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I. TRENDS AND FORECASTS

Introduction

The backbone of Kitsap County's economy historically has been the federal government, and in particular, the Department of Defense. The federal government and military-related businesses employ the largest percentage of the Kitsap County work force, followed by professional services (such as health and education), retail and services, and public administration. Employment in light manufacturing and agriculture/forestry account for the smallest percentages of the work force.

Overall, the total number of jobs in Kitsap County increased 42% from 1980 to 1990, and increased 8.2% from 1990 to 1995. (**Tables A_ED_1 and A_ED_2**). The Washington State Employment Security Department reports that the average unemployment rate in Kitsap County was 6.4% from 1980 to 1990, and 5.6% from 1990 to 1994. By comparison, the state unemployment average was 6.4% in 1994.

Employment in non-agricultural jobs within the county has increased at a slower rate than the work force, indicating an increase in the number of people working outside of Kitsap County. The average number of people commuting out of the county for work in the first seven months of 1995 was 17,857, or 20.8% of the employed work force (**Figure A_ED_3**). This is a slight increase from 1994 figures (16,530 or 19.5%). Overall, the percentage of people working outside of Kitsap County has stayed relatively steady at approximately 19% since 1990.

Table A_ED_4 shows that approximately 49% of the work force in 1980 was employed by the federal government. That percentage dropped to 46% in 1992, and to 33% in 1995. This does not indicate a diversification of the economy or the effects of military downsizing, but rather a growing service and retail industry in Kitsap County which has followed population growth. Other employment sectors have shown relatively stable or slightly decreased activity. **Tables A_ED_5 and A_ED_6** show the employment history within various employment groups from 1980 to 1990 and from 1991 to 1995.

The county wide median household income in Kitsap County increased from \$18,942 in 1980 to \$32,043 in 1990 (**Table A_ED_7**). The number of households making less than \$25,000 decreased while the number of households making greater than \$50,000 increased dramatically, by almost 14,000. The Washington State Employment Security Department reports the average industry wage in Kitsap County in 1993 was \$25,012.

The Military Presence

The three largest employers in Kitsap County in 1995 were military facilities (**Table A_ED_8**). **Table A_ED_9** shows employment breakdowns for the military facilities in Kitsap County in 1995. Federal government military facilities in Kitsap County employed approximately 33% of the total work force in 1995. Civilians employed by the military facilities comprised 18% of the labor force, while military personnel accounted for 14.7%. Although these percentages have remained relatively

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stable in Kitsap County over the past decade, they are higher than average for Washington State. In 1992, military personnel accounted for 15% of the work force in Kitsap County, compared with 2.2% for Washington State as a whole (i.e., 27% of the Washington state military work force was employed in Kitsap County).

The number of county residents employed by the federal government (civilian and military personnel) has remained relatively stable in Kitsap County, although it has commanded a smaller percentage of the total work force since 1980. Even with federal cutbacks, early retirements and a general reduction_in_force, the total number of civilian personnel employed at military facilities has decreased only slightly since 1991. However, there have been periods of significant reductions during the last few years, and indications of more to come. During 1993, total civilian employment at Puget Sound Naval Shipyard decreased by 2,200 full_time jobs, and at Naval Undersea Warfare Center by 400 jobs. Yet reductions at the Kitsap County military facilities have been minor compared with other facilities around the country, and to date, none of the Kitsap County facilities have been considered for closure. Facility closures in other parts of the country have actually increased the vitality of the Kitsap County facilities due to transfers of home_ported ships and their attached personnel and transfer of work originally scheduled for closed facilities. Yet even these factors will not negate the total impact of significant downsizing expected in military_related employment in the next five years. As a result, Kitsap County community leaders have committed to economic diversification in order to lessen the impact of significant military downsizing on the Kitsap County economy.

Non_Military Employment

The most significant growth in non_military jobs from 1980 to 1990 occurred in retail and services (**Table A_ED_6**). This may be attributed in part to the opening of large retail centers and businesses in the county, such as the Kitsap Mall, which met a pent_up demand in the growing population. The retail and service sectors of Kitsap County cater heavily to active_duty and retired military personnel, as well as federal civilian employees. This employment sector is also being increasingly driven by the number of resident commuters, and obviously depends heavily upon the stability of major employers in Kitsap County, i.e., the federal government.

Kitsap County's tourism and recreation_related industries have benefitted from local population growth as well. The only employment sectors with a slight decline in employment were in durable goods manufacturing and communications. Manufacturing (not including military_related manufacturing) has accounted for only 2.5% of the Kitsap County employment since 1991, compared to the Washington State average of 16%.

