target (1992-2012) to the 2000 base year. For UGAs, population allocations were calculated based on the total UGA allocation, then applied based on a percent of that total allocation. The population allocation for the McCormick Woods UGA is 2,674. Details on this approach appear in **Chapter VI** of this report. The following table shows how the adjustment was made.

McCormick Woods UGA: Summary of Residential Land Need				
2012 Pop Target	Single Family Units Needed*	1995-1999 SF Net Density**	Net Buildable Acres Needed	Gross Buildable Acres Needed
2,674	794	4.41	180	243

* Approximate remaining single-family residential units allowed under Performance Based Development approval, standard household size not used to calculate this number.

** Net density used due to unique nature of approval and development patterns in this UGA.

Residential/Buildable Lands Supply

Land supply was determined by first looking at gross available vacant and underutilized land. Vacant lands include all undeveloped parcels that have never had residential permits issued on them. Underutilized lands are those areas that may be likely to redevelop at higher densities in the future. For more details regarding assumptions for redevelopment potential, see **Chapter VI**, **Approach and Methodology**. To determine net available suitable lands, critical areas were removed. Specific critical areas removed are also noted in that chapter.

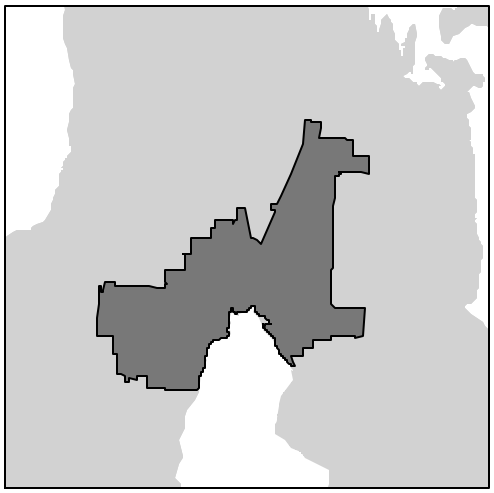
McCormick Woods UGA: Summary of Vacant and Underutilized Residential Lands
By Major Zoning Category

	Vacant Areas			Underutilized Areas			Total		
	Gross	Critical	Net	Gross	Critical	Net	Gross	Critical	Net
Single Family	233	37	197	37	10	28	271	46	224
Total	233	37	197	37	10	28	271	46	224

Note: Numbers in this table have been reported as whole numbers. Small differences in totals may occur due to rounding.

Silverdale UGA

Size (Total Acres)	4,411
Residential Acres	2,590
Commercial/Industrial Acres	1,085
Public/Exempt Lands	550
Critical Areas	362



The Silverdale UGA is in central Kitsap and includes the Silverdale and Island Lake areas. The Silverdale area is the commercial hub of the county and has developed in a primarily urban pattern. A major retail mall lies in the central part of the area and is surrounded by a variety of large and small commercial uses. A small historic commercial area is located near Puget Sound and offers a variety of small retail shops and offices. Most areas within this UGA have existing or planned urban services such as water and sewer

Silverdale is also a major residential area. Single-family housing is located throughout the UGA, especially in the Ridgetop area. Silverdale is also host to some of the highest density multi-family development in the County.

The citizens of Silverdale have undertaken several attempts at incorporation in the past few years. While none of the attempts has yet been successful, it is anticipated that this area will incorporate into a new city in the near future. Kitsap County is currently working with the citizens of Silverdale on a community planning effort to identify a vision for the future and implementing strategies to achieve the vision.

Buildable Lands Questions

1. What is the actual density and type of housing that has been constructed in the Urban Growth Areas? Are urban densities being achieved?

2. How much land was actually developed for residential use, and based on this, how much land would be needed for residential development during the remainder of the 20-year planning period?

3. To what extent have capital facilities, critical areas and rural development affected the supply of suitable land?

4. Is there enough buildable land in each city and the county to accommodate population and employment projections?

5. Are there inconsistencies between actual and planned development?

6. What measures can be taken that are reasonably likely to increase consistency during the subsequent five-year period, if the comparison shows inconsistency?

Introduction

To address the questions posed in the Buildable Lands Program, the following tables were prepared, summarizing: permitted and platted densities, residential land need (based on population projections), and residential land supply.

Permitted Densities

Residential densities may be analyzed as either permitted densities or platted densities. This study looks at both. Permitted densities cover all units that received a building permit for new residential construction. This will show a more comprehensive picture of all land developed, though permits issued on larger, non-conforming lots of record will likely lower the final density estimate. Platted densities, by contrast, more accurately reflect current density standards. Subdivisions platted during the analysis period were therefore included in the density analysis whether or not development actually occurred on each separate parcel.

Silverdale UGA
Net Density of Residential Units Permitted: 1995 - 1999

Type	Zone	Description	Total Acres with Permits	New Housing Units	Density
SF	UL	5 - 9 units per acre	71.28	335	4.70
Total			71.28	335	4.70
MF	MR	8 - 44 units per acre	-	-	-
	UH	19 - 24 units per acre	2.63	41	15.59
	UM	10 - 18 units per acre	22.10	108	4.89
Total			24.73	149	**6.03**
Total All Units			96.01	484	5.04

Platted Densities

A comparison between both permitted and platted densities reveals two major trends. In some cases, platted densities are lower than permitted densities, primarily due to open space. In other cases, platted densities are higher. This is because platted density estimates do not include development on larger, non-conforming lots of record. Gross residential platted densities are used to calculate land need**.**

Silverdale UGA
Density of Newly Platted Residential Parcels: 1995 – 1999

Zone	Density	Gross Acres Platted	Acres in Common Areas [1]	Net Acres	Lots Platted	Densities	
						Gross	Net
NC	Neighb. Commercial	1.69	0	1.69	1	0.59	0.59
UH	Urban High Residential	4.58	1.11	3.47	49	10.70	14.12
UL	Urban Low Residential	28.08	6.86	21.22	193	6.87	9.10
UM	Urban Med. Residential	12.48	5.18	7.30	88	7.05	12.05
Total Platted Units		46.83	13.15	33.68	331	**7.07**	9.82

[1] Includes all land with an assessment code, "91100".

Population/Dwelling Unit Target

The first step in estimating land need is to adjust the jurisdiction's allocated population target (1992-2012) to the 2000 base year. For UGAs, population allocations were calculated based on the total UGA allocation, then applied based on a percent of that total allocation. The population allocation for the Silverdale UGA is 4,519. Details on this approach appear in **Chapter VI** of this report. The following table shows how the adjustment was made.

This population number is then converted into the dwelling unit targets for single-family, and multi-family. An 85/15 split was assumed, per the County's Comprehensive Plan. For single-family units, 2.5 persons per household are assumed. For multi-family units, 1.8 persons per household are assumed. Finally, separate estimates for single family and multi-family dwelling units are converted into an estimate of net acres needed. This calculation assumes that the platted density of the analysis period will continue through 2012.

Silverdale UGA: Summary of Residential Land Need

2012 Pop Target	Single Family Units Needed	Multi-Family Units Needed	1995-1999 SF Density	1995-1999 MF Density	Net Buildable Acres Needed	Gross Buildable Acres Needed
4,519	1,536	377	**7.07**	**6.03**	280	370
If future development occurs at an average density of 4 units per acre						631

***** This study assumes that new streets (17%) and public facilities (15%) will increase the acreage required for new residential uses.

This area is meeting the urban density goal of 4 units per acre.

Residential/Buildable Land Supply

Land supply was determined by first looking at gross available vacant and underutilized land. Vacant lands include all undeveloped parcels that have never had residential permits issued on them. Underutilized lands are those areas that may be likely to redevelop at higher densities in the future. For more details regarding assumptions for redevelopment potential, see **Chapter VI**, Approach and Methodology. To determine net available suitable lands, critical areas were removed. Specific critical areas removed are also noted in that chapter.

Silverdale UGA: Summary of Vacant and Underutilized Residential Lands (with Critical Areas)
By Major Zoning Category

	Vacant Areas			Underutilized Areas			Total		
	Gross	Critical	Net	Gross	Critical	Net	Gross	Critical	Net
Single Family	284	26	257	386	26	360	670	53	617
Multi-Family	119	16	103	20	0	20	139	17	122
Total	403	43	360	406	27	379	809	69	739

Note: Numbers in this table have been reported as whole numbers. Small differences in totals may occur due to rounding.

Areas of More Intense Rural Development

Port Gamble

Manchester

Suquamish

Port Gamble

Size (Total Acres)	118
Residential Acres	50
Commercial/Industrial Acres	40
Public/Exempt Lands	1
Critical Areas	51

Port Gamble Rural Historic Town is located on the westerly tip of the peninsula in north Kitsap County. Access to Port Gamble Historic Town is via the Hood Canal Floating Bridge or by State Highway 104.

In Kitsap County's Comprehensive Plan, Port Gamble was originally designated an urban growth area.

In 1999, the Central Puget Sound Growth Management Hearing Board ordered Kitsap County to re-designate and rezone Port Gamble with an appropriate rural or other non-urban land use designation. Consistent with the policies of the Kitsap Comprehensive plan that allow for alternative designations for limited areas of more intensive rural development with potential for residential, mixed use, commercial, and limited industrial/waterfront development, Port Gamble was designated as a Rural Historic Town. The designation of Port Gamble as a Rural Historic Town is unique to the other jurisdictions and UGAs in Kitsap County.

Buildable Lands Questions

1. What is the actual density and type of housing that has been constructed in the Urban Growth Areas? Are urban densities being achieved?

2. How much land was actually developed for residential use, and based on this, how much land would be needed for residential development during the remainder of the 20-year planning period?

3. To what extent have capital facilities, critical areas and rural development affected the supply of suitable land?

4. Is there enough buildable land in each city and the county to accommodate population and employment projections?

5. Are there inconsistencies between actual and planned development?

6. What measures can be taken that are reasonably likely to increase consistency during the subsequent five-year period, if the comparison shows inconsistency?

Introduction

To address the questions posed in the Buildable Lands Program, the following tables were prepared, summarizing: permitted and platted densities, residential land need (based on population projections), and residential land supply.

Permitted Densities

No permits for residential units were issued in Port Gamble during the analysis period.

Platted Densities

No parcels were platted in Port Gamble during the analysis period.

Population/Dwelling Unit Target

In order to estimate land need, several steps are taken. First, it is important to determine the remaining allocated population between 2000 and 2012: For AMRIDs, no actual targets have been established. However, in order to calculate land need, and therefore buildout potential, a population "target" or "allocation" still needs to be derived. To do this for AMRIDS, population allocations were calculated based on the total AMRID population, then applied to each area on a percentage basis. Details of this process are included in **Chapter VI** of this report. The population allocation for Port Gamble is 157.

Because Port Gamble has had not development by which to measure densities, the single-family residential density from rural Kitsap County was used in its place.

Port Gamble: Summary of Land Need

2012 Pop Target	Single Family Units Needed	1995-1999 SF Density	Net Buildable Acres Needed	Gross Buildable Acres Needed
157	63	0.80	79	104
If future development occurs at an average density of 4 units per acre				21

***** This study assumes that new streets (17%) and public facilities (15%) will increase the acreage required for new residential uses.

Residential/Buildable Land Supply

Land supply was determined by first looking at gross available vacant and underutilized land. Vacant lands include all undeveloped parcels that have never had residential permits issued on them. Underutilized lands are those areas that may be likely to redevelop at higher densities in the future. For more details regarding assumptions for redevelopment potential, see **Chapter VI**, Approach and Methodology. To determine net available suitable lands, critical areas were removed. Specific critical areas removed are also noted in that chapter.

Port Gamble: Summary of Vacant and Underutilized Residential Lands
By Major Zoning Category

	Vacant Areas			Underutilized Areas			Total		
	Gross	Critical	Net	Gross	Critical	Net	Gross	Critical	Net
Single Family	3	1	3	1	0	1	4	1	4
Total	3	1	3	1	0	1	4	1	4

Note: Numbers in this table have been reported as whole numbers. Small differences in totals may occur due to rounding.

General Findings

Since no development has been recorded in Port Gamble during the analysis period, one cannot adequately establish whether growth is occurring according to expectations. The Port Gamble Historic Town designation was adopted in July 1999; prior to that, the zoning for this area was Rural Medium Density Residential. As a result, the zoning designations that allow for urban densities and development were in place for less than one year of the five-year evaluation period.

Manchester

Size (Total Acres)	1,132
Residential Acres	950
Commercial/Industrial Acres	20
Public/Exempt Lands	36
Critical Areas	102

First established in the 1860s and 1870s, logging, milling, agriculture and an extensive water transportation system have shaped the character of this small waterfront community. In the early 1900s, much of the property in downtown Manchester was platted into tiny lots, most with views of the Cascades, Mount Rainier and Puget Sound. Today, the quiet town is home to approximately 4,600 residents.

