

Kitsap County

COMPREHENSIVE PLAN

May 7, 1998

Introduction

A Vision for the Future

Kitsap County has reached a crossroads in its growth and development where many residents, business people and government officials see an opportunity to provide direction and vision for the future growth of the county.

Despite rapid growth in the past two decades, Kitsap County remains an attractive place to live and work – and its residents want to keep it that way. Yet Kitsap County faces several critical issues which, if misguided, could contribute to a loss of the sense of place that gives the county its unique character. Some of these issues include the loss of rural character, increasing growth pressures from forces both within the county and from without, increasing traffic on area roadways, and the implementation of public transit routes and alternative modes of transportation.

The county absorbed an 87% increase in population between 1970 and 1990 – more than twice the state’s growth rate of 42.6%. In the ensuing seven years, the county grew from 189,731 to 229,400 – a 21 % increase between 1990 and 1997. Today, in terms of the number of people per acre, Kitsap is the second most-dense county in the state next to King County.

In the face of continued growth, the county seeks to shape its future in ways that will maintain the quality of life that makes Kitsap County a special place to live and work.

Kitsap County citizens, through an extensive public involvement process, have described how they see their county today and tomorrow, and what they do and don’t like. They have made it clear what they want the county to look like 20 years from now.

They envision a future in which our natural systems are protected; the water quality in our lakes, streams and Puget sound is enhanced; the village character of some of our smaller towns is preserved; the historical nature of our communities is respected in order to preserve our heritage for future generations; a diversified economic base supports good jobs, contributes to healthy downtowns in our cities and affordable housing choices; and the rural appearance of our county is perpetuated.

This vision of the future – which is shared by citizens and elected officials – includes the following components:

- # protection and enhancement of the natural environment, including wetlands, streams, wildlife habitat, water quality and natural resource activities;
- # attractive, well designed and livable urban communities, supported by efficient and high quality services and facilities, and providing a range of housing choices;
- # creation of a system of open space, parks and greenbelts, that provide opportunities for recreation and that give structure and separation to urban areas;
- # healthy cities that are the region’s centers for employment, affordable housing choices, and civic and cultural activities;
- # a vital and diversified economy that provides living wage jobs for residents, supported by adequate land for a range of employment uses and that forwards accomplishment of local economic development goals;
- # maintenance of the traditional character, appearance, functions and lifestyles of the County’s rural communities and areas;

- # creation of an efficient multi-modal transportation system – including roads and highways, ferries, and opportunities for non-motorized travel – that provides efficient access and mobility for County residents and that supports our land use pattern; and
- # an efficient and responsive government that works with citizens, governmental entities and tribes to meet collective needs fairly and that supports education, environmental protection and human services.

This vision has guided development of this Comprehensive Plan. Its policies give direction for managing future growth consistent with our desired future and quality of life.

A key strategy to accomplish this vision is the intention to encourage future urban growth to occur in areas within incorporated cities and unincorporated areas which already are characterized by urban growth with existing and planned services and facilities. These actions will work to strengthen our natural environmental and rural character, and are geared to reduce taxpayer costs by focusing the expenditure of public funds, encouraging concentrated development where appropriate, and increasing our choices for housing and jobs.

This plan recognizes the complexities involved in balancing historical patterns of growth with a preferred vision of the future and legal requirements. It recognizes that some tradeoffs must be made to balance the costs with the gains, that flexibility is necessary to adapt to changing conditions and that at all times the Plan must reflect the long-term goals of the people living and working here.

What is a Comprehensive Plan?

This Comprehensive Plan, once it is adopted in its final form by the Board of County Commissioners, is a vehicle to help Kitsap County achieve its vision of the future.

Used as a guide for the physical, economic and community development of the county for the next 20 years, the Comprehensive Plan establishes goals and policies for the county to use in evaluating and making future decisions. The plan's policies communicate the long-term values and aspirations of the region. By viewing the region as a whole, the plan shows how all the different parts – land use, housing, transportation and capital facilities – must work together to achieve the desired vision.

Once the Comprehensive Plan is adopted, all the county's decisions must be consistent with it. Used this way, the Comprehensive Plan minimizes conflict in decision making, promotes coordination among programs and regulations, and brings predictability to the development process. Individual land owners and private interest groups are able to use the plan to evaluate their decisions in light of the community's goals. Everyone is able to determine how their individual interests can best be served in a manner consistent with the plan.

The Plan has these characteristics:

- # **Long-range.** The plan is based on a 20-year vision of the county, as articulated by the community through public participation meetings.
- # **Predictable.** The plan is site specific and the intent of the plan is stated clearly as to how properties will be zoned and used in the future.
- # **Consistent.** The plan is internally consistent and has been coordinated with

neighboring jurisdictions in an attempt to be externally consistent.

- # **Comprehensive.** The plan organizes and coordinates the complex interrelationships among people, land, resources, natural environmental systems, and public facilities in such a way as to protect the future health, safety and welfare of the citizens.
- # **Flexible.** The plan will continue to evolve after it is officially adopted to reflect Kitsap County’s actual experience of growth and citizens’ concerns. Through annual updates and major, five-year reviews, the plan will be adjusted to changing needs, unforeseen circumstances, or new local and regional trends.

The Planning Context

Planning for the future is happening simultaneously at several levels -- regional, countywide and in local cities and towns. Kitsap County’s plan must be consistent with planning policies adopted by the state and regional planning agencies.

The following outlines the state and regional planning policies and requirements that led to development of this plan:

Washington State: Growth Management Act

Passage of the Growth Management Act (GMA) in 1990 by the state Legislature was a critical step in the development of rational policies to sustain growth in Washington. For the first time in the state’s history, all urban counties and their cities were required to develop and adopt comprehensive plans and regulations to implement these plans. To ensure comparable planning efforts, the GMA required that comprehensive plans address specific issues including (but not limited to)

land use, transportation, housing, capital facilities and services, natural environment and economic development.

The GMA established 13 goals for the comprehensive planning process:

1. **Urban growth.** Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner.
2. **Reduce sprawl.** Reduce the inappropriate conversion of undeveloped land into sprawling, low-density development.
3. **Transportation.** Encourage efficient multimodal transportation systems that are based on regional priorities and coordinated with county and city comprehensive plans.
4. **Housing.** Encourage the availability of affordable housing to all economic segments of the population of this state, promote a variety of residential densities and housing types, and encourage preservation of existing housing stock.
5. **Economic development.** Encourage economic development throughout the state that is consistent with adopted comprehensive plans, promote economic opportunity for all citizens of this state, especially for unemployed and for disadvantaged persons, and encourage growth in areas experiencing insufficient economic growth, all within the capacities of the state’s natural resources, public services and public facilities.
6. **Property rights.** Private property shall not be taken for public use without just compensation having been made. The property rights of landowners shall be protected from arbitrary and discriminatory actions.