Forestry and Agriculture

Use of natural resources, such as forestry, fishing and agriculture, have historically been a source of economic stability in Kitsap County. Although there are still employment opportunities to be found in Kitsap County's natural resources, the economic vitality of this sector has been decreasing since 1980. The 1987 Census of Agriculture compared economic trends in farming between 1982 and

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1987. Probably the most significant trend is the steady, low percentage (7%) of farms in Kitsap County which earn \$10,000 or more per year, compared to the 65% of Kitsap farms which earn \$2,500 or less per year. The indication is that farming is not the principal occupation for households surveyed by the Census. Only one-third of operators listed farming as their principal occupation, and given the income figures in the table below, another source of income must be assumed for many of these households:

Number of Farms

	1987	1982
	404	422

Farms by Value of Sales

	1987	1982
\$2,500 or less	65%	59%
\$2,500 to \$4,999	19%	21%
\$5,000 to \$9,999	9%	13%
\$10,000 to \$24,999	4%	4%
\$25,000 or more	3%	3%

Operators by Principle Occupation

	1987	1982
Farming	32% (131)	28% (119)
Other	68% (272)	71% (303)

Forestry employment has also experienced a depreciation of earnings in Kitsap County over the past decade. Forestry's total earnings in 1992 (as reported by the Washington State Department of Revenue) was roughly 6/100ths of 1% of the total wages for all jobs in Kitsap County, compared to one-tenth of 1% of the total wages in 1980. Earnings in lumber and wood products in Kitsap County also show the same trend. According to the Department of Revenue in 1976, 7/10ths of 1% of total Kitsap County earnings was in lumber and wood products. In 1992, that percent fell to 4/10ths of 1%.

Employment Forecasts

The Puget Sound Regional Council estimates that an additional 33,967 employable people will reside in Kitsap County in 2012. The state Employment Security Department reports that in 1992, the available work force (those residents either employed or seeking employment) in Kitsap County was approximately 88,900. This results in a total of 122,867 employees working in Kitsap County in the year 2012. This is the number of jobs for which Kitsap County will need to plan during the 20-year period of the Comprehensive Plan.

The most significant employment growth between 1980_90 occurred in retail and services, while manufacturing of durable goods and communications had slight decreases in employment. Service

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and retail jobs are expected to grow significantly in the future, and reductions are anticipated in the federal work force.

The top 10 business types expected to have the fastest rate of job growth in the 1990's (as predicted in the General Information document from the Kitsap County Economic Development Council's 1993 Economic Diversification Summit) are:

- Computer and Data Processing Firms
- Outpatient Facilities and Health Services
- Personnel Supply Services
- Offices of Health Practitioners
- Credit Reporting and Business Services
- Legal Services
- Nursing and Personal Care Facilities
- Research, Management and Consulting Services
- Residential Care
- Miscellaneous Publishing

These employment types signify a trend in the United States economy __ dominance of the service sector. In 1981, the U.S. Department of Labor predicted that 71% of the work force would be in service jobs by the year 1990. However, by the end of 1986, 75% of the work force was employed in a service-producing industry. By the year 2000, the service-producing industries will account for nearly all of the projected U.S. employment growth.

Nationally, employment in the manufacturing sector is expected to decline by more than 800,000 jobs by 2000. However, manufacturing jobs are considered as basic employment __ that is, ones which provide a living_wage income upon which much of the local economy depends.

Kitsap County needs to develop more basic (i.e., manufacturing) jobs to counteract the reductions that will take place in the only other significant sector that provides this kind of employment locally __ the federal military facilities.

The economic base of an area consists of those activities which provide basic employment (therefore income) on which the rest of the economy depends. This dichotomy is often characterized as basic (or export) and non_basic (or local) economic activities. For example, local expenditures generated from such basic activities as Puget Sound Naval Shipyard attract non_basic (local) businesses such as retailers and service firms. Basic industry employment opportunities provide living_wage jobs, attract job_seekers from the outside, and encourage the start_up of non_basic businesses. Economic diversification and success is measured in terms of new basic jobs and the resultant income creation.

In Kitsap County, the only non_military_related basic jobs are in manufacturing. The Employment Security Department reports that only 2.5% of the county's current non_agricultural employment is in manufacturing. This is far below the Washington state average of 16%, and is indicative of the

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county's historical reliance on the military employers for basic jobs. If significant reductions in military employment do occur, the Kitsap County economy will suffer greatly, not only in the loss of basic jobs, but in the effect on the dependant service and retail industry.

TABLE A-ED-2

TABLE A-ED-3

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TABLE A-ED-6

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II. ECONOMIC DIVERSIFICATION

Federal military spending has been the principal economic driver in Kitsap County. However, policy at the federal level signals major changes are coming. The trend appears to be an overall decline in the size and spending power of the Navy, including a reduction in civilian and contractor employment and military personnel. With 33% of the 1995 work force tied directly to the military facilities in Kitsap County, major reductions will significantly impact nearly every segment of the community. It has spurred concern and a call for reducing Kitsap's dependence on the Navy through economic diversification. This concern is reflected in the County wide Planning Policy which states, "The County and the Cities recognize that the economy in Kitsap County is overly dependent on the U.S. Navy and diversification is necessary."