Buildable Lands Questions

1. What is the actual density and type of housing that has been constructed in the Urban Growth Areas? Are urban densities being achieved?

2. How much land was actually developed for residential use, and based on this, how much land would be needed for residential development during the remainder of the 20-year planning period?

3. To what extent have capital facilities, critical areas and rural development affected the supply of suitable land?

4. Is there enough buildable land in each city and the county to accommodate population and employment projections?

5. Are there inconsistencies between actual and planned development?

6. What measures can be taken that are reasonably likely to increase consistency during the subsequent five-year period, if the comparison shows inconsistency?

Introduction

To address the questions posed in the Buildable Lands Program, the following tables were prepared, summarizing: permitted and platted densities, residential land need (based on population projections), and residential land supply.

Permitted Densities

Residential densities may be analyzed as either permitted densities or platted densities. This study looks at both. Permitted densities cover all units that received a building permit for new residential construction. This will show a more comprehensive picture of all land developed, though larger, non-conforming lots of record will lower the final density estimate. Platted densities, by contrast, include subdivisions that were committed to a specific lot size, whether or not development actually occurred on each separate parcel. These densities also incorporate land set aside as open space or common area.

Manchester
Net Density of Residential Units Permitted: 1995 - 1999

Type	Zone	Description	Total Acres with Permits	New Housing Units	Density
SF	RR	1 unit per 5 acres	38.16	109	2.86
Total All Units			38.16	109	2.86

Platted Densities

No parcels were platted in Manchester Village during the analysis period.

Population/Dwelling Unit Target

In order to estimate land need, several steps are taken. First, it is important to determine the remaining allocated population between 2000 and 2012: For AMRIDs, no actual targets have been established. However, in order to calculate land need, and therefore buildout potential, a population "target" or "allocation" still needs to be derived. To do this for AMRIDS, population allocations were calculated based on the total AMRID population, then applied to each area on a percentage basis. Details of this process are included in **Chapter VI** of this report. The population allocation for Manchester is 315. The following table shows how the adjustment was made.

Manchester: Summary of Residential Land Need

2012 Pop Target	Single Family Units Needed	1995-1999 SF Density	Net Buildable Acres Needed	Gross Buildable Acres Needed
315	126	**2.86**	44	58
If future development occurs at an average density of 4 units per acre				42

***** This study assumes that new streets (17%) and public facilities (15%) will increase the acreage required for new residential uses.

Residential/Buildable Land Supply

Land supply was determined by first looking at gross available vacant and underutilized land. Vacant lands include all undeveloped parcels that have never had residential permits issued on them. Underutilized lands are those areas that may be likely to redevelop at higher densities in the future. For more details regarding assumptions for redevelopment potential, see **Chapter VI**, **Approach and Methodology**. To determine net available suitable lands, critical areas were removed. Specific critical areas removed are also noted in that chapter.

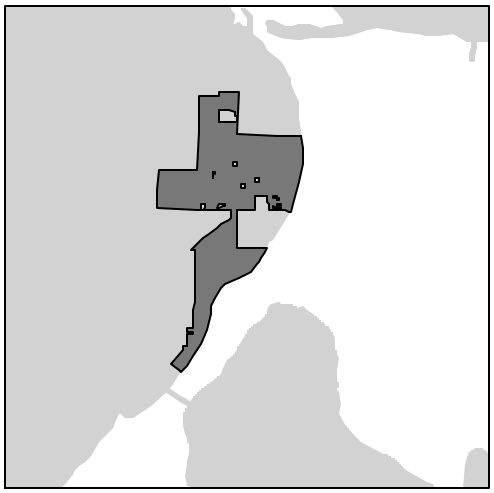
Manchester: Summary of Vacant and Underutilized Residential Lands
By Major Zoning Category

	Vacant Areas			Underutilized Areas			Total		
	Gross	Critical	Net	Gross	Critical	Net	Gross	Critical	Net
Single Family	199	12	187	0	0	0	199	12	187
Total	199	12	187	0	0	0	199	12	187

Note: Numbers in this table have been reported as whole numbers. Small differences in totals may occur due to rounding.

Suquamish

Size (Total Acres)	396
Residential Acres	280
Commercial/Industrial Acres	15
Public/Exempt Lands	30
Critical Areas	16



Suquamish Village is located on the Port Madison Indian Reservation just across the Agate Pass Bridge from Bainbridge. This rural area of Kitsap County has historically experienced more intensive rural development, yet it is not development that would be categorized as completely urban. In 1992, a group of local citizens developed the Suquamish Community Plan, however Kitsap County never adopted it. As Kitsap County worked on complying with the GMA, policies were developed on how to address areas that historically had experienced more intensive rural development that was not quite urban but not quite rural. In 1999, Kitsap County adopted the "Suquamish Rural Village Subarea Plan."

Introduction

To address the questions posed in the Buildable Lands Program, the following tables were prepared, summarizing: permitted and platted densities, residential land need (based on population projections), and residential land supply.

Buildable Lands Questions

1. What is the actual density and type of housing that has been constructed in the Urban Growth Areas? Are urban densities being achieved?

2. How much land was actually developed for residential use, and based on this, how much land would be needed for residential development during the remainder of the 20-year planning period?

3. To what extent have capital facilities, critical areas and rural development affected the supply of suitable land?

4. Is there enough buildable land in each city and the county to accommodate population and employment projections?

5. Are there inconsistencies between actual and planned development?

6. What measures can be taken that are reasonably likely to increase consistency during the subsequent five-year period, if the comparison shows inconsistency?

Permitted Densities

Residential densities may be analyzed as either permitted densities or platted densities. This study looks at both. Permitted densities cover all units that received a building permit for new residential construction. This will show a more comprehensive picture of all land developed, though larger, non-conforming lots of record will lower the final density estimate. Platted densities, by contrast, include subdivisions that were committed to a specific lot size, whether or not development actually occurred on each separate parcel. These densities also incorporate land set aside as open space or common area.

Suquamish Net Density of Residential Units Permitted: 1995 - 1999					
Type	Zone	Description	Total Acres with Permits	New Housing Units	Density
SF	SVLR	7 units per acre	5.46	15	2.75
	SVR	9 units per acre	11.55	75	6.49
Total All Units			17.01	90	**5.29**

Platted Densities

No parcels were platted in Suquamish Village during the analysis period.

Population/Dwelling Unit Target

In order to estimate land need, several steps are taken. First, it is important to determine the remaining allocated population between 2000 and 2012: For AMRIDs, no actual targets have been established. However, in order to calculate land need, and therefore buildout potential, a population "target" or "allocation" still needs to be derived. To do this for AMRIDS, population allocations were calculated based on the total AMRID population, then applied to each area on a percentage basis. Details of this process are included in **Chapter VI** of this report. The population allocation for Suquamish Village is 228. The following table shows how the adjustment was made.

Suquamish: Summary of Residential Land Need				
2012 Pop Target	Single Family Units Needed	1995-1999 SF Density	Net Buildable Acres Needed	Gross Buildable Acres Needed
228	91	**5.3**	17	23
If future development occurs at an average density of 4 units per acre				30

***** This study assumes that new streets (17%) and public facilities (15%) will increase the acreage required for new residential uses.

This area is meeting the urban density goal of 4 units per acre.

Residential/Buildable Land Supply

Land supply was determined by first looking at gross available vacant and underutilized land. Vacant lands include all undeveloped parcels that have never had residential permits issued on them. Underutilized lands are those areas that may be likely to redevelop at higher densities in the future. For more details regarding assumptions for redevelopment potential, see **Chapter VI**, **Approach and Methodology**. To determine net available suitable lands, critical areas were removed. Specific critical areas removed are also noted in that chapter.

Suquamish: Summary of Vacant and Underutilized Residential Lands
By Major Zoning Category

	Vacant Areas			Underutilized Areas			Total		
	Gross	Critical	Net	Gross	Critical	Net	Gross	Critical	Net
Single Family	53	1	53	38	0	38	91	1	91
Total	53	1	53	38	0	38	91	1	91

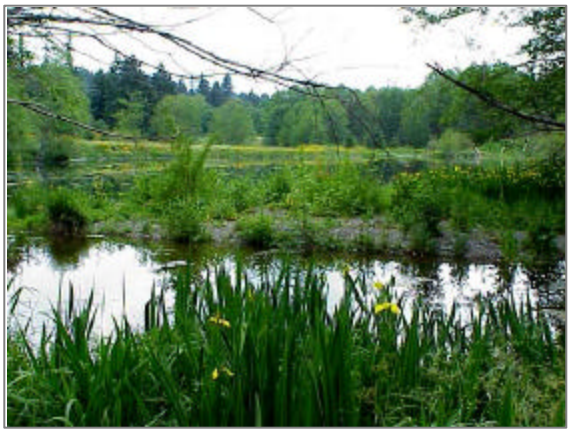
Note: Numbers in this table have been reported as whole numbers. Small differences in totals may occur due to rounding.

General Findings

Between June of 1998 and July of 1999 a moratorium on building permits for the Suquamish area was in place. As a result the sample data is somewhat limited. However, based on this analysis and limited sample, it appears as if sufficient land (91 acres) is available to meet land needs (23 acres) for projected population growth through 2012. The Suquamish Rural Subarea Plan was adopted in April 1999. As a result, zoning designations that allow for urban densities and development was in place for only one year of the five-year evaluation period.

Rural Unincorporated
Kitsap County

Rural Unincorporated Kitsap County



Size (Total Acres)	195,218
Residential Acres	172,440
Commercial/Industrial. Acres	770
Public/Exempt Lands	22,608
Critical Areas	34,316

Rural Kitsap County is characterized by typical rural residential development patterns. Much of the area enjoys sweeping views of Puget Sound, mountain ranges, dense forested areas, and open valleys. Historic development and land division has resulted in residential lots of varying sizes. As is true in most shoreline areas, lots adjacent to Puget Sound tend to be smaller and more densely developed than those in the interior portions of the County.

Many county residents, like their city and UGA counterparts, commute daily to Seattle on the many ferries that serve the County. Others commute to Tacoma via the highway system, work at one of the many military installations, or other local businesses. Kitsap County is known for its beautiful scenery, convenient access to metropolitan areas, and relatively affordable land prices. It has experienced significant population growth due to these factors.

Buildable Lands Questions

1. What is the actual density and type of housing that has been constructed in the Urban Growth Areas? Are urban densities being achieved?

2. How much land was actually developed for residential use, and based on this, how much land would be needed for residential development during the remainder of the 20-year planning period?

3. To what extent have capital facilities, critical areas and rural development affected the supply of suitable land?

4. Is there enough buildable land in each city and the county to accommodate population and employment projections?

5. Are there inconsistencies between actual and planned development?

6. What measures can be taken that are reasonably likely to increase consistency during the subsequent five-year period, if the comparison shows inconsistency?

Introduction

To address the questions posed in the Buildable Lands Program, the following tables were prepared, summarizing: permitted and platted densities, residential land need (based on population projections), and residential land supply.

Permitted Densities

Residential densities may be analyzed as either permitted densities or platted densities. This study looks at both. Permitted densities cover all units that received a building permit for new residential construction. This will show a more comprehensive picture of all land developed, though permits issued on larger, non-conforming lots of record will likely lower the final density estimate. Platted densities, by contrast, more accurately reflect current density standards. Subdivisions platted during the analysis period were therefore included in the density analysis whether or not development actually occurred on each separate parcel.

Rural Kitsap County
Net Density of Residential Units Permitted: 1995 – 1999

Type	Zone	Description	Total Acres with Permits	New Housing Units	Density
SF	MR/RR	Min Res/Rural Res.	44.77	33	.74
	MR/IRF	Mineral Res/Interim Rural For.	-	-	-
	MR/RL	Mineral Res/Rural Low Res.	-	-	-
	IRF	IRF/1 unit per 20 acres	275.49	44	0.16
	RP	1 unit per 10 acres	1,942.34	715	.37
	URS	Urb Reserve/1 unit per 10 acres	351.72	294	.84
	RR	1 unit per 5 acres	6,680.27	3,430	.51
	UL	5 - 9 units per acre	-	-	-
Total			9,294.59	4,516	.49
Total All Units			9.294.59	4.516	.49

Platted Densities

A comparison between both permitted and platted densities reveals two major trends. In some cases, platted densities are lower than permitted densities, primarily due to open space. In other cases, platted densities are higher. This is because platted density estimates do not include development on larger, non-conforming lots of record. Gross residential platted densities are used to calculate land need**.**

Rural Kitsap County
Density of Newly Platted Residential Parcels: 1995 – 1999

Zone	Density	Gross Acres Platted	Acres in Common Areas [1]	Net Acres	Lots Platted	Densities	
						Gross	Net
RP	1 unit per 10 acres	45.12	22.35	22.77	48	1.06	2.11
RR	1 unit per 5 acres	791.33	287.66	503.67	607	0.77	1.21
URS	1 unit per 10 acres	50.26	22.78	27.48	56	1.11	2.04
Total All Units		886.71	332.8	553.92	711	**0.8**	1.3

[1] Includes all land with an assessment code 91100.