- 7. Permits.** Applications for both state and local government permits shall be processed in a timely and fair manner to ensure predictability.
- 8. Natural resource industries.** Maintain and enhance natural resource-based industries, including productive timber, agricultural and fisheries industries. Encourage the conservation of productive forest lands and productive agricultural lands, and discourage incompatible uses.
- 9. Open space and recreation.** Encourage the retention of open space and development of recreational opportunities, conserve fish and wildlife habitat, increase access to natural resource lands and water, and develop parks.
- 10. Environment.** Protect the environment and enhance the state's high quality of life, including air and water quality, and the availability of water.
- 11. Citizen participation and coordination.** Encourage the involvement of citizens in the planning process and ensure coordination between communities and jurisdictions to reconcile conflicts.
- 12. Public facilities and services.** Ensure that those public facilities and services necessary to support development shall be adequate to serve the development at the time the development is available for occupancy and use without decreasing current service levels below locally established minimum standards.
- 13. Historic preservation.** Identify and encourage the preservation of lands, sites and structures that have historical or archaeological significance.

In addition, the GMA established three key requirements which all local plans must meet:

- # **Capital facilities.** Kitsap County must demonstrate that it can afford the infrastructure needed to support the expected growth. If the services cannot be provided, the land uses must be revised or the levels of services reduced.
- # **Comprehensiveness.** This plan must look at the county as an integrated set of systems of land use, housing, transportation, capital facilities and utilities. All areas of the county and all elements of this plan must be addressed from a countywide perspective.
- # **Consistency.** This plan must avoid internal contradictions and must not interfere with the successful implementation of the plans of neighboring jurisdictions. Its policies must be consistent with the direction established by the GMA, Vision 2020 and the Kitsap County Countywide Planning Policy.

Kitsap County: Countywide Planning Policy and Vision 2020

To achieve coordinated planning efforts, the GMA further required that counties and cities develop a set of framework policies to guide development of each jurisdiction's comprehensive plan. On August 10, 1992, the Board of County Commissioners adopted the Kitsap County Countywide Planning Policy which defines the countywide vision and establishes the parameters from which the comprehensive plans of Kitsap County and its cities were developed. Seven agencies participated in development of the Countywide Planning Policy through the Kitsap Regional Council: the City of Bainbridge Island, City of Port Orchard, Port

Gamble S’Klallam Tribe, Kitsap County, City of Bremerton, City of Poulsbo and Squamish Tribe.

Specific objectives of the Countywide Planning Policy include:

- # Establish a process and criteria for designation of Urban Growth Areas.
- # Promotion of contiguous and orderly development.
- # Siting of public capital facilities.
- # Establishing transportation facilities and strategies.
- # Creating affordable housing plans and criteria.
- # Ensuring favorable employment and economic conditions in the county.
- # Coordination with tribal and federal governments.

In addition, Kitsap County’s Comprehensive Plan was guided by the growth policies of Vision 2020, the regional plan developed by the Puget Sound Regional Council. Vision 2020 calls for directing future growth into existing urban centers and serving those centers with a regional transit system.

Kitsap County’s Comprehensive Plan

The Growth Management Act, the Countywide Planning Policy and Vision 2020 represent the framework for Kitsap County’s Comprehensive Plan. Comprehensive plans spell out the general policies and goals of a jurisdiction. They cover a wide range of issues relating to how a city or county changes over time.

This Comprehensive Plan is intended to comply with the Washington State Growth Management Act and other state laws that require local governments to plan comprehensively. It will be used to guide growth and development for residents living in the unincorporated area of Kitsap County.

This document is the result of a process that began in 1990 with the formation of citizens advisory committees and community planning efforts (see following section and appendix for detail on public participation).

On December 29, 1994, the Kitsap Board of County Commissioners adopted a Comprehensive Plan, which was subsequently appealed to the Central Puget Sound Growth Management Hearings Board and declared invalid. The county adopted interim development regulations and interim urban growth areas (IUGA’s) as it worked to revise its comprehensive plan to meet GMA compliance in order to avoid potential sanctions, such as the state withholding payment of highway or other taxes.

To guide revision of the Comprehensive Plan and implementing regulations, a number of “framework principles” grew out of a mediated process involving parties to various appeals to the county’s plan. The Board of County Commissioners affirmed these principles in January 1996: For a complete text of the principles and of substantive changes needed within the Comprehensive Plan to achieve the principles, see the Framework Principles Appendix.

Portions of the second Comprehensive Plan, adopted in 1996, were invalidated by the Central Puget Sound Growth Management Hearings Board in September, 1997. A revised plan, following the direction in the Hearings Board order, was prepared to meet the requirements of state law. This third revision – resulting in the 1998 Comprehensive Plan – was focused on revising the approach to

defining Urban Growth Areas and designating appropriate types, amounts and locations of different land uses; reconciling rural designations with Growth Management Act requirements; and ensuring consistency between the plan's amended land use element and map and other plan provisions.

How to Use this Document

This Comprehensive Plan is divided into chapters dealing with specific issue areas, such as land use, housing, transportation, economic development and so forth. In this version of the Comprehensive Plan, three separate chapters in previous drafts -- Urban Growth Areas, Resource Lands, Land Use and Greenways -- have been included in the Land Use Chapter. In addition, much of the background information (e.g. population statistics, housing inventory and so forth) are now found in the Appendix.

Chapters contain goals and policies and, in some cases, maps. The goals and policies usually are preceded by some explanatory text, which describes the context. Goals represent broad statements of what the county would like to achieve in that specific area. They are clearly identified as goals within the text. Policies are intended to guide county decisions and actions needed to achieve its vision of the future. All policies are numbered and highlighted in bold print.

Citizen Involvement

This Comprehensive Plan is based on an extensive public involvement process that began in 1990. Involvement included Community Forums, workshops, citizen advisory committees, open houses, comment sheets, mailings, public reviews by the Planning Commission and public hearings by the Board of County Commissioners.

A summary of the public participation program follows. For more detail, see the Public Participation appendix.

Comprehensive Plan

Phase one: Growth symposium, community plans and citizen advisory committees. In October 1990, Kitsap County conducted a Growth Management Symposium to 1) educate the community about growth and related planning issues in Kitsap County; 2) develop a vision and guidelines for a growth management strategy in 10 key areas; and 3) set forth a plan for post-symposium action. The visions and issues identified at the symposium have guided the comprehensive plan development. Subsequently, several communities of unincorporated Kitsap began community planning efforts which included establishment of citizen advisory committees and community plans for Silverdale, Kingston, Suquamish, Hansville and the South Kitsap area.