In March 1993, the Economic Development Council of Kitsap County (EDC) held an Economic Diversification Summit where 250 community leaders discussed the economic future of Kitsap County. The EDC has begun to implement some of the strategies identified at the Summit for economic development and diversification in Kitsap County.

Strategies for economic development have changed over the past decade. Many large corporations are downsizing, and most new jobs are being created by small, innovative local companies. Focus has turned to nurturing existing local businesses in many communities. This new economic development strategy is known as "gardening," and its aim is to grow jobs locally. The more established strategy of targeting industries and business to expand or locate continues to hold effectiveness and must be pursued as part of the economic diversification strategy.

These two economic strategies __ supporting the formation and expansion of small, local business and designating target industries for expansion or location __ are founded in the premise that Kitsap County is a place which fosters economic soundness and success. This premise is inherently linked to quality of life factors. A speaker at the EDC summit concluded his presentation by saying: "And don't lose track of this: 90% of all the new businesses being created worldwide can now be located

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anywhere. And they'll be looking for a place that has excellent schools, affordable housing, safe streets, cooperative governmental structure, active citizens, rich cultural diversity and a healthy, clean environment."

The EDC distributed a booklet of General Information to all participants of the Economic Diversification Summit that included a list of 20 quality of life factors the EDC has identified which attracts and maintains healthy businesses. These factors, by order of importance, are:

- Quality of schools
- Quality of housing
- Cultural activities
- Reasonable priced housing
- Favorable social environment
- Ease of "getting away"
- Labor force quality
- Access to higher education facilities
- Outdoor recreational activities
- Clean environment
- Ways to conserve time
- Transportation system
- Low crime rate
- Climate
- Organized sports
- Cost of living
- Low property taxes
- Low income taxes
- "Small town" atmosphere
- Religious alternatives

The 1993 Economic Diversification Summit found that creating living_wage basic jobs while maintaining the coveted Kitsap County quality of life was best done by creating new or diversifying existing businesses into light industrial and high_technology production and services. Previous attempts to recruit new high_technology businesses have been inhibited by the lack of existing businesses necessary to provide technical and industrial support. Since local defense facilities possess this necessary support, the objective is to be able to offer that support until the industry expands.

A continuing Navy presence, even though reduced, will help the community to diversify economically. Local defense facilities are looking to make their industrial and technology support base available to the non_defense sector. These "dual_use" support elements help sustain key, core areas of capability with the Navy, and will help to ensure future re_arming and/or expansion of the Naval forces while developing a competitive private sector. The extent of such support has proven to be dependent upon local economic development interests, enabling policies, and the operating philosophies of local defense facility commanders.

Other diversification efforts are underway, including a campaign to keep the USS Missouri in Bremerton as a tourist attraction, a revitalization project for the Bremerton waterfront which would include retail centers, restaurants, shops, theaters, a hotel, offices, apartments, and condominiums, and a variety of business assistance and education programs sponsored by the Economic Development Council of Kitsap County.

III. INDUSTRIAL & COMMERCIAL LAND SUPPLY & DEMAND ANALYSIS

Introduction

This appendix to the 1998 Comprehensive Plan addresses the projected demand for commercial and industrial land in Kitsap County over the next 20 years. It describe the general approach and methodology followed in Kitsap County's revised Comprehensive Plan to designate an appropriate amount of commercial and industrial land to support economic growth. It is based on a Preliminary Draft Industrial and Commercial Land Supply and Demand Issue Paper published in February, 1988 for public review and discussion.

Planning Context

Growth Management Act

Promoting economic development is one of the Growth Management Act's fundamental planning goals (RCW 36.70A.020(5)). According to the Act, economic development should be promoted throughout the state and in areas experiencing insufficient economic growth, consistent with adopted comprehensive plans and within the capacities of natural resources and services and facilities. Accomplishment of this goal is intended to be balanced with achieving the Act's other goals, including reducing sprawl, guiding urban growth to appropriate areas, protecting the environment and providing adequate public services and facilities. In general, then, GMA provides jurisdictions with the authority and the mandate to provide employment opportunities for its residents.

The Central Puget Sound Growth Management Hearings Board decision invalidating Kitsap County's 1996 Comprehensive Plan required the County to revise the plan's Land Use Element and map designations. This appendix documents a portion of the County's work on a revised Land Use Element as it relates to review of the appropriate distribution, location and extent of commercial and industrial lands.

This analysis assumes that the basic approach and methodology prescribed by several Central Puget Sound Growth Management Hearings Board decisions for determining residential land supply and demand may be adapted to help identify appropriate amounts of commercial and industrial land. Deviations from the residential methodology are explained to help document the logic of the County's decisions.

The general approach followed by Kitsap County is to: identify forecast jobs; estimate land needs based on typical building configurations and use patterns; calculate appropriate deduction and market factors to compensate for land constraints and market effects; and compare demand to existing supply to identify any deficiency or surplus. This approach is described in more detail below.