Population/Dwelling Unit Target

The first step in estimating land need is to adjust the jurisdiction's allocated population target (1992-2012) to the 2000 base year. The population allocation for rural unincorporated Kitsap County is 10,113. Details on this approach appear in **Chapter VI** of this report. The following table shows how the adjustment was made.

This population number is then converted into the dwelling unit targets for single-family, and multi-family. An 85/15 split was assumed, per the County's Comprehensive Plan. For single-family units, 2.5 persons per household are assumed. For multi-family units, 1.8 persons per household are assumed. Finally, separate estimates for single family and multi-family dwelling units are converted into an estimate of net acres needed. This calculation assumes that the platted density of the analysis period will continue through 2012.

Rural Kitsap County: Summary of Residential Land Need						
2012 Pop Target	Single Family Units Needed	Multi-Family Units Needed	1995-1999 SF Density	1995-1999 MF Density	Net Buildable Acres Needed	Gross Buildable Acres Needed
10,112	4,044	-	**0.80**	**N/A**	5,056	6,673

***** This study assumes that new streets (17%) and public facilities (15%) will increase the acreage required for new residential uses.

Residential/Buildable Land Supply

Land supply was determined by first looking at gross available vacant and underutilized land. Vacant lands include all undeveloped parcels that have never had residential permits issued on them. Underutilized lands are those areas that may be likely to redevelop at higher densities in the future. For more details regarding assumptions for redevelopment potential, see **Chapter VI**, **Approach and Methodology**. To determine net available suitable lands, critical areas were removed. Specific critical areas removed are also noted in that chapter.

Rural Kitsap County: Summary of Vacant and Underutilized Residential Lands
By Major Zoning Category

	Vacant Areas			Underutilized Areas			Total		
	Gross	Critical	Net	Gross	Critical	Net	Gross	Critical	Net
Single Family	36,589	7,270	29,319	3,446	608	2,838	40,035	7,878	32,157
Multi-Family	-	-	-	-	-	-	-	-	-
Total	36,589	7,270	29,319	3,446	608	2,838	40,035	7,878	32,157

Note: Numbers in this table have been reported as whole numbers. Small differences in totals may occur due to rounding.

General Findings

- According to this analysis, there are sufficient buildable residential lands (32,157 acres) available to meet the projected demand (11,720 acres) in rural Kitsap County.
- If multifamily densities are adjusted to reflect current standards instead of observed development patterns during the analysis period, the land needed to meet projected population growth goes down by over 50% to just over 4,000 acres.
- Overall, both permitted and platted densities in the County are higher than current zoning designations allow. Regarding permitted densities, the higher-than-currently-allowed densities are likely due to the large number of "legacy lots" that have been approved under old density standards.

It should be noted that several of the county's zoning designations, while considered single family residential in this analysis, are not expected, nor intended to be areas with a great deal of development. These areas include the Interim Rural Forestry Zones, and the Mineral Resource Overlay zones, where densities are intentionally low to protect the resource values of these areas.

VIII. Industrial and Commercial Lands

Overview

This section focuses on commercial and industrial land need and supply in Kitsap County. The questions of interest in this area of the study are as follows:

How much land was actually developed for commercial and industrial uses within the UGA since the last comprehensive plan was adopted or the last five-year evaluation completed?

and

Based on this and other relevant information, how much land would be needed for commercial and industrial development during the remainder of the 20-year comprehensive planning period?

Employment

Kitsap County's 1998 comprehensive plan has not produced target allocations for employment for specific cities. Because of this, the analysis on land need has been conducted only at the county level. Estimates of current land supply, for both vacant and redevelopable non-residential lands, are included within the previous findings section for each planning area.

Employment Targets

The first step in this analysis is to adjust the countywide employment targets to the 2000-2012 period, using data from the Employment Security Department. The commercial/industrial land use splits by sector follow the approaches outlined in the county comprehensive plan.

Summary of 1992 - 2012 Countywide Employment Targets
2000 - 2012 Adjustment

Industry Group	1992 Employ-ment Estimate [1]	2012 Comp Plan Projec-tion [2]	Expected Change (1992 - 2012)	2000 Employ-ment Estimate [3]	2000 - 2012 Expected Growth	Commercial/ Industrial Split [4]		Expected Employment Growth 2000 - 2012	
						Com	Ind	Com	Ind
Construction/Mining	3,800	4,628	828	4,800	-172	85%	15%	0	0
Manufacturing	1,800	8,028	6,228	2,300	5,728	5%	95%	286	5442
TPU	1,800	2,322	522	1,900	422	70%	30%	295	127
Trade	14,700	21,539	6,839	16,800	4,739	75%	25%	3554	1185
FIRE	2,500	3,248	748	2,600	648	90%	10%	583	65
Services	13,900	28,008	14,108	19,700	8,308	80%	20%	6646	1662
Government	29,300	27,630	-1,670	26,300	1,330	95%	5%	1264	67
TOTAL	67,800	95,403	27,603	74,400	21,003			12,629	8,546

Expected Employment Growth - Commercial	12,629
Expected Employment Growth - Industrial	8,546
Total Expected Employment Growth	21,175

(1) Source: Employment Security Department. Civilian labor force. Includes civilian military employees, but not enlisted military employees.
(2) These estimates from the Comprehensive Plan (p. A-177) are based on projections from the Employment Security Department.
(3) Source: Employment Security Department. Civilian labor force. Includes civilian military employees, but not enlisted military employees.
(4) Source: Kitsap County Comprehensive Plan. (p. A-178).

Employment Land Needs

Employment land is very different from residential land in a number of respects. The number of workers at a given site is likely to fluctuate due to economic cycles. The fluctuation of military employment in Kitsap County, which trickles through to other sectors, increases this effect. Employment density information collected over the 5-year analysis period, therefore, is not likely to give a complete picture of employment space needs for a 20-year period. Therefore, this study has relied on general estimates for employment density that have been used in the county's comprehensive plan.

In order to derive land need to support employment projections, several steps are necessary, including baseline assumptions and reduction factors. The approach utilized for this analysis follows similar procedures as those used in Kitsap County's 1998 Comprehensive Plan.

Assumptions

In this study, commercial employment is estimated at 500 square feet per employee. Industrial employment is estimated at 969 square feet per employee. Floor area ratios are estimated at .32 and .38, respectively.

In addition, a market factor is applied (.25 for commercial uses and .5 for industrial uses) to account for probable vacancy rates, and to provide for some level of flexibility in the marketplace.

Summary of Land Need for Commercial Uses

Industry Group	2000 - 2012 Target	Acres Needed for Building Area Alone (1)	Acres Needed for Building + Parcel Area (2)	Additional Acres for Right of Way and Public Facilities (3)	Additional Acres for Market Factor (4)	Total Commercial Acres Needed (5)
Assumptions Applied		**500**	**0.32**	**0.32**	**0.25**	
Construction/Mining	0	0	0	0	0	0
Manufacturing	286	3	10	3	3	17
TPU	295	3	11	3	3	17
Trade	3,554	41	127	41	42	210
FIRE	583	7	21	7	7	35
Services	6,646	76	238	76	79	393
Government	1,264	15	45	15	15	75
Total	**12,629**	145	453	145	149	**747**

(1) Employment target multiplied by s.f. per employee estimate: 500 s.f./emp for commercial uses, and 969 s.f./emp for industrial uses. Expressed in acres.
(2) Building area estimate divided by floor area ratio: .32 for commercial uses, and .38 for industrial uses.
(3) Acres needed for building and parcel area multiplied by .15 for needed streets and .17 for public facilities (.15 + .17 = .32).
(4) A market factor of .25 for commercial uses and .5 for industrial uses has been applied, following the procedures used in Kitsap County's Comprehensive Plan. The market factor increases the estimate of land need to account for vacancy rates, and to provide for flexibility in the marketplace.
(5) Sum of the former three columns.

Summary of Land Need for Industrial Acres

Industry Group	2000 - 2012 Target Employment	Acres Needed for Building Area Alone (1)	Acres Needed for Building + Parcel Area (2)	Additional Acres for Right of Way and Public Facilities (3)	Additional Acres for Market Factor (4)	Total Industrial Acres Needed (5)
Assmptions Applied		**969**	**0.38**	**0.32**	**0.5**	
Construction/Mining	0	0	0	0	0	0
Manufacturing	5,442	121	319	61	190	569
TPU	127	3	7	1	4	13
Trade	1,185	26	69	13	41	124
FIRE	65	1	4	1	2	7
Services	1,662	37	97	19	58	174
Government	67	1	4	1	2	7
Total	**8,546**	190	500	95	298	**893**

(1) Employment target multiplied by s.f. per employee estimate: 500 s.f./emp for commercial uses, and 969 s.f ./emp for industrial uses. Expressed in acres.
(2) Building area estimate divided by floor area ratio: .32 for commercial uses, and .38 for industrial uses.
(3) Acres needed for building and parcel area multiplied by .15 for needed streets and .17 for public facilities (.15 + .17 = .32).
(4) A market factor of .25 for commercial uses and .5 for industrial uses has been applied, following the procedures used in Kitsap County's Comprehensive Plan. The market factor increases the estimate of land need to account for vacancy rates, and to provide for flexibility in the marketplace.
(5) Sum of the former three columns.

Employment Land Needs Summary

Countywide, approximately 1,640 acres of land will be needed to accommodate projected commercial and industrial employment to the year 2012. Slightly more land is needed for commercial uses than for industrial uses.

While it is not possible to break this need down to specific planning areas (since employment projections were not assigned by jurisdiction or area), this analysis has generated some estimates of non-residential lands that are vacant and non-residential lands with redevelopment potential for each jurisdiction. These estimates may help to guide ongoing policy discussions regarding non-residential land needs throughout Kitsap County.

Employment Land Supply

In order to determine available employment land supply, vacant lands and underutilized lands were identified. Vacant lands are considered to be parcels which have not had a permit issued to them. A special set of assumptions was developed for re-developable commercial and industrial lands. First, all parcels zoned for residential uses have been excluded from consideration, as were parks, Military areas, public facilities, tribal areas and open space. Generally, single-family residential uses in a non-residential zone are considered redevelopable. Non-residential uses in non-residential areas are considered to have redevelopment potential when the improvement value on that parcel is less than the land value on that parcel. Critical areas, as defined earlier in this report, have been removed from vacant and underutilized acres.

Estimate of Non-Residential Vacant and Underutilized Land Supply

	Vacant Land			Underutilized Land		
	Com	Industrial	Mixed	Com	Industrial	Mixed
Bainbridge Is.	15.0	62.1	19.4	20.7	34.2	43.0
Bremerton	81.4	331.7	5.0	111.5	42.3	17.7
Bremerton UGA	6.0	19.9	-	9.8	6.1	-
Port Orchard	107.3	47.2	0.6	29.8	5.9	1.6
Port Orchard UGA	85.0	-	-	121.5	-	-
Poulsbo	82.7	13.0	193.5	56.6	1.1	-
Poulsbo JPA	3.2	15.6	-	-	18.6	-
Central Kitsap UGA	86.9	2.5	-	45.0	9.1	-
Gorst UGA	6.3	0.1	-	18.9	0.2	-
Kingston UGA	3.3	11.2	-	30.6	-	-
McCormick Woods UGA						
Silverdale UGA	50.2	225.9	-	93.6	82.2	-
Port Gamble Village	-	-	-	-	-	-
Manchester Village	1.3	-	-	3.4	-	-
Suquamish Village						
SKIA UGA	-	30.2	-	-	1,526.9	-
Rural Unincorporated County	17.5	147.3	-	41.3	151.9	-
TOTAL	**546.3**	**906.7**	**218.4**	**582.9**	**1,878.4**	**62.2**

General Findings

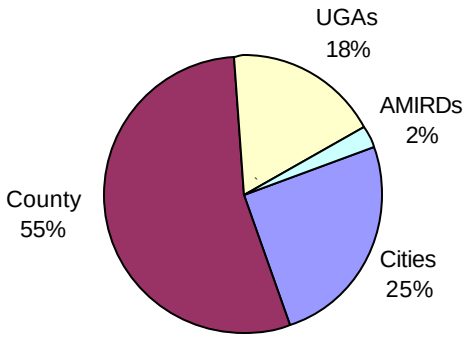
In total, there appear to be approximately 1,450 vacant acres and 2,460 underutilized residential acres for commercial and industrial uses. This does not include land zoned for mixed use, which adds to the totals. Vacant commercial and industrial areas, in particular, appear to cluster in Bremerton, Port Orchard, and Central Kitsap UGA and in Silverdale. Further study and discussion may be necessary to identify locations where the need for nonresidential land may be greater than others. In addition, further analysis of vacant and redevelopable lands by parcel size will help identify whether sufficient land exists for specific types of commercial or industrial uses.