In addition to the citizen advisory committees which developed the above-mentioned community plans, other citizen advisory committees were appointed to focus on various issues which would contribute to, if not become a part of, the countywide comprehensive plan. These citizen advisory committees are:

- # Subarea Transportation Citizens Advisory Committee, which worked with Public Works' transportation staff and consultants in developing a 20-year plan by identifying and prioritizing transportation improvements for 6, 12 and 20 years.
- # Ground Water Advisory Committee developed a 20-year Groundwater Management Plan which addresses water quantity and quality in Kitsap County.

- # Parks Citizen Advisory Committee worked with the Parks Department staff and consultants to develop a 20-year comprehensive plan which identifies park improvements, acquisitions and funding sources.
- # Open Space Council supported Department of Community Development planning staff by writing the Open Space Goals and Policies and identifying areas to be included on the Open Space Overlay.
- # The Solid Waste Citizen Advisory Committee assisted Public Works' staff in writing the Solid Waste Management Plan.
- # Rural Roundtable, appointed by the Board of County Commissioners to direct staff with policies for the Interim Development Regulations for Resource Lands.
- # Kitsap County Planning Commission, the central citizen advisory committee which considered and made recommendations on the entire comprehensive plan.
- # **Phase two: Visioning.** Visioning was an important and essential component of the public involvement program and in the development of the comprehensive plan. Visioning provided opportunities for Kitsap County residents, Planning Commissioners and planning staff to interact and discuss the issues facing planning for Kitsap's future. Beginning with the Growth Symposium, DCD staff initiated a separate visioning process for the countywide comprehensive plan in August 1992 and conducted nine public forums. The public input gathered at these meetings, and the questionnaires which were distributed throughout these meetings and subsequent outreach meetings, were used by planning staff to develop the framework of the plan, and specifically the goals and policies for the plan.
- # **Phase three: Outreach.** From January 1993 through March 1994, DCD conducted an extensive program to gain public involvement in comprehensive plan development. The outreach included open houses and attending meetings of community and civic groups as well as regular press releases, meeting notices, newsletters and updates on the planning process. DCD mailed to a list of some 2,000 names, as well as making presentations at 54 open houses and meetings.
- # **Phase four: Planning Commission as GMA Citizen Advisory Committee.** In September 1992, the Board of County Commissioners established that the Kitsap County Planning Commission would serve as the central citizen advisory committee to direct and assist planning staff in developing the countywide comprehensive plan. Between January 1993 and July 1993, the Planning Commission held 10 "education sessions" when experts in each of the areas to be addressed in the comprehensive plan made presentations. These sessions were vital for the both the planing staff and commission to grasp and understand the complexity and interconnectedness of developing a comprehensive plan under growth management. These were followed by 21 public sessions to review and revise comprehensive plan elements. On June 8, 1994, the draft comprehensive plan was presented to the Planning Commission and the public.
- # **Phase five: Public Hearings.** The Planning Commission held seven public hearings between June and July 1994 before sending its recommendation to the Board of County Commissioners on

August 3, 1994. The Board of County Commissioners held three public hearings in September 1994 on the Planning Commission's recommended draft comprehensive plan. The County Commissioners sent portions of the draft plan with their proposed revisions back to the Planning Commission for its consideration and recommendations. The Planning Commission then held four public hearings in October 1994 on these remanded portions and proposed revisions. On October 17, 1994 the Planning Commission sent its recommendations on the remanded portions back to the County Commissioners, who approved the draft plan on October 19, 1994. The plan was sent to the Washington State Department of Community, Trade and Economic Development for the 60-day review period mandated by the Growth Management Act. The Board of County Commissioners subsequently adopted the plan on December 29, 1994.

Phase six: Redevelopment of Comprehensive Plan. On October 6, 1995, the Central Puget Sound Growth Management Hearings Board declared the Kitsap County Comprehensive Plan and implementing development regulations invalid. Following that decision, DCD began to rewrite the comprehensive plan in order to gain approval of the Growth Management Hearings Board. This phase also included extensive public involvement in the form of public hearings, educational workshops and public outreach meetings. On May 3, 1996, the Planning Commission adopted its recommended plan and presented it to the Board of County Commissioners, who held three public hearings as well as receiving public comment on the plan. Parts of the plan were returned to the Planning Commission for additional review in July 1996, and then sent back to the Commissioners for further consideration in September 1996. The

Commissioners approved the Plan on October 7, 1996 and sent it to the Washington State Department of Community, Trade and Economic Development for the 60-day review period mandated by the Growth Management Act.

Phase seven: 1998 Revision of the Comprehensive Plan

On September 8, 1997, the Central Puget Sound Growth Management Hearings Board invalidated the 1996 Comprehensive Plan, finding that several provisions – including defined Urban Growth Areas (UGAs) that were too large, and Rural Area land use provisions that permitted inappropriate urban densities -- still violated the Growth Management Act. Because the Land Use Element was invalidated, numerous provisions of the Plan had to be reviewed and potentially revised to ensure consistency with required changes. The County was also required to adopt implementing development regulations.

The County's work program for revising the Comprehensive Plan to comply with the Hearings Board decision focused on urban residential land capacity as the foundation for establishing correctly sized UGAs. Adopted and approved population forecasts and allocations (1992-2012) were the basis for this work, along with recalculated factors used to estimate developable land. GMA criteria for locating growth within UGAs (RCW 36.70A.110) were relied on to allocate growth in a priority sequence to areas already characterized by urban development and which had existing or planned services to accommodate planned growth.

Public involvement activities supporting this revision were geared to the nature of the plan revision effort and the compressed timetable for compliance established by the Hearings

Board order (180 days). The range of opportunities for public involvement and information included: dissemination and discussion of several issue papers (urban residential land capacity, commercial/industrial land capacity, and rural character/limited areas of more intensive development); public informational meetings and workshops; meetings and discussions with interested groups, associations, tribes, cities and property owners; study sessions between the Planning Commission and Board of County Commissioners; and public hearings conducted by the Planning Commission and the Board of County Commissioners to hear testimony and to make recommendations and decisions. The revised plan is scheduled to be adopted by April 3, 1998 and transmitted to the Hearings Board on April 17, 1998.

SEPA Process

Scoping for the Environmental Impact Statement (EIS) began with the community meetings for the comprehensive plan's visioning process, initiated in August 1992. At each of the public forums, public comment was solicited on both planning issues and environmental impacts of concern. The meetings were advertised as opportunities for participation in the GMA planning process and for early scoping in the environmental review process.