Economic Development Context

Goals articulated in the 1998 Plan are intended, in part, to reflect consensus developed through a 1993 Economic Development Summit sponsored by the Economic Development Council (EDC). This summit resulted in recommendations and a marketing strategy that focus on economic diversification to reduce dependence on military employment; emphasizes attracting and expanding living_wage basic jobs, including an increase in the County's proportion of light industrial and high technology jobs (from its current 2.9 percent to 9 percent by 2015); and, through the Comprehensive Plan, to provide an adequate supply of land to accommodate targeted employment growth. While these objectives may change over time, they provide a starting point for Kitsap County's planning.

In terms of land use, meeting these future economic development objectives will require a variety of sites to meet varying needs. This includes large and small sites, high quality sites for business parks, and industrial facilities to meet the needs of a range of small and growing businesses.

An Industrial Land Market Analysis Study, published by the EDC in 1994, and relied on in the 1996 Plan, was reviewed as part of the research for this appendix. Based on Kitsap County's independent analysis, many factors and formulas suggested in the EDC report are based on reasonable assumptions about commercial and industrial development and are appropriate to use in the County's methodology. Some factors have been revised to reflect direction in Growth Management Hearings Board decisions and the approach used to determine residential land capacity in this Plan. The approaches used by other jurisdictions in the Puget Sound region were also reviewed to see how they had dealt with various supply/demand and methodological issues. In addition, the work of a public_private task force in King County was reviewed for its insight. An Eastside Industrial Land Study, prepared by the National Association of Industrial and Office Parks (NAIOP, 1988, updated 1992) was also reviewed to help identify qualitative factors that should be considered when evaluating land supply and demand. Factors identified in the NAIOP study as significant considerations in siting decisions by high technology businesses include site size, access, infrastructure and amenities.

This appendix is organized in four sections. Following this Introduction, Section I explains the methodology behind the employment capacity analysis, focusing on demand. It includes estimates of the number of jobs that are being planned for (for 1992_2012 and 2012_2017) and converts those jobs to land needs. Alternative methods of allocating employment to the county and cities are also discussed. Section II discusses how to calculate developable land, considering a range of factors that will affect capacity (e.g., reductions for critical areas, public uses and right_of_way, and market_oriented factors). Section III identifies the county's existing supply of commercial and industrial land, and Section IV compares supply to demand.

A. Employment Land Demand

The demand for employment land is a function of the number and types of jobs projected to occur in Kitsap County; the characteristics of that future growth (in terms of the likely densities of different types of employment uses and buildings); and land characteristics that will affect how land will be utilized (e.g. deductions for critical areas and a reflection of market conditions). These considerations are compiled in a mathematical model or formula that can be used to estimate how many acres of land are needed to accommodate expected jobs.

In the following discussion, industrial and commercial land is calculated separately. Industrial uses include business parks, light industrial, warehouse distribution and heavy industrial. Commercial uses include retail sales, office and service activities.

Identify Future Employment Targets

The calculation of demand begins with a long_range projection of jobs for Kitsap County, shown in Table 1. Unlike population estimates in the Growth Management Act scheme, the law does not require the use of any particular agency's employment projections to plan for non_residential land uses. Nor does it specify that any particular forecast is considered to be a "floor" and/or a "ceiling" for planning purposes. Washington State Employment Security Department's employment projections (through 2020) have been used as a starting point. These were felt to be the most reliable long_range projections available for Kitsap County at this time. Calculations for individual years were done on a straight_line average basis (i.e., by applying average annual increases for interstitial years). The 1992_2012 period corresponds to the planning period for Kitsap County's 1998 Comprehensive Plan revision. Since it is expected that the Comprehensive Plan will be revised in the near term to address the 2013_2017 period, estimates for this time period are also provided.

The Employment Security projections shown in Table 1 have been adjusted to reflect the objective of increasing Kitsap County's share of manufacturing jobs from its current 2.9 percent of total non_agricultural jobs to 9 percent over 20 years; the target is still below the average proportion of manufacturing jobs in Washington counties (approximately 14 percent). The jobs forecasts for the manufacturing sector have been increased to achieve this target. It should be noted that the forecasts for the other economic sectors have not been reduced proportionately to reflect the increase in manufacturing. Any such a reduction, it was felt, could be arbitrary and lead to an underestimation of the demand for other economic activities. The increases in manufacturing, therefore, are treated as a targeted addition to the initial forecast. This approach is also consistent with Kitsap County's objective to kick_start its economic growth and diversification through aggressive marketing efforts and by providing an ample supply of developable land.