IX. Summary Findings and Conclusions

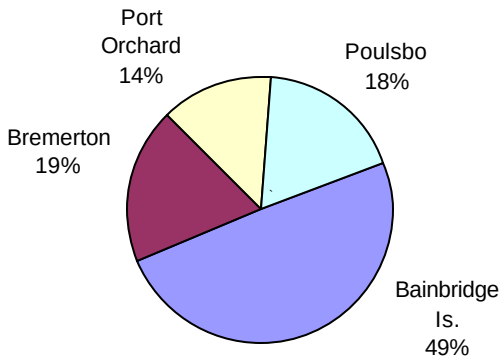
Number of New Residential Units Permitted: 1995 – 1999

The data collected for this study indicate that between 1995 and 1999, approximately 55 percent of all newly permitted units occurred in the rural unincorporated portions of the County. Cities received about one quarter of all newly permitted units. Remaining units went to UGAs and to areas of more intense rural development (AMIRDs), which include Port Gamble, Manchester Village and Suquamish Village.

1995 - 1999: Residential Units Permitted - Type of Jurisdiction



1995 - 1999: Residential Units Permitted - Cities



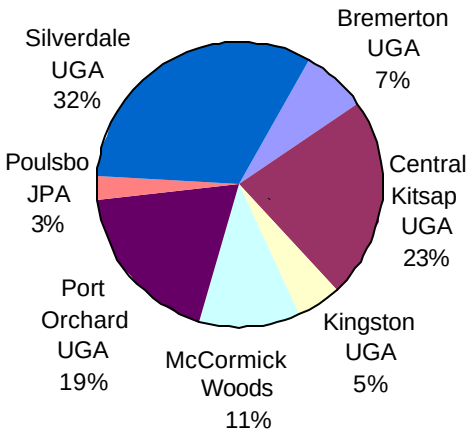
In cities, almost one half of all new residential units occurred in the City of Bainbridge Island. The remaining units permitted had a roughly equal split between Bremerton, Port Orchard and Poulsbo.

In UGAs, most of the new residential construction occurred in Silverdale and Central Kitsap. Port Orchard's UGA also exhibited a good deal of new construction activity.

Of course, it should be noted that *one* primary factor influencing the distribution of new residential permits is their relative size. However, market demand for some areas over others, as well as zoning, which may accommodate more units in some areas, also plays a role.

Summary Table 1 on the following page shows a table with specific counts of new residential units permitted in each jurisdiction.

1995 - 1999: Residential Units Permitted - UGAs



Summary Table 1
Number of New Residential Units Permitted in Kitsap County
By Jurisdiction and General Zoning Type: 1995 - 1999

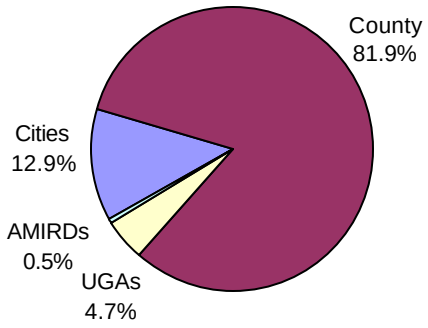
Jurisdiction	Single Family	Multi-family	Mixed Use	Total
Bainbridge Island	1,000	1	14	1,015
Bremerton City	164	223	0	387
Bremerton UGA	108	0	0	108
Bremerton Total	272	223	0	495
Port Orchard City	228	57	0	285
Port Orchard UGA	240	42	0	282
Port Orchard Total	468	99	0	567
Poulsbo City	360	12	0	372
Poulsbo JPA	43	0	0	43
Poulsbo Total	403	12	0	415
Central Kitsap UGA	299	41	0	340
Gorst	0	0	0	0
Kingston	69	3	0	72
McCormick Woods	166	0	0	166
Silverdale	337	149	0	486
Manchester Village	109	0	0	109
Port Gamble Village	0	0	0	0
Suquamish Village	90	0	0	90
Rural Kitsap County	4516	1	0	4,516
Total	**7,728**	**529**	**14**	**8,271**

* Note: There may be very slight differences between these totals and totals tracked in the density estimates for each jurisdiction. A small number of permits were not included in the final density estimates.

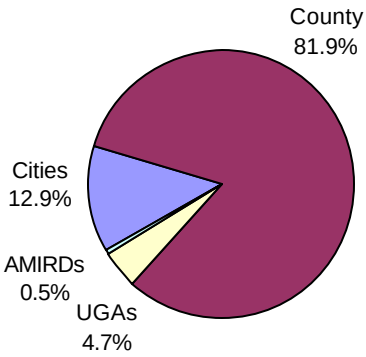
Acres of Residential Land Permitted: 1995 – 1999

The data collected for this study indicate that, between 1995 and 1999, approximately 80 percent of the land permitted for new residential construction was within rural unincorporated Kitsap County. Cities captured about 13 percent of newly permitted acres, with UGAs and areas of more intense rural development (AMIRDs) capturing the remainder.

1995 - 1999: Residential Acres Permitted - Type of Jurisdiction



1995 - 1999: Residential Acres Permitted - Cities

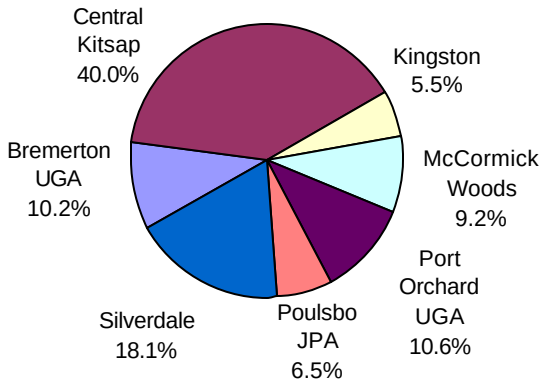


Summary Table 2 on the following page shows a table with specific counts of acres developed with new residential units in each jurisdiction.

Among cities, the majority of land permitted for new residential construction was within Bainbridge Island. Remaining land was split roughly equally between Bremerton, Port Orchard and Poulsbo.

In UGAs, residential land absorption was greatest in Central Kitsap UGA, Silverdale UGA, Port Orchard and Bremerton.

1995 - 1999: Residential Acres Permitted - UGAs



Summary Table 2
Acres of Residential Land Permitted in Kitsap County
By Jurisdiction and General Zoning Type: 1995 - 1999

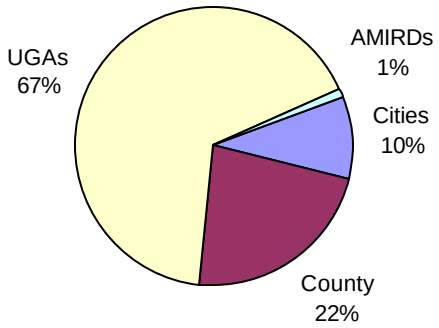
Jurisdiction	Single Family	Multi-family	Mixed Use	Total
Bainbridge Island	1,200.12	0.43	9.76	1,210.30
Bremerton City	69.39	23.60	0.00	92.98
Bremerton UGA	54.53	0.00	0.00	54.53
Bremerton Total	123.92	23.60	0.00	147.51
Port Orchard City	52.72	20.30	0.00	73.02
Port Orchard UGA	50.77	6.18	0.00	56.95
Port Orchard Total	103.49	26.48	0.00	129.97
Poulsbo City	71.24	14.85	0.00	86.10
Poulsbo JPA	34.90	0.00	0.00	34.90
Poulsbo Total	106.14	14.85	0.00	121.00
Central Kitsap UGA	151.40	63.06	0.00	214.46
Gorst	0.00	0.00	0.00	0.00
Kingston	28.94	0.74	0.00	29.68
McCormick Woods	49.12	0.00	0.00	49.12
Silverdale	72.19	24.74	0.00	96.93
Manchester Village	38.16	0.00	0.00	34.90
Port Gamble Village	0.00	0.00	0.00	0.00
Suquamish Village	17.00	0.00	0.00	17.00
Rural Kitsap County	9,294.59	0.00	0.00	9,294.59
Total	11,179.41	159.56	9.76	11,348.73

* Note: There may be very slight differences between these totals and totals tracked in the density estimates for each jurisdiction. A small number of permits were not included in the final density estimates.

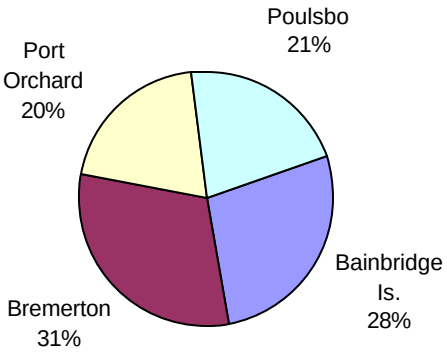
Number of Commercial and Industrial Permits Issued: 1995 – 1999

The data collected for this study indicate that between 1995 and 1999, approximately two thirds (or, 67 percent) of all new commercial and industrial permits in Kitsap County occurred in the UGAs. The rural unincorporated areas of the county received about 22 percent. Remaining permits went to cities and areas of more intense rural development (AMIRDs).

1995 - 1999: Commercial and Industrial Permits - Type of Jurisdiction



1995 - 1999: Commercial and Industrial Permits - Cities

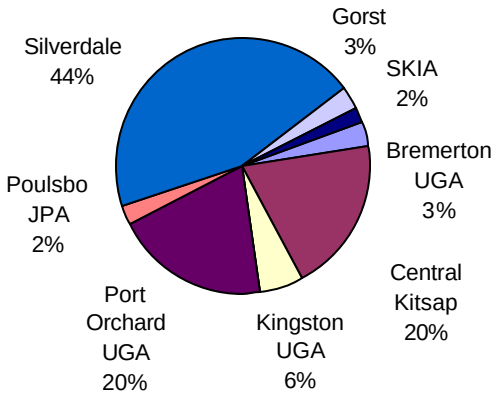


Within cities, new commercial and industrial permits were split roughly equally between each of the four incorporated areas: Bainbridge Island, Bremerton, Port Orchard and Poulsbo.

In UGAs a vast majority of new commercial and industrial permits occurred in Silverdale (about 45 percent). Central Kitsap's UGA and Port Orchard's UGA also saw a reasonably high share of activity.

Summary Table 3 on the following page shows a table with specific counts of new commercial and industrial permits in each jurisdiction.

1995 - 1999: Commercial and Industrial Permits - UGAs



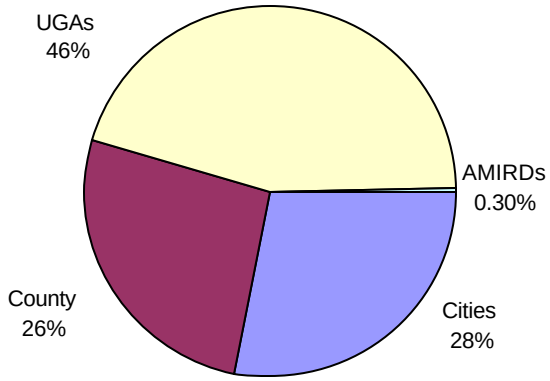
Summary Table 3
Number of New Commercial and Industrial Permits Issued in Kitsap County
By Jurisdiction and General Permit Type

Jurisdiction	Commercial	Industrial	Total
Bainbridge Island	35	0	35
Bremerton City	38	1	39
Bremerton UGA	27	0	27
Bremerton Total			
Port Orchard City	25	0	25
Port Orchard UGA	166	9	0
Port Orchard Total			
Poulsbo City	27	0	27
Poulsbo JPA	13	8	21
Poulsbo Total			
Central Kitsap UGA	166	8	172
Gorst	23	2	25
Kingston	49	0	49
McCormick Woods	0	0	0
Silverdale	388	5	393
SKIA UGA	15	13	28
Manchester Village	3	1	4
Port Gamble Village	0	0	0
Suquamish Village	9	0	9
Rural Kitsap County	259	35	294
Total	**1,233**	**82**	**1,315**

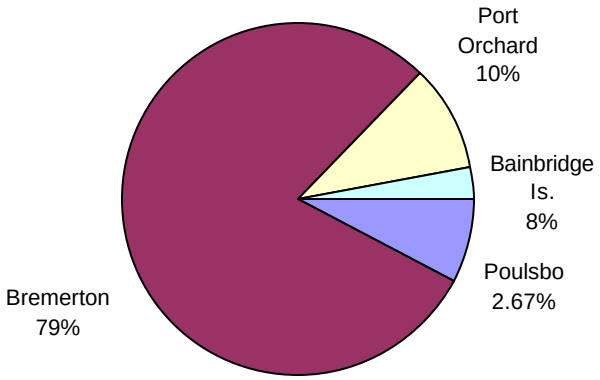
Commercial and Industrial Acres Permitted: 1995 – 1999

The data collected for this study indicate that between 1995 and 1999, most of the land absorbed for new commercial and industrial development was located inside of UGAs (about 46 percent). Following UGAs were cities, where about 28 percent land was absorbed. Remaining land with new commercial and industrial permits was in counties, with a small fraction in areas of more intense rural development.