The Determination of Significance and Scoping Notice for the Comprehensive Plan was issued in February 1994. A scoping meeting was held in Silverdale on March 1, 1994. Following the formal scoping period, a draft EIS was developed. The Draft Environmental Impact Statement (DEIS) for the Kitsap County Comprehensive Plan was issued on July 11, 1994 with the comment period ending August 12, 1994. A public hearing on the DEIS was held August 9, 1994 in Silverdale.

After review of the comments, a Final Environmental Impact Statement (FEIS) was prepared and issued on August 23, 1994. The adequacy of the FEIS was appealed by several parties. The appeal was heard by the Board of County Commissioners, who upheld the adequacy of the FEIS prior to adopting the comprehensive plan. The adequacy of the FEIS was subsequently appealed to the Growth Management Hearings Board along with the comprehensive plan. A decision by the Hearings Board on the adequacy of the FEIS is still pending.

On June 21, 1996, the County released an Addendum to the Plan's EIS to cover two, more recent alternatives being considered to the Comprehensive Plan -- one issued on January 8, 1996; the other, May 3, 1996. The appeal period for the Addendum EIS ended on July 12, 1996. An appeal was filed and was heard in a public hearing held before the Board of County Commissioners on September 16, 1996. On October 7, 1996 the Board of County Commissioners upheld the appeal. County Staff was directed to prepare a Supplemental EIS to address the two previously mentioned alternatives and an analysis of the changes contained in the October 7, 1996 recommended Comprehensive Plan.

An EIS Addendum on the revised, 1998 plan was published in March, 1998. The Addendum provided new information concerning environmental impacts associated with the revised plan. The types and degree of environmental impacts anticipated to occur as a result of the plan are the same as or similar to those identified in previous Kitsap County environmental documents for a broad range of land use alternatives.

Land Use Chapter

The Land Use Chapter is divided into the following sections:

The Introduction describes the intent of the Land Use Chapter and its relationship to Kitsap County’s vision of the future and other Comprehensive Plan chapters.

The Planning Context discusses the requirements of the Growth Management Act and the Countywide Planning Policy as they relate to land use policies.

Population Projections and Allocations discusses historical trends and forecasts of county population.

Urban Growth Areas discusses how the county’s urban growth areas were identified and how they will develop .

The Land Use Goals and Policies are divided into the following areas:

- A. **Land Use Plan Map** lists the land use designations found on the Comprehensive Plan Land Use Map.
- B. **Residential Development** defines urban residential use designations and

Introduction

The intent of the Land Use chapter is to guide development over the next 20 years. While the Land Use Chapter’s goals and policies build upon the existing land use pattern and the presence of natural features, they also set forth some changes in the way land use development

encourages a residential land use pattern that ensures compatibility with established residential areas and encourages growth in urban areas.

- C. **Commercial Lands** discuss character and functions of commercial areas.
- D. **Industrial & Business Lands** define industrial and business park land use designations and encourages such activities.
- E. **Open Space and Greenways** seek to preserve and protect open space areas.
- F. **Historic Preservation** encourages the preservation of lands, sites and structures that have historical or archaeological significance.
- G. **Drainage, Flooding & Stormwater Runoff** review issues and programs affecting land use.
- H. **Groundwater Protection** identifies critical recharge areas and describes programs intended to prevent contamination.

should occur in the future.

The Land Use Chapter helps to achieve Kitsap County’s vision by providing for planned growth that contributes and enhances the county’s cherished, rural character; by encouraging affordable housing; protecting existing residential areas and uses; safeguarding the environment; encouraging economic development; and providing for citizen participation during plan development and

implementing processes.

The Land Use Chapter contains several specific designations for future land uses which are reflected on the Land Use Plan Map and described in the text. The text and the map are intended to work together and, as such, they are to be considered equal in effect. The specificity of the Land Use Chapter is intended to enhance predictability and promote efficient processing of development permits.

The Land Use Plan's Map designations are not based on a single factor (for example, soil type), but rather on several relevant considerations that have been applied consistently countywide. These considerations include existing land use, ownership patterns, transportation amenities, availability of public water, sewer and other utilities, availability of public schools and parks, along with topography, soil characteristics and wildlife habitat.

The Land Use Chapter is closely coordinated with other chapters and provides the basis for their development as they all must be consistent with Land Use Chapter. For instance, the issue of housing affordability has come to the forefront as we learn more about the demographics of our population and trends in housing costs. The Land Use Chapter encourages single-family houses on smaller lots and multi-family buildings at appropriate locations to help facilitate the goal of providing more affordable housing.

Similarly, economic development is a concern of the community as military downsizing continues to become a reality. This chapter attempts to respond to this concern by introducing some new concepts for facilitating industrial and other business development, in coordination with goals and policies outlined in the Economic Development Chapter.

Planning Context

The Land Use Chapter identifies the extent and distribution of a wide range of land uses and provides protection for surface and ground water, while taking into account population densities and estimates of future population growth.

The Countywide Planning Policy also sets forth directions for dealing with land uses, particularly as they relate to establishment of urban growth areas and a process for allocation of forecasted population as it relates to land use planning. This Land Use Chapter responds to these requirements and directions.

Population Projections and Allocations

This section discusses historical and forecasted as well as population allocation methodology.

Historical Trends

Growth has been very rapid in Kitsap County in the last 20 years. Kitsap County's population grew from 101,732 in 1970 to 189,731 by 1990, an increase of 87% representing 88,000 people. By comparison, the state population grew 42.6% over the same period. The county's close commute by ferry

to the metropolitan centers in the Snohomish, King and Pierce counties, its affordable housing, steady military employment base, attraction to retirees and strong local economy all contributed to the county's continued growth from 1980 to 1990.

Between 1980 and 1990, the average annual growth rate was 2.9%. Between 1990 and 1997 the annual growth rate was 2.7%. During the 1980s, the county's unincorporated areas experienced an average annual growth rate of 3.8%, compared with an average annual growth rate of 0.9% in the incorporated areas. Of the 42,579 person increase between 1980 and 1990, less than 17% occurred in incorporated areas. (For more detail on population trends, see the Population Appendix).

Population Forecast and Allocations

The ability to forecast population and allocate it to smaller geographic areas is a vital planning tool for Comprehensive Plan development. Such knowledge helps to plan for the impacts of growth and its demands on such services as roads, sewers, schools, water systems, fire stations and other public facilities. The following population forecasts will assist the providers of the public facilities in prioritizing their needs and system improvements to meet the demands of growth.

County Forecasting Methodology

The Kitsap Regional Coordinating Council's adopted Countywide Planning Policy Population Forecast was utilized in the development of the Kitsap County Comprehensive Plan. The Kitsap Regional Council is composed of the three county commissioners, mayors from the four incorporated cities (Bremerton, Bainbridge Island, Port Orchard and Poulsbo) and two tribal council members from their respective

tribes. The KRCC is the forum where regional planning policies are decided.