Table 1. Employment Security Department Employment Projections for Kitsap County (Adjusted)

Employment Sector	1997 ^a	2012 ^b	2017 ^c	Change 1997 to 2012	Change 2013 to 2017
Manufacturing	2,100	8,028	9,273	5,928	1,245
Mining and Misc.	800	833	921	33	88
Construction	3,300	3,795	3,928	495	133
Transportation and Utilities	1,800	2,322	2,471	522	149
Wholesale and Retail Trade	16,700	21,539	23,541	4,839	2,002
Finance, Insurance and Real Estate	2,600	3,248	3,479	648	231
Services	17,500	28,008	32,186	10,508	4,178
Government	24,600	27,630	27,236	3,030	-394

Table 1. Employment Security Department Employment Projections for Kitsap County (Adjusted)

Total	69,400	95,403	103,035	26,003	7,632
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^a Employment Security, September 1997

^b Calculated by Kitsap County from Employment Security’s 2010 and 2015 Employment Forecasts. Manufacturing forecast adjusted to include targeted increase to 9% of total by 2015.

^c Extension of Employment Security’s 2015 Employment Forecasts.

The next step in the calculation estimates the type of buildings (e.g., office, industrial, business park) that should be planned to house forecast new jobs of different types. It estimates what proportion of the new employees in each employment sector (e.g. manufacturing) should be allocated to industrial, business park or commercial use categories or zones, based on the type of buildings they are likely to locate in (see Table 2). This adjustment is intended to reflect the fact that, based on observations in the market place (regional and local), certain types of jobs that may be categorized as industrial are actually likely to locate in commercial zones/buildings; similarly, some portion of jobs categorized as commercial will actually locate in industrial zones or buildings. For example, as shown in Table 2, 95 percent of manufacturing jobs are expected to locate in manufacturing zones and buildings, with the remainder locating in what would be considered commercial zones or buildings. Twenty percent of service jobs are assumed to locate in industrial rather than in commercial zones or buildings; this is readily observed in many business parks in the Puget Sound region (e.g. consulting businesses locating in business parks). The goal of this adjustment is to provide a more accurate picture of the type and amount of employment land and space that will be needed considering where businesses will locate.

Table 2. Estimated Proportions of Employment Sectors Locating in Industrial or Commercial Structures

Employment Sectors	Industrial %	Commercial %	Industrial Share 1997-2012	Commercial Share 1997-2012	Industrial Share 2013-2017	Commercial Share 2013-2017
Manufacturing	95%	5%	5,632	297	1,183	62
Mining and Misc.	15%	0%	5	0	13	0
Construction	15%	85%	74	421	20	113
Transportation and Utilities	30%	70%	157	365	45	104
Wholesale and Retail Trade	25%	75%	1,210	3,629	501	1,502
Finance, Insurance and Real Estate	10%	90%	65	583	23	208
Services	20%	80%	2,102	8,406	836	3,342
Government	5%	0%	152	0	-20	0
Total	--	--	9,397	13,701	2,601	5,331

Source: Real Estate Economics (1994) using data provided by the Urban Land Institute.

Note: No mining and miscellaneous or government employment sector jobs were allocated to the

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commercial categories i.e. these jobs are assumed to locate in “government” buildings rather than office buildings. Jobs not allocated to the industrial category are considered to be accommodated in mineral resource or government zones.

It should be noted that at this stage of the calculations, the employment forecasts have not been allocated among jurisdictions in the region. This issue is discussed in Section B below.

Translate Employment Projections into Land Demand

The number of projected new employees in commercial and industrial categories must then be converted into gross acres of land. This step is performed using a number of ratios and factors which include estimates of square feet per employee and lot coverage (Table 3). The ratios were developed based on examination of the approaches of other jurisdictions in the region and research into national trends. Each step is described below.

Square Feet per Employee. The square feet per employee factor indicates the typical average number of square feet of building area devoted to each employee for each type of use. A weighted average of space requirements per worker __ calculated at 969 square feet per employee __ was developed to reflect different industrial use categories (business parks, light industrial, warehouse distribution and heavy industrial). These floor space requirements were initially developed by Real Estate Economics (1994) for the EDC using Urban Land Institute (ULI) data.

A survey of ratios of commercial space per employee used by other jurisdictions in Washington showed a range of 400 ft. to 620 ft. Other sources used in this research included the Institute of Transportation Engineers (ITE) Trip Generation Manual and ULI data. An average of 500 sq. ft. per employee average was identified as an appropriate ratio for retail, office and service business uses in Kitsap County.

Lot Coverage. Lot coverage refers to the percentage of land that is covered by buildings, parking areas, outside storage and other impervious surfaces. Permitted lot coverage for different types of uses is generally determined by zoning regulations. Industrial and commercial building configurations and lot coverage reflect their needs and patterns of activity. Research of Puget Sound jurisdictions development standards (King, Snohomish, Pierce and Clark counties) indicated a range in industrial lot coverage of 20 percent to 46 percent. An analysis of industrial developments built in Kitsap County over the last four years was conducted and yielded an average of lot coverage of 38 percent. The EDC's Industrial Land Market Analysis also used this percentage. This ratio is used in Table 3.