1995 - 1999: Commercial and Industrial Acres Permitted - Type of Jurisdiction



1995 - 1999: Commercial and Industrial Acres Permitted - Cities

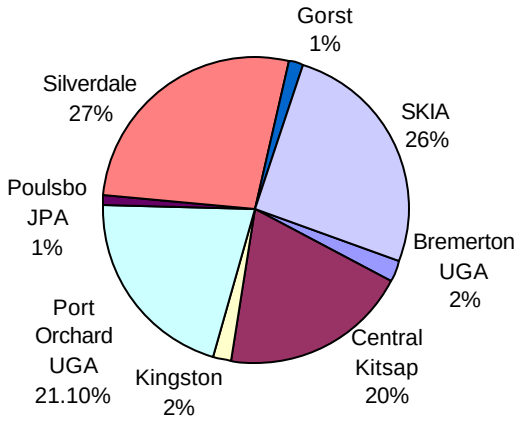


Among cities, the distribution was not as balanced, with Bremerton assuming approximately 80 percent of all new land absorbed for commercial and industrial uses. Port Orchard, Bainbridge Island and Poulsbo took the remainder, that order.

In UGAs, the majority of land that went for these uses is in Silverdale, SKIA, Port Orchard, and Central Kitsap.

Summary Table 4 on the following page shows a table with specific counts of acres developed with new commercial and industrial construction in each jurisdiction.

1995 - 1999: Commercial and Industrial Acres Permitted - UGAs



Summary Table 4
Acres of New Commercial and Industrial Permits Issued in Kitsap County
By Jurisdiction: 1995 – 1999

Jurisdiction	Acres Permitted
Bainbridge Island	90.20
Bremerton City	908.32
Bremerton UGA	39.47
Bremerton Total	947.79
Port Orchard City	114.71
Port Orchard UGA	389.88
Port Orchard Total	504.59
Poulsbo City	30.55
Poulsbo JPA	19.33
Poulsbo Total	49.88
Central Kitsap UGA	365.10
Gorst	24.40
Kingston	37.57
McCormick Woods	0
Silverdale	498.39
SKIA UGA	473.53
Manchester Village	5.09
Port Gamble Village	0
Suquamish Village	12.35
Rural Kitsap County	1080.09
Total	**4,088.98**

Summary Table 5
Comparison of Average Permitted and Platted Densities
By Jurisdiction

Jurisdiction	SF Permitted Density	MF Permitted Density	SF Platted Density (Gross)
Bainbridge Island	.83	2.33	1.30
Bremerton City	2.36	9.45	2.58
Bremerton UGA	1.98	-	4.07
Bremerton Total	2.20	9.45	2.91
Port Orchard City	4.32	2.81	3.45
Port Orchard UGA	4.73	6.80	2.77
Port Orchard Total	4.52	3.74	3.13
Poulsbo City	5.05	0.81	3.69
Poulsbo JPA	1.23	-	-
Poulsbo Total	3.80	.81	3.69
Central Kitsap UGA	1.97	0.65	4.17
Gorst	-	-	-
Kingston	2.38	4.05	2.50
McCormick Woods	3.38	-	4.41
Silverdale	4.70	6.03	7.07
Manchester Village	2.86	-	-
Port Gamble Village	-	-	-
Suquamish Village	5.29	-	-
Rural Kitsap County	0.49	-	.8

Summary Table 6
Comparison of Buildable Lands
with Dwelling Unit Targets (*Single Family and Multi-Family Combined)*

Jurisdiction	Buildable Vacant	Buildable Underutilized	Dwelling Unit Target
Bainbridge Island City	3,007.3	1,651.2	1,748
Bremerton City	446.0	224.4	8,554
Bremerton UGA	341.3	537.6	1,343
Bremerton Total	784.3	762.0	9,897
Port Orchard City	245.5	221.2	129
Port Orchard UGA	263.8	311.7	1,092
Port Orchard Total	509.3	523.9	1221
Poulsbo City	433.6	233.0	1,234
Poulsbo JPA	193.2	0	1,505
Poulsbo Total	626.8	233.0	2,739
Central Kitsap UGA	572.4	565.6	5,197
Gorst	-	-	-
Kingston	129.2	57.4	662
McCormick Woods	196.7	27.7	794
Silverdale	359.8	379.4	1,913
Manchester Village	187.3	-	63
Port Gamble Village	-	-	126
Suquamish Village	52.7	37.9	91
Rural Kitsap County	29,319.0	2,838.0	4,044

Summary Table 7
Comparison of Estimated Land Need with Supply

Jurisdiction	Land Need Assuming Current Development Trends	Land Need Assuming Average of 4 Units per Acre	Estimated Buildable Land Supply
Bainbridge Island City	1,620	577	4,659
Bremerton City	3,189	2,822	670
Bremerton UGA	895	443	879
Bremerton Total	4,084	3,265	1,549
Port Orchard City	52	43	465
Port Orchard UGA	459	420	575
Port Orchard Total	511	463	1,030
Poulsbo City	751	407	667
Poulsbo JPA	1,615	497	193
Poulsbo Total	2,267	904	860
Cities and Associated UGAs	***8,482***	***5,209***	***8,098***
Central Kitsap UGA	1,883	951	1,138
Gorst	0	0	0
Kingston	323	219	187
McCormick Woods	243	262	224
Silverdale	370	631	739
Manchester Village	58	42	187
Port Gamble Village	79	104	4
Suquamish Village	23	30	91
Rural Kitsap County	11,854	*	32,157

**** Urban Densities are not expected/anticipated for rural areas.***

Conclusions

To summarize the Buildable Lands Analysis, it is important to come back to the initial questions that must be addressed. The answers to many of these have been addressed within each planning area, and are included here as general themes which have emerged.

1. Are urban densities being achieved?

In most cases, the cities of Bainbridge Island, Bremerton, Port Orchard and Poulsbo are coming close to, or are meeting, densities prescribed in their zoning. The urban density standard of 4 units per acre, however, does not appear to be occurring in all areas. In addition, it appears that development densities in some UGAs are higher than densities occurring in incorporated areas. A possible explanation is that development in older incorporated areas must address established lot configuration patterns that may not be conducive to more efficient land uses. Newer development outside of these areas, by contrast, may occur on a "blank slate" thereby maximizing development opportunities.

In rural unincorporated Kitsap County, development densities average approximately 1 unit per acre, which represents a midpoint between extremely rural and urban-style densities. One development constraint is the large number of smaller, nonconforming lots of record. Until these parcels are fully absorbed, the County may face obstacles in directing new growth towards urban areas.

Because of the Comprehensive Plan adoption process in Kitsap County, current zoning designations for the UGAs and rural areas were only in place since 1998, though zoning densities prior to this period were proximate to those in place currently. Still, this means that during the analysis period, 1995-1999, only one year of data reflects the current GMA-compliant Comprehensive Plan. Therefore, comparing zoning designations from 1995 to those of 1999 is problematic. A more meaningful analysis will be available for the next 5-year analysis period.

2. How much land was developed for residential use? How much land would be needed?

According to this analysis, over 11,000 acres of land has been developed for residential use over the past five years. Of course, it is improbable that all of this land has been developed as intensively as possible, and there may be additional room for development within these areas.

This analysis has shown that, if Kitsap County jurisdictions continue to develop according to densities shown during the five-year analysis period (1995 – 1999), about 23,000 acres would be needed to accommodate residential growth to the year 2012. The vast majority of this land need occurs within the County, which is experiencing a good deal of development at semi-rural densities.

In cities and associated UGAs, approximately 1,600 acres of land has developed for residential uses during the five-year analysis period. At current densities, approximately 8,000 acres of land would be needed to accommodate growth to the year 2012.

3. To what extent have capital facilities (public lands) affected land supply?

The following table shows publicly owned and tax exempt lands in each jurisdiction. The last column shows total public/tax exempt lands as a percent of total land area.

Summary of Total Acres and Public/Tax Exempt Acres
By Jurisdiction

Jurisdiction	Total Acres	Total Public Lands [4]	Other Exempt Lands	Total Public and Exempt Lands	Percent Public or Exempt
Bainbridge Is.	17,467	735	1,444	2,179	12%
Bremerton	13,199	1,413	7,827	9,239	70%
Port Orchard	2,191	212	203	415	19%
Poulsbo	1,862	147	220	366	20%
Bremerton UGA	3,278	181	85	266	8%
Central Kitsap UGA	4,414	153	329	482	11%
Gorst UGA	129	16	7	23	17%
Kingston UGA	652	39	42	80	12%
McCormick Woods UGA	1,690	2	0	2	0%
Port Orchard UGA	2,444	288	223	511	21%
Poulsbo JPA	913	17	29	47	5%
Silverdale UGA	3,675	210	339	550	15%
SKIA UGA	1,965	12	0	12	1%
County	188,574	10,820	11,788	22,608	12%
Port Gamble Village	89	0	1	1	2%
Manchester Village	965	19	17	36	4%
Suquamish Village	298	17	13	30	10%
Total	**243,805**	**14,281**	**22,567**	**36,847**	**15%**

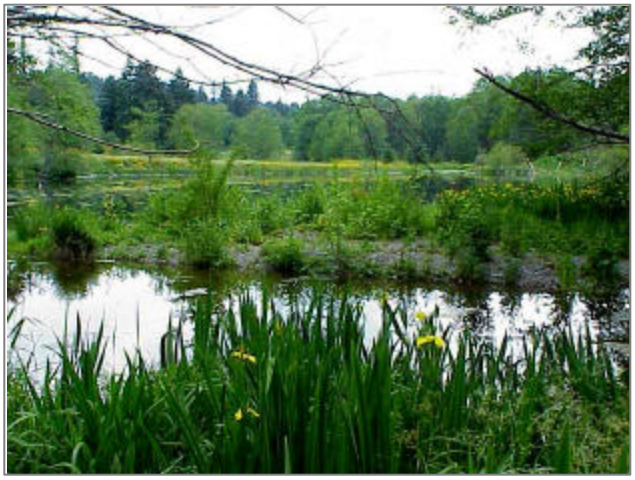
Countywide, about 15 percent of the county is publicly owned or tax exempt. Bremerton's high ratio results from the presence of military lands. The military base, as well as the large amount of land in forest ownership, may give an impression that the city has an abundance of available land. In most areas, however, public lands and tax exempt lands are not considered a significant deterrent to providing adequate lands for other residential and non-residential uses.

As a further refinement of this question, the County would like to analyze the accessibility of rural lands. While there may be adequate land supply, the proximity of roads accessing the acreages, and the availability of water, septic, and other utilities, will greatly impact the rate at which development occurs, as well as where the development *could* occur. The County hopes to complete a separate technical analysis indicating the number and size of specific available buildable lands. This data is intended for use by the development community.

[4] Publicly owned lands have been estimated from land use assessment codes. They include educational services, government services, parks, public assembly, transportation and utilities, and state forestlands. Other lands that have a tax exemption, but are not classified as one of the uses above, are included in the "Tax Exempt" column.

4. To what extent have critical areas affected land supply?

The figures in the tables below show permitted residential and commercial/industrial development occurring between 1995-1999.



As shown, critical areas have generally comprised around 15 percent of residential lands developed between 1995-1999. Since development is still occurring at relatively low densities, one could conclude that the presence of critical areas has not been a large deterrent in development activity. As land continues to be absorbed, and the supply of unconstrained land decreases, one could reasonably expect to see an increase in the percent of critical areas within new developed parcels.

Residential Permitted Development: 1995 - 1999			
Jurisdiction Type	Developed Acres	Critical Acres	Percent Critical
City	1462.40	228.23	15.61%
County	9,294.59	1319.10	14.19%
UGA	536.57	83.75	15.61%
Village	55.16	4.10	7.43%
Total	11,348.73	1635.17	14.41%

As shown in the table below, critical areas are generally less present in lands that have recently been devoted to new commercial and industrial uses. One may reasonably assume that lands with considerable environmental constraints are not typically devoted to such uses.