It was the consensus of the KRCC to formulate population forecasts which considered the county's economic future, but reflected its historical population trends as well. However, the original forecasts contained in the 1992 Countywide Planning Policy were higher than the original forecasts of the state Office of Financial Management (OFM).

Therefore, in June 1995, the KRC agreed to 'roll back' the original population numbers adopted by the council and to change the forecast period from the year 2014 to 2012, to coincide with the current OFM projection period. The revised population forecast calls for Kitsap County to grow by 86,624 people, or 42%, to 292,224 by the year 2012.

In December 1995, OFM released "Official Growth Management Act Population Projections" for the year 2012 for all counties in Washington state. These projections established a range that has a low of 271,982 to a high of 317,654 for Kitsap County. The KRC's adopted 2012 population forecast is well within that range.

Table LU-1 shows the 1997-2012 population allocations based on a county-wide distribution; these are updated to reflect recent growth. The allocations reflect the Countywide Planning Policy (CPP) decision that at least 2/3 of the 20-year forecast should be located in the urban area, and 1/3 in the rural area. After allocating growth to the cities first, 70% of the unincorporated sub-total is allocated to the unincorporated UGAs. The City of Bremerton and the City of Bainbridge Island received specific population allocation from the CPPs, but they did not include specific allocations to Port Orchard and Poulsbo. The unincorporated UGAs will need

Plan up to date. Successive amendments of the Plan will reflect the population projections for succeeding periods. An “Urban Reserve” plan designation and zoning classification are used to indicate areas that will be considered for potential additions to the designated UGA to reflect population updates for 2013-2017 and for subsequent planning periods, as well as to reflect resolution of planning issues with the Cities.

This 1998 Comprehensive Plan identifies a process for monitoring and evaluating land use and development trends within Urban Growth Areas and for periodically revising them as appropriate. This process is intended to be consistent with the “buildable lands” provisions of the Growth Management Act (RCW 36.70A.215). Kitsap County wishes to accelerate its compliance with these requirements (prior to 2002) to help ensure that its assumptions about land supply and demand are reasonably accurate. This monitoring and evaluation process would be used to make any appropriate modifications to assumptions defined in the County’s land capacity methodology (Appendix 3).

Urban Growth Area Policies

UGA-1 The majority of forecast growth will be accommodated within defined Urban growth Areas. The Urban Growth Area designated on the 1998 Comprehensive Plan map includes sufficient land to provide capacity to accommodate growth expected to occur over the 1992-2012 period. Expected growth has been calculated using OFM population forecasts and allocations contained in the County-wide Planning Policy. Land supply and demand have been calculated using

methodologies described in the land capacity appendix to the Comprehensive Plan.

UGA-2 The unincorporated Urban Growth Area has been defined by allocating population according to the factors and priorities identified in the Growth Management Act: *1st*, currently urbanized areas with existing service capacity to accommodate future growth; *2nd* currently urbanized areas where a combination of existing and planned services provide capacity to accommodate future growth; and *3rd* lands adjacent to such currently urbanized and serviced areas. The Urban Growth Area has also been defined so as to identify to the extent possible a contiguous urban area within which most growth will be encouraged to occur.

UGA-3 The County will work with the Cities and Tribes, using the KRCC as a forum, to establish updated population forecasts and allocations to reflect the 2013-2017 and subsequent planning periods. Updated regional employment forecasts may also be considered as appropriate. The first annual Comprehensive Plan review process should address any appropriate expansions of designated UGAs and/or rezoning of lands designated for Urban Reserve, to reflect the updated forecasts.

UGA-4 The County will use the Urban Joint Planning Area designation and process, shown on the Comprehensive Plan map and

defined in this plan, to work with Cities and Tribes to resolve issues relating to Urban Growth Areas. Resolution of questions of land use and densities, population forecasts and allocations, service provision, and governance for these areas will be a high priority and reflected in an ongoing work program to implement the Comprehensive Plan.

UGA-5 Land capacity, development trends and quality of life occurring within UGAs should be monitored and reviewed annually. Kitsap County should evaluate the assumptions contained in its land capacity analysis used to identify UGAs for residential and commercial/industrial lands. Based on review of new or updated data relating to achieved densities, critical areas, unavailable lands, redevelopment trends, changing demographics, industrial development trends or other appropriate factors defined in plan policies or implementation programs, the County may initiate revisions to UGAs as part of its annual Comprehensive Plan revision process.

UGA-6 Development within the Urban Growth Area should be supported by provision of public services and capital facilities necessary to support planned growth at adopted levels of service. The Urban Growth Area shall generally receive priority for County expenditures for public services and facilities as a tool to encourage development, to make these areas desirable places to live, and to use existing infrastructure more efficiently and cost effectively.

Urban services and facilities shall not be extended to or expanded in rural areas except in limited circumstances shown to be necessary to protect basic public health safety and the environment and when such services are financially supportable at rural densities and do not permit urban development outside the designated Urban Growth Area. The Comprehensive Plan land use map will be reassessed and appropriate amendments considered if funding for capital facilities falls short of expectations and/or if levels of service cannot be adjusted to compensate for any shortfall.

Implementation Strategies & Programs

1. Monitoring & Evaluation Program.

Kitsap County will establish an ongoing local program, equivalent to and implementing the buildable lands process established in RCW 36-70A.215, for determining whether there is sufficient developable land contained within the Comprehensive Plan’s designated Urban Growth Area. This program should be developed in cooperation with the cities and tribes, the state and the private sector.

The program will establish and use “benchmarks” or key indicators to evaluate growth and development trends for residential, commercial and industrial

development, and to consider whether Kitsap County is achieving the goals and objectives established in the Comprehensive Plan. Initial indicators should relate to land use, housing and economic development as follows: actual achieved densities relative to planned densities; the amount and distribution of critical areas; market issues relating to land supply, such as availability; changes in land and housing costs; and similar factors. Additional indicators relating to quality of life will be identified in future phases of the monitoring and evaluation program

An advisory committee will be appointed to help oversee establishment and operation of the monitoring and evaluation program. The committee may also include technical sub-committees to address the need for and provide access to particular types or sources of data.

Kitsap County will also prepare “contingency plans” and procedures regarding the timing and range of potential actions that may be taken in response to identified inconsistencies between Comprehensive Plan assumptions and actual development trends or failure to achieve stated Plan objectives.