A similar analysis of other jurisdictions and recent development was performed for commercial development. The survey of jurisdictions showed a range in commercial lot coverage of 20 percent to 40 percent. The analysis of commercial developments built in Kitsap County over the last four years indicated an average of 32%, which is used in Table 3.

Table 3. Employee and Lot Coverage Ratios	
Average Square Feet per Employee - Industrial Uses	969
- Commercial Uses	500
Lot Coverage - Industrial Uses	38%
- Commercial Uses	32%

B. Calculating Developable Land _ Land Capacity Analysis

Developable Land

Commercial and industrial development occurs in a complex and dynamic market environment whose functions are not fully understood. Factors that influence development include local and regional land supply and demand, as well as economic forces and regulatory influences. To account for these realities, land capacity analyses typically apply a number of factors __ variously referred to as discount, reduction, reduction and market factors _ that can be used to calculate the amount of land realistically needed and available to accommodate the type and amount of growth being planned for. Discounts are typically made for land that is constrained by or used for critical areas, road right_of_way, public facilities (parks, etc.), and land that is assumed to be unavailable during the planning period. These factors may be viewed alternatively as subtractions from the gross supply of land identified to meet a particular planning target to identify the net amount; or as additions to the net amount of land needed. These adjustments to vacant land yield the gross amount of land needed to meet planning forecasts or targets.

The market or safety factor acknowledges that it is impossible to accurately predict how real estate markets will actually function over a 20_year period; some margin of safety, therefore, is appropriate to ensure that adequate developable land is available. This number is an addition to the amount of land otherwise calculated to be needed to accommodate planned growth. The various factors are discussed below.

The industrial and commercial reduction factors differ somewhat from those identified in the Residential Land Capacity Analysis Appendix. Assumptions regarding redevelopment, for example, are different. Over the next 20 years, redevelopment of currently developed but underutilized commercial and industrial land in unincorporated Kitsap County's was not considered likely to redevelop. Factors influencing this conclusion included the age, location and use of these parcels. Future disposition or reuse of U.S. Government properties was considered to be unknown and/or speculative and not amenable to estimation as a proportion of land likely to redevelop over the planning horizon. Additional data, gathered through ongoing monitoring of development activity, is necessary to determine how to account for redevelopment in the future.

Critical Areas. Critical area reductions for wetlands, streams, geologic hazards and their associated buffers have also been adjusted relative to the factors used to calculate residential land needs. This adjustment to the methodology is intended to reflect the nature of commercial and industrial sites and buildings. The reduction factors identified for residential land is based on a combination of GIS data, a study of the East Bremerton area, and the experience of other jurisdictions. Although many potential industrial parcels are located apart from Kitsap County's contiguous urban growth area, the quantitative findings of the East Bremerton study are assumed to be a reasonable generalization about commercial and industrial sites. These assumptions may be revised in the future based on additional data compiled as the result of monitoring land supply or demand or in connection with site_specific development studies.

The Residential Land Capacity Appendix estimates that 32 percent of vacant land (based on analysis of the East Bremerton study area) may be constrained by critical areas. A 15 percent net reduction was recommended for residential land to reflect the possibility of on_site density transfers and to reflect the reduction factors recommended by CTED and other jurisdictions. However, given the size, lot coverage and footprint of typical commercial and industrial buildings, it is not likely that on_site density transfers (discussed for residential development) will be a practical mechanism; nor does the Critical Areas Ordinance currently permit such transfers for non_residential uses. A 32 percent reduction was applied for critical areas, therefore.

Road Right_of_Way. A right_of_way reduction is made to account for land necessary for streets and roads. The Residential Land Capacity Analysis Issue Paper recommends a reduction of 17 percent. Estimates from

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jurisdictions around the Puget Sound region range from 10 percent to 20 percent. CTED recommends a 17_30 percent reduction when major roads are not already in place. It is anticipated that most land designated for industrial or commercial use will be along major arterials and thus CTED's low end of 17 percent appears appropriate.

Public Facilities. A deduction is also made for public facilities, which includes parks, schools, institutions, utility corridors, sewage treatment facilities and open space. The Residential Land Capacity Appendix documents use of a 15 percent reduction. Snohomish County's research on local and national ratios of public purpose lands also suggested a 15 percent factor. A reduction of 15 percent was used for commercial and industrial lands.

Unavailable Land. Unavailable land is some portion of potential land supply that is not considered to be available for sale or development within the 20_year planning period. This is intended to recognize that some property owners may desire to hold or use their land for other purposes notwithstanding land use designations. Based on Kitsap County's research, a 15 percent reduction has been used by the majority of jurisdictions for calculating residential land capacity. Many of the sites being considered for industrial designation have previously been identified by owners who have expressed an interest in development; so this land may be considered to be available. Nevertheless, some recognition of unavailability is felt to be appropriate to reflect uncertainty regarding the timing or feasibility of development of individual sites. The Port of Bremerton's industrial property, for example, is a significant portion of potential future industrial land supply but is available only for lease, not for sale. This limitation on tenure could affect the availability of the property to segments of the market searching for large sites for sale.