Commercial and Industrial Permitted Development: 1995 - 1999			
Jurisdiction Type	Developed Acres	Critical Acres	Percent Critical
City	1,143.78	84.97	7.43%
County	1,080.09	160.08	14.82%
UGA	1,847.67	125.37	6.79%
Village	17.44	0.98	5.62%
Total	4,088.97	371.40	9.08%

5. To what extent has rural development affected land supply?

As shown in the table below, the vast majority of residential land consumed during this analysis period is within unincorporated rural Kitsap County. To some extent this is explained by the low densities, which should occur in rural areas. However, as shown in the earlier charts, the County has also absorbed over 50 percent of new residential permits issued during this analysis period. While the County's available residential land supply has decreased due to these trends, there is still a large supply of vacant available land left in the county.

Total Residential Development, by Jurisdiction Type

Jurisdiction Type	Acres Developed	Percent of Total
City	1,462.40	12.89%
County	9,294.59	81.90%
UGA	536.57	4.73%
Village	55.16	0.49%
Grand Total	11,348.73	100.00%

6. How much land was developed for commercial and industrial uses, and how much is needed?

As shown earlier in **Summary Table 4**, approximately 4,000 acres of land have been absorbed for new commercial and industrial development during the 1995 – 1999 analysis period. Approximately 40 percent of this land is inside of UGAs, with Silverdale, SKIA, Central Kitsap County and Port Orchard UGA using the bulk. Of the roughly 30 percent that went to cities, Bremerton's land base absorbed the vast majority. Finally, one quarter of the new commercial and industrial land base occurred in rural Kitsap County.

This analysis, which has relied on established employment density ratios and standards outlined in Kitsap County's comprehensive plan, indicates that Kitsap County has sufficient commercial and industrial land supply to accommodate projected employment growth.

It should be noted that this analysis has not been able to collect records of actual building sizes or employment counts to measure current trends. An analysis based on five-years of current employment data would not likely capture a comprehensive view of employment land needs. In addition, this study has not examined employment land needs for individual cities and UGAs, as such targets have not yet been established by the Kitsap Regional Coordinating Committee.

Vacant commercial and industrial areas cluster in the cities of Bremerton and Port Orchard, and the Central Kitsap and Silverdale UGAs. Further study and discussion may be necessary to identify locations where the need for commercial land may be greater than others.

Is there enough suitable land to accommodate population projections?

When looking at Kitsap County on the aggregate, sufficient land exists to accommodate population projections. However, this picture is different when looking at individual areas.

For cities and their associated UGAs, the estimated balance between residential land need and land supply is very close, assuming future build out occurs at current densities (**Summary Table 7**). However, a surplus of available land appears to exist in Bainbridge Island and Port Orchard, while there are apparent land deficits for Bremerton and Poulsbo. Bremerton's relative abundance of multi-family zoning may likely accommodate additional supply, and while conditions may change, that supply is not currently being absorbed to its fullest extent. Development at the urban density standard of 4 units per acre would some of the remaining areas accommodate additional growth.

While a change in Kitsap County's planning cycle during the analysis period may prevent this study from capturing a comprehensive picture of development trends, cities and UGAs have shown trends of higher development densities in past years. These trends should continue to be monitored.

7. What measures can be taken that are reasonably likely to increase consistency during the subsequent five-year period?

The Buildable Lands legislation included this final question to address at the end of the analysis, with the goal of realigning policy or other elements that may be keeping a county or jurisdiction from meeting Comprehensive Plan and/or GMA target. However, the contract between the State and Kitsap County did not include this within the final scope of work. In order to address the legislation, but understanding the parameters of the actual contract, Kitsap County has developed preliminary "next steps" toward the development of reasonable measures (see **Chapter X**). The County hopes that with restored funding, more detailed work on these measures can occur. The County intends to work closely with the Kitsap Regional Coordinating Council on these countywide measures.

X. Recommendations and Reasonable Measures

More Questions

During the course of the analysis phase of the buildable lands data, many more questions arose, primarily out of a need to further explore those things that this report is not, including market/economic factors, and the extent and accessibility of public facilities and its relationship to rural land supply. It became clear that the Buildable Lands Analysis is more of a starting point than an end, and that with newly available data, much additional study is now possible. Some specific questions that were asked by the County, Jurisdictions, the Advisory Committee, and other interested parties include:

- *What are the actual number and sizes of available lots in each of the designated areas (jurisdictions, UGAs, rural County)?*
- *What specific types of commercial and industrial development have been occurring (warehousing, retail, office), how many employees are at each new site, and how does that compare to other projections?*
- *To what extent is the development of "available buildable lands" in the rural County impacted by the presence of, or lack of, capital facilities such as roads, water, and sewer?*
- *How do the market factors impact both need and supply? If the market indicates that people are purchasing acreage intended for higher development, but they do not intend to develop it further (i.e. they want a 10-acre parcel in close proximity to urban services, with one home in the middle), does that mean there is still sufficient land to accommodate population need?*

The County hopes that funding will become available in the future to further explore these and other questions.

Planning Policy

It is possible that countywide planning policy will need to be addressed or refined as the result of this study. The jurisdictions of Kitsap County currently work together through the Kitsap Regional Coordinating Council (KRCC) to ensure consistency in planning policy.

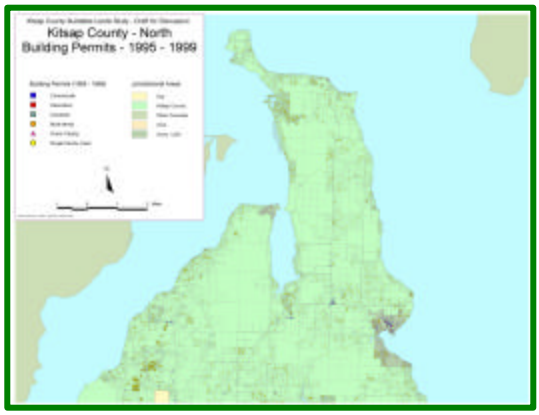
Data Collection

The following are a number of recommendations that came out of this process through internal discussions with Cities, the County and TAC representatives. These are ideas that may help with future planning and monitoring efforts. Some recommendations are relatively simple; others are long-term ideas that the county and cities may already have been discussing.

Data Sharing and Streamlining

There is a tremendous opportunity for the county and cities to enhance the protocols and standards for maintaining local development and land use data. This could greatly increase the usefulness and reliability of buildable lands studies and other studies that the county and its cities carry out. The following are three categories, or types of planning related data, that were used in this report and are relevant to a variety of GMA studies.

Building Permits, Parcel Data and Assessment Data



In the initial stages of this study, electronic building permit files from each the four cities and from Kitsap county were collected and reviewed. Some inconsistencies were noted in the structure and format of local building permit databases. These include missing APN codes, as well as missing records and classification codes.

As an alternative, a separate permit database for cities and the unincorporated area was collected directly from the county assessor. As part of its regular practice, the county's assessment department collects individual records (hard copies) of permits issued from each city. County staff input these records into their database using an independent classification scheme, which is shown herein. Permits issued by the county for development in unincorporated areas are recorded in the same manner. However, these permit records originate from the department of community development (DCD), and are transferred electronically to the assessment department once per day through a batch file transfer process.

The county and its cities may wish to consider standardizing the permit information and collection process. A standardized approach (which would include software, formatting and data entry protocols) would enable jurisdictions to track the development process more effectively and accurately. As jurisdictional boundaries are in flux, and local development data becomes increasingly important for local planning and monitoring, this would be a worthwhile investment. These building permit files could also be cross-referenced with land use codes on a regular (annual) basis to ensure the accuracy of vacant lands information.

Because much of new residential development occurs as subdivision plats rather than specific permits, the county may also wish to enhance their abilities to track parcels at the subdivision level. A parcel identification number that is unique for tax lots within the same subdivision would facilitate this, and allow monitoring to be carried out with greater ease on a regular basis.

This study also found that building information at the parcel level (building structure and sizes) could be enhanced at both the city and county levels. In particular, information on the number of units in multi-family structures, as well as the size of non-residential structures, would allow for much more refined analyses.

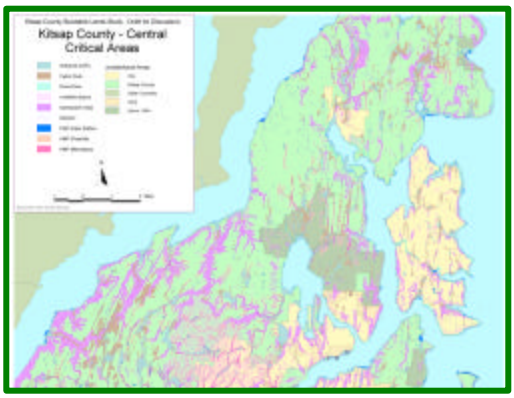
Zoning, Comprehensive Plan Categories and Jurisdictional Boundaries

This study found that zoning information is collected and maintained differently between cities and counties. This study used local zoning data, where available. A single zoning coverage covering the entire county, like that which was created for this report, may be of further use. In addition to denoting specific local zoning designations, this data includes an "aggregated" zoning category, which allows zones to be classified simply as "single-family", "multi-family" or "commercial". This type of analysis is useful when looking for broader patterns over a large area, a common requirement for GMA and related studies.

It may be helpful for the county to take the lead as the responsible entity for maintaining data on jurisdictional boundaries for all cities, urban growth areas and rural areas.

Critical Areas

Initial meetings with cities revealed that some of the spatial data regarding critical areas has positional inaccuracies. It has been beyond the scope of this study to collect or correct such data. However, as the county continues to refine its critical areas ordinance, it may wish to convene a group of local and environmental planning experts. This group would be charged with the task of clarifying how different requirements apply in different areas, and building a GIS database that reflects the different levels of protection identified in county and local ordinances.



An additional suggestion brought up at a TAC meeting during this process was for the county to make wider use of the parcel specific information on wetlands and critical areas that is collected through the site development review process.

At the beginning of this study, Parametrix collected GIS data files from the county's GIS department, and non-spatial data from the county's assessment department. Some of these data were further refined for the analysis, as described below.

Jurisdictional Boundaries

GIS files of jurisdictional boundaries were obtained from the county. Urban Growth Areas and rural areas were received as separate data files. A single data layer of all jurisdictional areas studied (county, cities, urban growth areas and rural areas) was constructed for this analysis.

XI. Technical Appendix

Glossary

Gross Acre.
An area measuring 43,560 square feet, which may include any of the following:
- Road rights-of-way through or on the edge of the land,
- Environmentally constrained or critical areas,
- Publicly owned areas or areas designated for public facilities use.

Net Acre.
An area measuring 43,560 square feet, which excludes all of the following:
- Road rights-of-way through or on the edge of the land,
- Environmentally constrained or critical areas,
- Publicly owned areas or areas designated for public facilities use.

Geocoding.
A technical process used in Geographic Information Systems applications for electronically pinpointing specific features to their appropriate locations.

Gross Density.
A measurement of density from gross acres. Gross acres divided by number of units.

Net Density.
A measurement of density from net acres. Net acres divided by number of units.

Platted Density.
A measurement of density from lots that are part of a platted residential subdivision, whether or not development actually occurred on that lot. Common areas are excluded from the calculation of net platted density; they are included in the calculation of gross platted density. Roads, which are not part of platted tax lots, are excluded from all calculations. Critical areas, which occur within platted tax lots, are included in all calculations.

Permitted Density.
A measurement of density from parcels that received a residential permit for new construction. Some of these parcels are existing lots of record, and may not be part of an actual subdivision.

Underutilized/Redevelopable Areas.
Areas zoned for uses of a more intensive nature than uses currently existing on the property. These areas are suitable for redevelopment to higher densities or more intensive uses.

Vacant Areas.
Areas with a property assessment code of 91000, or undeveloped land.

Vacant Buildable Areas.
Vacant parcels refined with the following modifications:
- Local updates and review
- Tax exempt parcels removed
- Recently developed parcels removed
- Critical areas removed.
- Open space and common areas removed.
- No roads are included.

Acronyms

AMIRDS	Areas of More Intense Rural Development
APN	Account Processing Number
BLA	Buildable Lands Analysis
DU	Dwelling Unit
GIS	Geographic Information Systems
GMA	Growth Management Act
JUPA	Joint Planning Area/Joint Urban Planning Area
UGA	Urban Growth Area

GIS Data and Methods for Buildable Lands Study

The following provides additional description on the GIS methods used in this study which involved data processing and analysis. At the beginning of this study, The Shea Group collected GIS data files from the county's GIS department, as well as non-spatial data from Kitsap County's assessment department. Some of these data were further refined for the analysis, as described below.