The County will prepare and publish an annual report showing trends in indicator categories. The report will include a discussion of the implications of the data for accomplishment of Kitsap County Comprehensive Plan and Growth Management Act goals and policies. *Target Date: 1999 for functioning monitoring program, 2000 for initial evaluation.*

2. Population Forecasts & Allocations.

Kitsap County will use the KRCC as the designated forum to discuss and decide on population forecasts and allocations by jurisdiction for the 2013-2017 planning period based on the official OFM county-wide

forecast. The KRCC may also discuss any reallocations of population proposed by the Cities in this forum. *Target Date: 1998 (subject to confirmation by KRCC).*

Working with the Cities to Plan for Future Growth -- Urban Joint Planning Areas

This and the following subsection describe special designations that are applied on the Land Use Map to foster coordinated planning within the Urban Growth Area. The first – Urban Joint Planning Areas – refers to areas contiguous to cities that will be subject to coordinated city/county planning to resolve outstanding land use and capital facility issues. These areas are provisionally recognized as Urban Growth Areas, subject to completion of interlocal agreements that will ultimately determine how these areas are planned and serviced. The second – Urban Study Areas – includes areas where significant land use decisions still need to be made through a multi-party process.

“Urban Joint Planning Areas” are designated on the County’s Comprehensive Plan Land Use Map. Urban Joint Planning Areas refer to unincorporated areas, generally contiguous or adjacent to cities, which have been proposed by each City for inclusion in a “city Urban Growth Area”. Each City’s proposed extraterritorial Urban Growth Area is intended to provide land for future growth and/or to recognize areas that currently have adequate urban services or are planned to be provided with urban services by that city. All cities are included within Urban Growth Areas; the Urban Joint Planning Area process addresses the location and amount of land outside the Cities respective boundaries asserted to be needed by each City to support its future growth.

The Urban Joint Planning Area Process was developed to be consistent with Element A of the Kitsap County-wide Planning Policy (1992). The provisions in A.3 specify use of “urban growth management agreements” between the City and the County for City Urban Growth Areas beyond municipal boundaries to provide a framework for orderly annexations of these areas. Element F of the County-wide Planning Policy similarly encourages use of inter-local agreements as a means to achieve coordinated planning and service provision. Designation of Urban Joint Planning Areas on the Comprehensive Plan map, and use of the process described in the Plan, is intended to accomplish these same objectives. The joint planning process also reflects a similar approach used by a number of jurisdictions in Puget Sound and around the state.

The Urban Joint Planning Area designation acknowledges each City’s Urban Growth Area proposal and allows time for resolution of planning issues. The designation indicates Kitsap County finding that additional planning and discussion is necessary to determine more specifically how each particular area should be configured, designed, serviced, financed and/or governed. Including all of the Cities’ proposed Urban Growth Areas at this time would lead to a larger Urban Growth Area than Kitsap County feels can be supported by current planning period (1992-2012) population forecasts and allocations which have been approved and used as the basis for this Comprehensive Plan. In some cases, issues of service provision must be resolved – and relevant City Comprehensive Plans and capital facility plans must be amended – before these Urban Growth Areas can meet the requirements of the Growth Management Act.

The Urban Joint Planning Area map designation recognizes that the affected lands

are considered provisionally suitable for inclusion in an Urban Growth Area subject to specified conditions. The conditions will be addressed through a cooperative City/County planning process defined in this Comprehensive Plan. Urban Joint Planning Area issues will be considered to be resolved when the County, applicable City, affected service provider(s) and property owner execute an inter-local agreement adopting the urban joint plan which fully addresses all issues, or establishing a regional service agreement, and the City amends its comprehensive plan in accordance with the agreement.

The Urban Joint Planning Area designation is applied in two ways: as an overlay for sites within designated Urban Growth Areas; and to sites that are provisionally considered appropriate for inclusion in an Urban Growth Area but for which numerous issues must still be resolved.

The Urban Joint Planning Area designation may apply as an overlay to lands that are within designated Urban Growth Areas. In this case, the area has been determined to meet the test for inclusion within an Urban Growth Area (i.e., urban in character, adequate existing/planned services, and/or vested for urban development with existing adequate or planned services). Population and/or employment allocations have been made to these areas, and they have received urban land use and zoning designations. The Urban Joint Planning Area overlay indicates that these areas are proposed by a city for inclusion in its Urban Growth Area and for eventual annexation. The joint planning process is intended to provide a means for cooperative city-county resolution of issues related primarily to services and facilities, governance and revenue sharing. In some cases, two cities and the county will be involved in planning to determine how these

areas should be serviced and governed in the future. No annexations will occur until the joint plans and interlocal agreements are adopted and the city or cities have amended their comprehensive plans in accordance with the interlocal agreements.

In other cases, the Urban Joint Planning Area designation indicates that specified areas, while provisionally considered suitable for inclusion in an Urban Growth Area, are in an earlier stage of planning. Issues addressed through joint plans will include, as appropriate, population allocations, appropriate types and densities of land use, levels of service and capital facilities. Each Joint Planning Area reflects somewhat different issues; each joint planning process will be tailored to address and resolve these issues. Each is described below. The County has proposed and is currently discussing initial Memoranda of Agreement with each City to set forth the issues, schedule and process for the joint plans.

In the interim, these lands would be designated and zoned as “urban reserve” as a means to preserve options during the planning process. Vested projects within such areas will retain their existing land use designation. At the conclusion of the joint planning process, lands determined to not be suitable for inclusion in an Urban Growth Area would be given appropriate plan designations. The scope and issues to be considered in each joint planning process would be defined through a Memorandum of Agreement between the County and the applicable City (or Cities). The joint plans and interlocal agreements are expected to be completed within approximately 6 months, assuming dedication of necessary resources by the respective jurisdictions and implementation of the work program identified in this Comprehensive Plan. No annexations of Urban Joint Planning Areas will occur until completion of the joint

plan and interlocal agreement and the City or Cities have amended their comprehensive plans in accordance with the interlocal agreement.

The County will also work with affected Tribes to address identified planning or resource issues within the Urban Joint Planning Areas.

City of Poulsbo

The City of *Poulsbo Urban Joint Planning Area* consists of approximately 911 acres of unincorporated land contiguous surrounding the present City limits and which has been proposed by the City as a UGA. The City has relied on the a population forecast of 8,000 persons from 1992 to 2012 which was included in the 1996 Kitsap County Comprehensive Plan and which has been used by the City and County as the basis for sewer planning. Primary issues to be resolved through the joint planning process include: the appropriate methodology that should be used to calculate land capacity within the City limits; appropriate urban residential densities; the amount of population that should be allocated to this area for the 20-year planning period; the size and location of an urban growth area; and adequacy of City services and capital facilities. Provisionally, this planning area has been reserved 3,864 people from the 1992-2012 unincorporated urban population forecast. It is the Plan’s intent that the County and City will enter into an interlocal agreement which will establish a process in which the above stated issues will be addressed. A joint plan will be a product of this process and the end of the process will result in either the confirmation of the JPA as a UGA and the City and County Comprehensive Plans will be amended accordingly or the denial of the JPA as a UGA in which case the County

Comprehensive Plan shall be amended to allocate the above population reserve elsewhere.