Kitsap County did not use a specific factor for unavailable lands in its industrial land capacity. The market factor, discussed below, may be considered to include a margin of safety to reflect unavailability of some portion of supply.

Market/Safety Factor

Land capacity studies typically include a market or safety factor. This is an additional amount of land that is added to supply to account for operation of land markets. This approach can also be seen as providing a margin of safety to ensure that land supply is not constrained.

The market factor acknowledges that urban land markets are complex and imperfectly understood. It addresses the risk that constraining land supply _ as growth management systems do to encourage compact, higher density development _ can disrupt the equilibrium between supply and demand, which can have adverse effects on land costs.

The literature on market factors is limited and most of the discussion of this issue has occurred in a residential context. Various studies have recommended factors ranging from zero to 300 percent. There is, in fact, little empirical evidence to support the use of any specific percentage. A 25 percent market factor was identified in a CTED report on residential land capacity methodology, has been used by most jurisdictions, and has been approved by the Central Puget Sound Growth Management Hearings Board in a residential context as a "bright line."

Kitsap County is preliminarily using a 50 percent market factor for industrial and business park uses and a 25 percent market factor for commercial uses in the 1998 Plan. The context of Kitsap County economic development activities warrants use of a higher market factor for business parks and industrial lands. The County's economic performance, particularly in basic employment categories, has been weak. The historical dependence on military employment leaves the County extremely vulnerable to decisions beyond its control. At this time, the County has developed a clear economic diversification objective and an aggressive marketing program. A greater supply of and choice among industrial and business park sites _ particularly suitably located larger sites __ is believed to be necessary to help jump start local economic development activities, to provide the County with a competitive advantage at this stage of its planning for economic growth, and to enable it to effectively market and attract

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targeted businesses.

The 50 percent market factor also addresses two issues regarding availability. First, the higher market factor for commercial and industrial lands incorporates considerations of unavailability; no separate factor for unavailable lands was used. Second, a portion of estimated supply – specifically the Port of Bremerton’s industrially zoned land – is limited to lease and cannot be sold to individual users. This limitation is likely to limit the attractiveness of this land for certain types of users by some degree; the higher market factor is also intended to compensate for this situation.

Land supply and demand will be monitored through the monitoring and evaluation program established pursuant to this plan. The market factor may be revised in the future, as appropriate, based on the findings of the monitoring program.

Sequence for Applying Land Capacity Factors

Table 4 summarizes the calculations described above and Table 5 identifies the total employment land needed in Kitsap County for the 1992_2012 period.

Table 4. Summary of Discount, Reduction and Market Factors		
Critical Areas	32%	
Right of Way	17%	
Public Facilities	15%	
Developable Land { 100 - (Critical Areas + Right-of-Way + Public Facilities)		36%
<i>Market Factor</i> - Industrial & Business Parks		50%
- Commercial		25%

The order in which the factors are applied is intended to avoid potential double counting. As described in the Residential Land Capacity Appendix, unavailable lands are deducted first, with the other discounts and reductions then applied sequentially to the same gross total. The market factor is then added to the resulting subtotal to identify demand.

Table 5. New Employment to Gross Acreage Calculations 1992-2012										
Employment Use	New Jobs	Sq. Ft. per Employee	Sq. Ft. Needed	Sq. Ft. to Acres	Lot Coverage	Net Acres	Developable Land %	Acres Needed	Market Factor	Gross Acres
Industrial	9,397	969	9,105,693	209	38%	550	36%	1,538	1.50	2,292
Commercial	13,701	500	6,850,500	157	32%	491	36%	1,365	1.25	1,706

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Allocating Employment Land Demands to Unincorporated Kitsap County and the Cities

At this time, there are no agreed upon regional or local policies that direct how future employment should be allocated among the jurisdictions in Kitsap County. The Kitsap County_wide Planning Policy (CPP) does not address this issue from a regional perspective. Appendix B of the CPP provides some general guidance as to how each individual jurisdiction could calculate the amount of non_residential land needs, but that method is not related to employment forecasts. An examination of adopted city comprehensive plans did not consistently reveal what employment assumptions the cities used or an analysis of commercial/industrial land supply and demand.

Kitsap County must make some initial, provisional allocations of employment to identify its commercial and industrial land needs. Given that most of the regional industrial and business park land base is located in unincorporated areas, action now is critical to facilitate pursuit of regional economic development goals in the near term. At the same time, the County recognizes that allocation of employment growth is a regional issue. Therefore, it has proposed that the Kitsap Regional Coordinating Council (KRCC) place this issue on its agenda for discussion. Kitsap County's approach assumes that the current ratio of developed commercial and industrial land by jurisdiction can be used as a guide for allocating future growth to the cities and the county. Kitsap County's Geographic Information System was used to search Assessor's data on currently developed commercial and industrial land. This survey indicated that 11 percent of developed industrial land is contained in the cities while 89 percent is located within unincorporated areas. For developed commercial land uses, forty_five percent is contained within the cities and 55 percent is in unincorporated areas. These percentages were applied to the county_wide, employment forecasts to identify the County's assumed industrial and commercial demand.