Parcel Base

The Shea Group received the county's GIS parcel base (year 2000) with related attribute tables and assessment data. A few modifications and refinements were made to the parcel base, as follows:

- Several areas were identified where single parcels were originally represented as two or more contiguous polygons bisected by section lines. These parcels were grouped into single polygons for the analysis.
- Also identified were several parcels represented as two or more proximate polygons with the same APN (account processing number). These parcels were grouped back into single polygons, as they are assumed to be part of the same legal tax lot. This was done to prevent double counting.
- Shorelines present a challenge for GIS in counties like Kitsap. Many of the parcels along Kitsap's shoreline extend beyond the delineated land area. To address this, the land area extending beyond the shoreline was subtracted from the total area of each parcel.

Building Permits Issued (1995 – 1999)

Building permits are an important component of this study. These data must be collected and mapped to determine the amount of land that developed during a specific period, the type of development that occurred, and the density at which it occurred.

In the initial stages of this study, electronic building permit files from each the four cities and from Kitsap County were collected and reviewed. Due to different information needs and tracking systems of each jurisdiction, the structure and format of each local permit database was not consistent enough for use in this study. As an alternative, a separate building permit database for cities and the unincorporated area was collected directly from the county assessor.

As part of its regular practice, Kitsap's Assessor's office collects individual records (hard copies) of permits issued from each city. County staff input these records into their database using an independent classification scheme, shown herein. Permits issued by the county for development in unincorporated areas are recorded in the same manner. However, these permit records originate from the county's community development department, and are transferred electronically to the assessor once per day through a batch file transfer process.

The county's permit files include the 14-digit tax lot number, the local permit ID number (for permits issued in cities), applicant name and address, permit date[5], section/township/range, assessment number and APN.

[5] Permit issue date was used in this study. This is the most readily available date in the permit files. While there may be some lag time between permit issue date and the date of actual development, it

As a first step, the permit records were geocoded to tax lots. Geocoding is a process by which specific data points are located electronically on a map. The locations are typically represented as points. In geocoding, any feature with a geographic component can be used to locate data. Census tracts, street addresses and tax lots are commonly used. The APN was used in this study, as it represents the common attribute between the tabular building permit files and the GIS parcel base.

In the first attempt, about 95 percent of all building permits could be successfully matched to a parcel. Of these, slightly less than half (46 percent) were permits for new construction or demolitions. The remaining permits involve activities such as residential renovations, the addition of a garage or carport, and utilities upgrades, and are of less interest to this study.

The five percent of permits (1,062 records) that could not initially be located in the first trial had APN codes that did not appear in the county's parcel base. Of these, 685 were permits for new construction or demolitions; 377 fall into the "other" category and are not of interest for this study. A second attempt was made to locate the 685 permits of interest. In this next round, building permits were geocoded to the parcel by using the site address (a file in the assessment database that was joined to the parcel base). By using this method, an additional 162 of the 685 permits for new construction were successfully matched to a parcel.

In total, the number of permits that did not geocode successfully in either trial (523) represents a relatively small proportion, about 5 percent, of the 9,958 (9,796 + 162) total permits for new construction and demolitions that were issued during the analysis period. A comparative tabulation was run of both the geocoded and non-geocoded groups to help highlight unique characteristics of this non-geocoded group that should be considered.

Table 1, below shows a breakdown of the 9,958 building permits for new construction and demolitions issued between 1995 and 1999 that geocoded.

Table 1: Total Geocoded Building Permits in Kitsap County: 1995 – 1999
New Construction and Demolitions Only

	Bainbridge	Bremerton	Port Orchard	Poulsbo	Unincorp.	TOTAL
Single Family	1,014	237	158	315	6,299	8,023
Multi-Family	1	2	37	10	42	92
Commercial	30	61	25	25	1,118	1,259
Industrial	0	0	0	0	82	82
Public Facility	3	1	0	0	56	60
Demolition	22	100	13	12	295	442
TOTAL	1,070	401	233	362	7,892	9,958

Source: Kitsap County Assessor. Data Processing and Analysis by The Shea Group

Table 2, below, shows a breakdown of the remaining 523 building permits for new construction or demolitions that did not geocode successfully in either of the two trials.

should not be a significant issue for an analysis of this scale, as long as it is used consistently for all permits.

Table 2: Non-Geocoded Building Permits in Kitsap County: 1995 – 1999
New Construction and Demolitions Only

	Bainbridge	Bremerton	Port Orchard	Poulsbo	Unincorp.	TOTAL
Single Family	8	36	1	1	126	172
Multi-Family	4	1	14	0	6	25
Commercial	4	3	1	5	136	149
Industrial	0	0	0	0	17	17
Public Facility	0	0	0	0	2	2
Demolition	4	122	5	5	22	158
TOTAL	20	162	21	11	309	523

Source: Kitsap County Assessor. Data Processing and Analysis by Parametrix.

In comparing the totals in the two tables, both as raw numbers and as percentages, the following items stand out.

- Though the number of permits for commercial construction that did not geocode was not high in absolute terms, the count is high in relative terms, particularly for Poulsbo and for the unincorporated area.
- A disproportionately high number of permits for residential demolitions did not geocode successfully. This is particularly the case for Bremerton, though the discrepancy appears in all areas. [6]
- A number of permits for new single-family homes (mostly in the unincorporated area and in Bremerton) did not geocode successfully. A closer look at the database reveals that the vast majority of these permits were for manufactured homes.

Conclusions Regarding Building Permit Data:

The inability to pinpoint some recent commercial developments may affect our understanding of non-residential land that has been absorbed between 1995 and 2000, as well as the amount that will be needed in the 20-year timeframe.

As demolition permits are important in flagging both vacant areas and areas that may have redeveloped, the inability to locate these permits may affect the inventory of vacant land, as well as the ability to understand the characteristics contributing to redevelopment. However, there is some evidence, as indicated by the common APN number for some of these permits, that many of the demolitions and commercial permits are part of a common development. Such developments may consist of a mobile home park, or a commercial center with separate retail operations. When these activities are sharing a single parent parcel, some of the impact of their absence on the vacant lands inventory would be lessened.

The table on the following page shows the building permit classifications used by Kitsap County's Assessor in the County database. For the buildable lands study, the classifications were aggregated into the categories shown in the third column. Building permits that do not entail new construction or demolitions were not considered in this analysis, as indicated by the N/A.

[6] Note: Discussions at the TAC level during the analysis period amended the methodology to exclude residential demolitions from the analysis. This was decided because many demolitions are not full-scale demolitions. They do not necessarily constitute additional vacant land.

Kitsap County – Building Permit Classifications		
Kitsap Permit Category	Kitsap Permit Description	New Aggregated Category
CA	Commercial Addition	N/A
CD	Commercial Demolition	Demolition
CNAM	New Amusement/Rec	Commercial
CNCH	New Church	Public Facility
CNED	New School	Public Facility
CNIB	New Institutional Bldg	Commercial
CNID	New Industrial Bldg	Industrial
CNMF	New Multi-Family (5+)	Multi-Family
CNOB	Other Commercial	Commercial
CNOF	New Office/Bank	Commercial
CNPW	Public Works	Public Facility
CNSS	New Service Station	Commercial
CNST	New Store	Commercial
GRAD	Grading	N/A
MECH	Mechanical	N/A
PLMG	Plumbing	N/A
RA	Residential Addition	N/A
RD	Residential Demolition	Demolition
RM1F	Moved Single Family	Single Family
RN1F	New Single Family	Single Family
RN2F	New Duplex	Multi-Family
RN3F	New Triplex	Multi-Family
RN4F	New Four-Plex	Multi-Family
RNGC	New Garage/Carport	N/A
RNMH	Mobile Home	Single Family
RNOB	Residential Accessory Bldg.	N/A
RNOI	Residential Non-Bldg Structure	N/A
SEPT	Septic	N/A
SEWR	Sewer	N/A
WOOD	Wood Stove	N/A

Building Permits – 2000

A follow-up analysis was also conducted for development occurring during the year 2000. A tabular file was received from the County with 4076 building permit records. In this building permit geocode, 3913 permits successfully geocoded using the APN, and an additional 34 permits successfully geocoded using an address match the address in the permit database.

Analysis of Permitted Densities

The building permit data described above was used to estimate the densities of residential developments occurring between 1995 and 1999 throughout the county (a separate analysis was also conducted for the year 2000). Building permits for new residential construction were matched to specific parcels. In cases where more than one permit occurred on the same

parcel, the type of each permit was noted. The current zoning on these parcels was also identified, as well as the jurisdiction. A cross-tabulation was run on the number of new permitted units, by jurisdiction and zone. Final densities were estimated as the number of new units divided into the total acres developed for each zoning category.

Some residential development permits appeared to occur in non-residential zones. In most cases, these numbers were not significant, and were not included in the final tabulations.

Analysis of Platted Subdivision Densities

For this study, an analysis was run of platted residential subdivision densities, as well as permitted densities (above). To initiate this, The Shea Group collected a database of tax lots that had received a long plat from the County Assessor. This data file contained plat number, account number, APN, land use and levy code. This file was linked to a separate data file indicating the date of each plat. For a number of these parcels, no plat date was indicated. [7] Common areas within these subdivisions were also indicated by the "91100" land use code.

This data file was mapped, and additional information (attribute data) was added regarding the jurisdiction, zoning category, densities and parcel size. Gross densities were estimated as all land platted including the common areas. Net densities were estimated excluding the common areas.

The same procedure described above was used to analyze subdivision plats that occurred during the year 2000.

Vacant Lands

Vacant lands constitute the foundation of the county's buildable lands, with a number of additional refinements. Vacant lands, or "undeveloped lands" are initially defined as parcels with a "91000" property code. Other property classifications such as 83000 (open space agricultural), 91088 (bare land removed from assessment), 92000 (noncommon forest), 94000 (open space), 99000 (other undeveloped land) were not considered vacant for this analysis.

Several additional modifications were made to the vacant lands database to arrive at vacant buildable lands.

First, the vacant lands database was refined to address some classification errors. Prior to this study beginning, staff in the county's GIS department kept an electronic file of properties coded as vacant which should have been coded as "common area" (which have a similar classification code of "91100"). The project team removed those properties from the vacant lands database.

Next, the project team sought local review of the data. During late 2001 and early 2002, the project team met individually with each of the cities represented in this analysis: Bainbridge Island, Bremerton, Port Orchard and Poulsbo. Local planners were given maps of their vacant lands, which they were asked to review and verify. [8] Corrections were received by some of the jurisdictions either as hard copies, in written format, or in electronic format. These updates were incorporated into the database.

[7] For this reason, this analysis may not reflect the full range of residential plats occurring during the analysis period.

[8] For this study, all vacant lands data is intended to reflect vacant lands existing on January 1, 2000.

As a third step in refining the vacant lands database, the electronic file of geocoded building permits (described above) was used to identify and remove properties that received a building permit for new construction between 1995 and 1999. Theoretically, none of these properties should have been coded as vacant. However, a number of properties were still classified as vacant and had received a permit for new construction during this period.

At the December 18th TAC meeting, the project team addressed the possibility of using building permits for demolitions to identify properties had had recently become vacant. This would result in *adding* some vacant areas to the database. It was decided that this approach would not be taken. This decision was based on the fact that demolition permits do not always distinguish between full and partial demolitions, and many of these demolitions are immediately followed by (and associated with) a permit for new construction.

Discussions at the TAC level also addressed the level of accuracy of vacant lands data. Inaccuracies may result from either missing or incorrect data (assessment data, building permit geocode errors, local input) or from spatial/positional inaccuracies in the GIS data itself. It is beyond the scope of this study - and would be virtually impossible - to develop a perfectly accurate database of all vacant lands existing at a specific point of time. Missing permits and vacant lands areas are both possible and probable for a study of this nature. This does not prevent the study from meeting its primary objective of pointing out broader trends and policy issues for the county and its cities.

Zoning Classifications and Categories

For this analysis, the county GIS data was used as a starting point for county and local zoning classifications. Several additional steps were taken to refine the zoning data layer for this study.

During the meetings with individual jurisdictions that occurred during late 2001 and early 2002, local representatives were each given a map of the zoning information that the project team obtained from the county. Local planners were asked to review the data for completeness and accuracy. Small modifications were made either at these meetings, or in follow up, which were integrated into the electronic document. Modifications were made to the zoning information for Bremerton and for Pouslbo.

For Bainbridge Island, no GIS zoning layer existed at the time of the study. To address this, the project team collected a CAD file from the city and converted/digitized this into a GIS zoning shapefile. This shapefile was sent to Bainbridge Island planning staff for review and approval prior to carrying out the analysis.