South Kitsap

The *South Kitsap Urban Joint Planning Area* consists of approximately 4,490 acres of land west of the City of Port Orchard. This Joint Planning Area consists of three separate areas: (1) the McCormick Woods development (a partly developed, vested golf course/residential PUD), and Campus Station (a vested mixed-use area north of McCormick Woods); (2) the 620 property, a vacant section of land west of McCormick Woods; and (3) an intervening area between the City's current boundaries and McCormick Woods. The City recently agreed to acquire the McCormick Water Company. Primary issues to be resolved through the joint planning process include: population allocations/reallocations relied on by the City to justify the size of the proposed Urban Growth Area; planned urban densities and land uses; provisions for protection for critical areas; adequacy of and plans for services and capital facilities; and service agreements with affected special districts. At this time, McCormick Woods and Campus Station (both of which are vested, partly developed for urban uses and densities and served by adequate services) are included in an Urban Growth Area. This area is also given an Urban Joint Planning overlay designation to provide a framework for resolving identified issues. The County and Port Orchard -- and Bremerton in regards to Campus Station -- intend to resolve outstanding issues cooperatively. The area located between Port Orchard's current boundaries and McCormick Woods, and the 620 property will be given an Urban Reserve land use designation, pending resolution of outstanding issues. The County and City are currently discussing a draft Memorandum of

Agreement to initiate the planning process, which will include an opportunity for full participation by affected land owners.

City of Bremerton

The *City of Bremerton Urban Joint Planning Area* consists of approximately 6,150 acres of land, comprising most of the urbanized portion of central Kitsap County except for Silverdale. Previously, the City had indicated that it intended to accommodate its growth allocation (20,000 people over 20 years) within its existing boundaries. The City's currently proposed Urban Growth Area is bounded on the north by Barker Creek and Waaga Way, on the east by Port Orchard Bay, on the south by proposed industrial lands south of the Bremerton National Airport, and on the west by the City's Union River watershed lands. It comprises lands already included within unincorporated Kitsap County's proposed/designated Urban Growth Area, as well as some lands that are not included within the unincorporated Urban Growth Area, and lands that are encompassed by Port Orchard's proposed Urban Growth Area (Campus Station). It also includes two large existing or potential industrial and commercial areas -- the Port Blakely Tree Farm property west of Kitsap Lake, and the commercial/industrial area that comprises the Gorst UGA. Primary issues to be resolved through the joint planning process include: City population and/or employment forecasts and allocations used to justify the need for the proposed Urban Growth Area; the City's ability to provide adequate services and capital facilities to the proposed Urban Growth Area as identified in the capital facilities element of the City's Comprehensive Plan; the need for service agreements with special districts and Kitsap County; and the need to resolve with Port Orchard competing proposals to annex or provide services to Campus Station.

Population allocations have been made to those portions of this area included within Kitsap County's unincorporated Urban Growth Area.

A number of land use plan map designations have been applied at this time to reflect Bremerton's proposal and to provide additional time for planning. Portions of the east Bremerton area (south of Riddell Road) are included within an Urban Growth Area. These areas are urban in character and are currently served with urban services by Bremerton. Several smaller areas to the west, also developed at urban densities, served by the City and currently in the annexation process (Camp McKean and Sun Fjord/Admiralty Heights), are similarly designated as an Urban Growth Area. An Urban Joint Planning overlay is also applied to provide a process for working out service agreements. The Brownsville/ SR-303 commercial corridor is also included within an Urban Growth Area. This commercial corridor is urban in character and has urban services. An urban joint planning overlay is applied to provide a framework for resolving issues relating to land use and potential revenue sharing. No annexations may occur until the issues identified in a Memorandum of Agreement, which is currently being pursued, are resolved and the City's comprehensive plan is amended in accordance with the agreement.

The approximately 500-acre Port Blakely Tree Farm property west of Kitsap Lake is designated as a Joint Planning Area; a dual land use designation – Industrial/Business Park and Urban Reserve – is applied to indicate the appropriateness of this land use and to ensure that the property is maintained in large parcels during the joint planning process. The County does acknowledge the importance of the Chico Creek Basin to the environment and the Suquamish Tribe. Any

development will follow under the policy of avoidance over mitigation. A Memorandum of Agreement is being pursued with the City to clearly define the issues that will be addressed and the process for resolution. Initial utility planning has been performed by the property owner and technical studies have been reviewed and generally concurred with by the City. The County also acknowledges the water, wastewater and transportation studies for the Kitsap Lake Technology Park (Parametrix, 1997) in its Comprehensive Plan. The City intends to amend its Comprehensive Plan to address service and facility issues. In addition to public services and capital facilities, these will include environmental issues and transportation. Environmental issues will be addressed in detail at the project review level. The more stringent standards as between the County's and City's regulations will be applied to protect environmental resources. Project-level traffic analysis will address and mitigate impacts to county roads, including payment of any applicable impact fees.

South Kitsap Industrial Area

The South Kitsap Industrial Area consists of the Bremerton National Airport and the adjacent Olympic View Industrial Park properties owned and operated by the Port of Bremerton, a port district pursuant to state law; a vested industrial project to the southwest of the airport; and an undeveloped multiple-parcel area east and south of the airport. The land use map designations for this approximately 1,800 acre area reflect existing land uses and the presence of sewer, water and other utilities.

The Bremerton National Airport, Olympic View Industrial Park and adjacent vested industrial lands are placed within an unincorporated Urban Growth Area and given appropriate urban land use and zoning

designations. A Joint Planning Area overlay is also placed on these properties – as well as the multiple-parcel area to the east and south - to provide a forum for the Port, Kitsap County, the City of Bremerton and the City of Port Orchard to discuss alternative long-term service and facility arrangements. A Memorandum of Agreement (MOA) between these parties is being developed. Until a joint plan and interlocal agreement is completed and a determination as to long-term service provision is agreed upon, no annexations of this area will occur.

The multiple-parcel area south of the Bremerton Airport (along with the airport and adjacent industrial lands) has been proposed for inclusion in Urban Growth Areas by the Cities of Bremerton and Port Orchard. A number of options for providing sewer service to the area are addressed in the Gorst/South Kitsap Industrial Area Sewer Feasibility Study (Kitsap County, 1997); the property owners, the County and the cities participated in preparation of this study. The property owners have also entered into a memorandum of understanding to prepare concept master plans for this industrial area. This area is designated as a Joint Planning Area on the Land Use Map; a dual land use designation – Industrial/Business Park and Urban Reserve – is applied to indicate the appropriateness of industrial and/or business park land use and to ensure that the property is maintained in large parcels during the joint planning process.