Table 6. City/County Employment Allocation			
City Industrial	County Industrial	City Commercial	County Commercial
11%	89%	45%	55%

The commercial land allocation uses approximately the same ratio applied to the split of 2012 population between the cities and County adopted in the CPP. This allocation implicitly assumes that retail sales and services, in particular, are located in proportion to population growth. (It should be noted that the CPP, Appendix B suggests that jurisdictions project commercial land needs in proportion to population.)

Table 7. 1997-2012 City/County Employment Allocations (Gross Acres)			
City Industrial	County Industrial	City Commercial	County Commercial
252	2,040	768	938

Total 2012 employment land needs are shown in Table 7. Unincorporated Kitsap County needs to plan for 2,040 acres of vacant industrial and business park land and 1,125 acres of commercial land to meet 2012 employment projections.

2013_2017 Employment Needs

Kitsap County is using the 1992_2012 period for revising its Comprehensive Plan pursuant to directions in Central Puget Sound Growth Management Hearings Board decisions. The plan will need to be updated in the near term to make it current and to reflect the 1997_2017 planning period. Employment land needs for 2013_2017 are identified

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here to facilitate that planning period update. Using the same employment forecasts, employment capacity model and county_city allocations, the gross industrial and commercial land necessary from 2013 to 2017 are shown in Tables 8 and 9. This is an additional amount of commercial and industrial land that should be identified to accommodate employment forecasts.

Table 8. New Employment to Gross Acreage Calculations 2013-2017

Employment Use	New Jobs	Sq. Ft. per Employee	Sq. Ft. Needed	Sq. Ft. to Acres	Lot Coverage	Net Acres	Developable Land %	Acres Needed	Market Factor	Gross Acres
Industrial	2,601	969	2,520,369	58	38%	152	36%	422	1.50	633
Commercial	5,331	500	2,665,500	61	32%	191	36%	531	1.25	664

Table 9. 2013-2017 City/County Employment Allocations (Gross Acres)

City Industrial	County Industrial	City Commercial	County Commercial
70	299	563	365

C. Existing Land Supply

For purposes of analysis, the existing supply of commercial and industrial land in unincorporated Kitsap County was considered to be sites currently zoned for commercial or industrial classifications designations on Kitsap County's Interim Zoning Map (readopted in January 1998). The County's GIS system was used to calculate land area within these zoning classifications. Industrial designations encompassed approximately 4,600 acres of land (excluding mining sites), of which approximately 2,200 acres were considered to be vacant . Using the same data sources, approximately 1,744 acres of zoned commercial land were identified. Of this total, approximately 632 acres are considered vacant. This data was the starting point for bringing supply and demand into balance on the Land Use Map.

D. Comparison of Supply and Demand

The 1998 Comprehensive Plan Land Use map relied on the above data and methodology to review and designate a sufficient quantity of land for commercial, industrial and business park uses. The Plan map designates a total of 2,780 acres of vacant land for industrial and business park uses and 567 acres for commercial activities to reflect demand for the 1992_2017 planning period.

Consistent with stated economic development policy, the Plan also views potential industrial sites as a valuable resource that should be preserved to meet longer_term future needs. The Plan map, therefore, reserves 1,904 acres of the designated land for potential future employment needs (using Urban Reserve designations). Future Kitsap County Comprehensive Plan updates, in conjunction with the land monitoring and evaluation program and ongoing discussion of regional economic development strategies, will address how and when this land reserve should be actualized or planned for another land use.

It is recognized that a recent draft study of Industrial Land and Supply and Demand in the Central Puget Sound Region (February, 1998) by the Puget Sound Regional Council (PSRC) identified a large hypothetical oversupply of industrial land (approximately 300 percent) in the four_county region through 2020. This conclusion considers only gross regional supply and demand. Other important factors noted in the study _ including supply and demand or qualitative factors for particular geographic subareas or industrial sectors, lack of infrastructure for one_third of

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the supply, and land availability __ were not evaluated. Two-thirds of the supply was also found to be located in Pierce and Snohomish Counties. Information for Kitsap County used in this study was apparently based on prior versions of this Comprehensive Plan and the EDC's 1994 studies. One might also question whether the strong economic performance of the Central Puget Sound region over the past decade is possibly related to the large hypothetical oversupply of land identified in the PSRC study.

Currently, economic development is a primarily a local not a regional activity. A large supply of vacant industrial land in Pierce County does not address Kitsap County's economic needs or performance. Kitsap County is planning for its economy with the goal of making it more diverse and vital.