As an additional step to facilitate the countywide analysis, all of the separate data layers were compiled into a single zoning data layer for the county, cities and UGAs. In compiling these data layers, some inconsistencies were noted regarding jurisdictional boundaries – either between the county and cities, or between cities and UGAs. These inconsistencies were verified with cities and the county and corrected.

Finally, to ensure consistency in the analysis, a new coding scheme was added to the attribute tables of the countywide data (jurisdiction type, name, zoning abbreviation, general zoning type, zoning description, minimum lot size, and minimum/maximum units per acre). Using GIS, this zoning information was also transferred to individual tax lots to allow the analysis to be conducted at the parcel level.

Shorelines and Critical Areas

Shorelines represent an additional challenge for GIS analysis in counties like Kitsap. It has been noted above that Kitsap County's GIS parcel base recognizes the legal portion of tax lots that extend well beyond the delineated shoreline. To address this, the project team used GIS to compute the area outside of each shoreline tax lot (parcels were clipped with water bodies). The area underwater for each parcel was then added back to the parcel layer's original attribute table. This allowed underwater portions of tax lots (shoreline areas) to be subtracted from total parcel area for the analysis of permitted and platted densities.

For this analysis, critical areas were considered as the following:

- Unstable slopes (not including intermediate slopes)
- Flood zones
- Geohazard areas
- National Wetlands Inventory Wetlands (all except Bainbridge Island, below)
- Local Wetlands Inventory for Bainbridge Island
- Streams and associated Buffers (on each side) as follows:
  - Type 1 streams, 100-foot buffers
  - Type 2 streams, 100-foot buffers
  - Type 3 streams, 50-foot buffers
  - Type 4 stream, 50-foot buffers
  - Type 5 streams, 25-foot buffers
- Shorelines (noted above).

GIS was used to generate stream buffers individually for each stream type (1-5, above). These buffers were then combined into a single GIS data layer, and next, combined with each of the other data layers described above. This final layer of critical areas was intersected with the county's GIS parcel base. Critical areas were then summarized by tax lot. Finally, the acreage of critical area was assigned to the parcel layer's attribute table, denoting the acreage of each individual parcel that is constrained by critical areas.

Residential Underutilized Lands

The residential redevelopment (underutilized lands) analysis for this study was carried out in several steps. Each step consists of a "screening" process, whereby properties not meeting certain criteria area are filtered out of the database. The first few screening steps identify properties that meet very general criteria. The later steps focus on more specific criteria that are necessary for a property to be considered underutilized.

Several points should be noted about these assumptions. First, since Kitsap County is acknowledged to have a large vacant lands supply, the analysis for redevelopment potential is a general one; it does not aim to predict where and when redevelopment may occur on every specific property. Even with models that apply dozens of variables, redevelopment estimates can never be perfectly accurate. In addition, as this analysis assumes a 20-year timeframe, some of the properties identified in this study may not appear as likely candidates for redevelopment -- even within the next few years. These assumptions are intended to gain a general sense of additional areas that may be considered as part of the county's buildable lands

supply. In places of uncertainty, this analysis has tried to err on the conservative side to prevent an overestimate of underutilized acres.

The following steps were used for this estimate:

First, all tax lots in single family, multi-family or mixed-use zones were selected.

Next, all parcels with a land use code denoting multi-family or non-residential uses were deleted. Since these parcels are already being used more intensively than zoning would generally permit, they are not likely to redevelop to more intensive uses in the future. For example, this would apply to multi-family buildings in single-family zones [9].

Tax-exempt parcels, with an assessment code of "X" were also deleted.

An estimate has been made of the likely density (lot size or units per acre) that would occur in that zone. These estimates are based on descriptions of zoning and lot sizes permitted. In cases where a range of densities, or lot sizes, is permitted, the average of that range was used.

GIS was used to calculate a ratio for each of these parcels as follows:

$$\frac{\text{Parcel Size}}{\text{Average Permitted Density}}$$

The resulting figures were rounded to the nearest whole number. For example, a result of "2" indicates that the parcel is twice the size of the lots that are generally permitted in that zone. In the next step, all parcels with a parcel area/density ratios less than "2" are deleted. In other words, a parcel has to be more than 2 times the lot size permitted for that zone to be considered for in the remaining steps. A few additional points should be noted:

- For a number of multi-family zoned areas, there is no prescribed minimum lot size, and no ratio could be calculated. To partially address this, parcels of this description that are below 20,000 square feet have been removed. The assumption is that infill or redevelopment at a significantly higher density than single family use would be very difficult without at least this much land area.

- This procedure also revealed a number of large developed lots in older rural subdivisions (greater than or equal to 20,000 square feet) where the underlying density is much higher (5 or more units per acre) than the lot sizes would suggest. Because it is unlikely that properties of this nature would be partitioned or be demolished for more intensive use, all parcels in single family use less than 20,000 square feet (approximately 1/2 acre) were not considered.

- Finally, due to environmental protections and setback regulations in shoreline areas, shoreline parcels were also removed from consideration for redevelopment potential. These parcels are often narrow, oddly configured, and have large setback requirements, as well. While many of these properties are high-value single-family homes that may experience additions and renovations, they may be less likely to undergo redevelopment of a more *intensive* nature that would add dwelling units.

[9] Land use codes above 11888 were considered to be multi-family or non-residential. For detailed information on the land use classification codes, please see the list of codes appearing at the end of this section.

In the final step, properties that met the earlier screening criteria were evaluated based on two factors: the parcel size-to-density ratio, described above, and the building value. The following is the final set of criteria for assessing redevelopment potential:

- If parcel is 2x zoning size, it will only redevelop if building value is $100,000 or less
- If parcel is 3x-4x zoning size, it will only redevelop if building value is $250,000 or less
- If parcel is >5x zoning size, it only redevelop is building value is $500,000 or less
- Redevelopment won't occur if building value is greater than $500,000

Properties meeting all of these criteria are the properties considered to be "underutilized" or to have potential for redevelopment over the 20-year timeframe.

In tabulating redevelopable areas for the report, these properties were summarized by zone and by jurisdiction. As with vacant lands, critical areas were removed from these areas.

Non Residential Underutilized Lands

For the analysis of non-residential underutilized lands, the same type of screening process was used.

First, all properties in non-residential zones were selected.

Properties in non-residential zones with the following land use classifications were identified and removed from the database.

All 13000s – Multi-family units
14501 – Condominiums
15000 – Mobile Home Parks
45000 – Highway and Street Right of Way
45900 – Encumbered Easements
≥ 70000 - Public and recreational uses, agricultural and open space uses.

These properties have been considered to be unavailable for non-residential redevelopment. Multi-family units and condominiums generally do not experience high turnover rates due to multiple ownership patterns. Other uses listed above represent properties in public ownership, or with site-planning constraints.

Remaining properties with land use classifications below 20000 (mainly single family uses) are considered redevelopable for non-residential uses, as they represent residential uses in a non-residential zone, any may be intensified in the future.

Remaining properties with a land use code above 20000 (non residential) are considered redevelopable when the building value is less than the land value of the parcel.

As with residential redevelopment, tax exempt areas and critical areas are removed from the total acreage.

Land Use Classifications Used by Kitsap County Assessor

The first two digits of the land use codes comply with the requirements of WAC 458-53-040.

21-39 Manufacturing
41-49 Transportation and Utilities
51-59 Trade
61-69 Services
71-79 Cultural, Entertainment, and Recreational Uses
81-89 Resource Production and Extraction
91-99 Undeveloped Land and Water Areas

Remaining digits of the land use codes provide greater detail, and are derived from the "Standard Land Use Coding Manual" published by the Federal Bureau of Public Roads, February 1965.

11101	1	Single Family Residence
11102	2	Single Family Residences
11103	3	Single Family Residences
11104	4	Single Family Residences
11105	5	Single Family Residences
11106	6	Single Family Residences
11107	7	Single Family Residences
11108	8	Single Family Residences
11109	9	Single Family Residences
11188		Land with Residence Removed from Assessment
11901	1	Mobile Home
11902	2	Mobile Homes
11903	3	Mobile Homes
11904	4	Mobile Homes
11905	5	Mobile Homes
11906	6	Mobile Homes
11907	7	Mobile Homes
11908	8	Mobile Homes
11909	9	Mobile Homes
11950		Mobile Homes on Leased Land
11988		Land with Mobile Home(s) Removed from Assessment
11999		Mobile Home to be Deleted
12101		Duplex
12102	2	Duplexes
12103	3	Duplexes
12104	4	Duplexes
12105	5	Duplexes
12106	6	Duplexes
12107	7	Duplexes
12108	8	Duplexes
12109	9	Duplexes
12201		Triplex
12202	2	Triplexes

12203 3 Triplexes
12204 4 Triplexes
12205 5 Triplexes
12206 6 Triplexes
12207 7 Triplexes
12208 8 Triplexes
12209 9 Triplexes
12301 Four-Plex
12302 2 Fourplexes
12303 3 Fourplexes
12304 4 Fourplexes
12305 5 Fourplexes
12306 6 Fourplexes
12307 7 Fourplexes
12308 8 Fourplexes
12309 9 Fourplexes
13100 1-9 Units
13200 10-14 Units
13300 15-19 Units
13400 20-29 Units
13500 30-39 Units
13600 40-49 Units
13700 50+ Units
14101 Condominium Units - Residential
14501 Condominium Unit - Retail
14601 Condominium Unit - Office
14701 Condominium Unit - Marina
15000 Mobile Home Park
16000 Hotels and Motels
16100 Bed and Breakfast Lodging
17000 Institutional Lodging
18000 Other Residential
18300 Sheds and Garages
13810 Retirement Apartments
19801 1 Cabin
19802 2 Cabin
19803 3 Cabin
19804 4 Cabin
19805 5 Cabin
19806 6 Cabin
19807 7 Cabin
19808 8 Cabin
19809 9 Cabin

21000 Food Product Manufacturing (not Agriculture)
23000 Apparel and Fabric Manufacturing
24000 Lumber and Wood Products Manufacturing
25000 Furniture and Fixtures Manufacturing
26000 Paper Products Manufacturing
27000 Printing and Publishing
28000 Chemical Manufacturing

29000 Petroleum Products Manufacturing
30000 Plastics
31000 Leather Goods Manufacturing
32000 Stone, Clay and Glass Products
34000 Fabricated Metal Products
35000 Precision Instruments
39000 Miscellaneous Manufacturing
41000 Railroad Transportation
42000 Motor Vehicle Transportation
43000 Aircraft Transportation
44000 Marine Craft Transportation
45000 Highway and Street Right of Way
45900 Totally Encumbered by Easements
46000 Parking
47000 Communication
48000 Utilities
48330 Water Systems
48540 Sanitary Land Fills
48999 Operating Property
49000 Other Transportation or Utilities

51000 Wholesale Trade
52000 Retail Trade – Building Materials, Hardware and Equipment
53000 Retail Trade – General Merchandise
54000 Retail Trade - Food
54100 Convenience Stores – with Gas Pumps
54110 Convenience Stores – without Gas Pumps
54120 Chain-type Groceries
55000 Retail Trade – Automotive, Marine, Craft Accessories
55100 Manufactured Housing Sales Lot
55900 Auto Wrecking Yards
56000 Retail Trade – Apparel and Accessories
57000 Retail Trade – Home Furnishings and Equipment
58100 Restaurants
58110 Fast Food
58210 Tavern
59000 Other Retail Trade
59100 Neighborhood Center
59200 Community Center
59300 Regional Center

61000 Finance, Insurance and Real Estate Services
61100 Banks
62000 Personal Services
62400 Cemetery
63000 Business Services
63760 General Warehouse
63770 Mini Warehouse
64000 Repair Services
64100 Service Stations/Auto Repair
65000 Professional Services

65100 Medical and Dental Offices
65130 Hospitals
65160 Convalescent Center
66000 Contract Construction Services
67000 Governmental Services
68000 Educational Services
69000 Miscellaneous Services
69110 Churches

71000 Cultural Activities and Nature Exhibitions
72000 Public Assembly
73000 Amusements
74000 Recreational Activities
74088 Recreational Activities Removed from Assessment
74400 Marina
75000 Resorts and Group Camps
76000 Parks
79000 Other Recreation and Amusements
81000 Agricultural (not Open Space Agricultural)
82000 Agricultural Related Activities
82210 Veterinarian Services
83000 Open Space Agricultural
84000 Fishing and Related Services
85000 Mining and Related Services
87000 Classified Forest Land (84.33 RCW)
88000 Designated Forest Land (84.33 RCW)
89000 Other Resource Production
91000 Undeveloped Land
91088 Bare Land Removed from Assessment
91100 Common Area
92000 Non-Commercial Forest
92200 State Forest
93000 Water Areas
93900 Tidelands
94000 Open Space
95000 Open Space - Timber
99000 Other Undeveloped Land