The MOA between the County and the Cities of Bremerton and Port Orchard, and the Port, concerning this area will clearly define the issues that will be addressed through joint planning and which will be conditions of an Urban Growth Area designation, including: how sewer and other services will be provided; which jurisdiction(s) and/or special district(s) will provide necessary services and facilities; standards for environmental

protection; a framework for environmental review (lead agency status and the roles of the other parties, etc.); and governance questions, including whether annexation is desirable or preferable to other potential service arrangements. Until a joint plan and interlocal agreement is completed and the Cities and Port have amended their Comprehensive Plans in accordance with the agreement, no annexations of this area will occur.

Silverdale Unincorporated UGA and Joint Planning Area

Silverdale is an unincorporated area in Central Kitsap County. Kitsap County has been working with members of the Silverdale Chamber of Commerce and is supporting exploration of governance options for the area. Kitsap County also appointed an advisory committee of local citizens to recommend unincorporated urban growth area boundaries for this portion of Central Kitsap. The County, the City of Bremerton and the advisory committee have also held a number of meetings to discuss land use and service options for the larger geographic area. In late March, a petition for incorporation was submitted to Kitsap County and forwarded to the Boundary Review Board.

Portions of unincorporated Silverdale have an urban land use character and existing urban services. These areas are placed within an unincorporated Urban Growth Area on the Land Use Map and given appropriate urban zoning. The area to the southeast of the Silverdale core is placed within a Joint Planning Area and given an Urban Reserve designation. Portions of this area are characterized by a network of critical areas and raise questions regarding appropriate land use designations. Other issues which need to be resolved relate to public services

and facilities and service area boundaries. The Joint Planning Area designation is also intended to provide an opportunity for the City of Bremerton, Kitsap County and a Silverdale Advisory Committee to explore governance options.

Urban Joint Planning Area Policies

UGA-7 a. Urban Joint Planning Areas are designated on the Comprehensive Plan Land Use Map contiguous to Cities. These areas are considered provisionally suitable for inclusion within an Urban Growth Area or are currently within a designated Urban Growth Area. Where appropriate, they will be planned and further evaluated for final inclusion in a UGA (in whole or part), and/or eventual annexation by a City, subject to the process and conditions defined below.

b. Where Urban Joint Planning Areas are used as an overlay for an Urban Growth Area on the plan map, the joint planning overlay is intended to provide a framework and process for further interjurisdictional planning for land use, services and capital facilities, governance and revenue sharing. Such areas are given urban land use

! ensure that the region’s cities have sufficient land for future expansion, consistent with agreed upon population and employment allocations and forecasts, the availability of public services and facilities, and the requirements of the Growth Management Act;

! identify areas contiguous to cities that are considered potentially suitable for urban development and

designations to recognize their existing urban character and the presence of services and facilities.

c. Urban Joint Planning Areas are also designated as a way to recognize properties that are considered provisionally suitable for inclusion in a City’s Urban Growth Area pending resolution of issues relating to land use, services and facilities, governance, financing, revenue sharing and similar concerns. In the interim, pending resolution of the issues specific to each urban Joint Planning Area that will be addressed in the joint plan, and to preserve options for ongoing planning, such areas are designated and zoned for low density “urban reserve” land uses; currently vested projects within these designated Urban Joint Planning Areas shall, however, retain their existing zoning.

UGA-8 The purposes of designating Urban Joint Planning Areas and defining a cooperative inter-jurisdictional planning process are to:

for provisional inclusion within an Urban Growth Area subject to further planning and resolution of outstanding issues;

! develop plans cooperatively with Cities and service providers to facilitate annexation of these unincorporated areas over time, or to provide equitable service arrangements, consistent with inter-local agreements;

! establish procedures for resolving issues affecting decisions on such areas – including but not limited to population and employment forecasts and allocations and arrangements for service provision – that are regional in nature and require resolution through a regional forum such as the Kitsap Regional Coordinating Council (KRCC);

! provide a collaborative framework, within a regional perspective, for examining and resolving issues relating to population and land use/density, land capacity, services and facilities, financing and governance for currently unincorporated areas that may be suitable for eventual annexation to cities;

! promote adoption of plans and execution of inter-local agreements that affected jurisdictions will implement; and

! facilitate County support for proposed annexations consistent with the adopted plan and agreements.

UGA- 9 Each Urban Joint Planning Area designated on the Comprehensive Plan Land Use Map shall be the subject of a separate collaborative planning process between the County, the affected City, affected property owner(s), and any affected service provider(s). The County and Cities should each commit appropriate staff and dedicate sufficient financial resources to support identified planning activities. The parties will jointly

define a schedule for required meetings, technical analysis, public review and adoption of jointly developed plans and standards. The parties may also develop provisions regarding resolution of disputes that arise during development of the plan or implementation of its provisions, including selection of a facilitator or mediator to help reach consensus on plan issues.

UGA-10 The parties to each urban joint plan shall execute an inter-local agreement setting forth the elements of the joint plan and any additional provisions regarding its implementation. The joint plan should be formally adopted by each jurisdiction as policies and implementing regulations of its respective Comprehensive Plan.

UGA-11 The joint plan may, at the City’s and County’s option, be considered a sub-area element of the respective Comprehensive Plans for purposes of any necessary amendments of plans and development regulations. The parties may also consider the sub-area for purposes of designating a planned action and complying with SEPA.

UGA-12 The County will support City annexation of unincorporated Urban Joint Planning Areas consistent with the provisions of an adopted joint plan and inter-local agreement. No annexations of or within Urban Joint Planning Areas should be approved until interlocal agreements which embody the joint plan are completed and executed and the City’s comprehensive plan

has been amended in accordance with the interlocal agreement.

UGA-13 Urban Joint Plans shall, in general, address the following elements and criteria and meet the following conditions:

- a. the plan shall address the City’s expected boundary for future expansion, which shall include the area anticipated to be annexed and/or provided with urban services over the next 20 years;**
- b. the plan shall be based on agreed upon, authorized City population and employment projections and allocations supporting the need for such expansion, including a demonstration that projected growth cannot be reasonably accommodated within the city’s existing corporate boundaries;**
- c. the plan shall identify the types, density/intensity and location of land uses anticipated within the planning area. Planned uses are expected to be urban in character and density, should include provision for open space and/or urban separators;**
- d. the plan shall identify responsibilities for providing services and facilities and associated levels of service within the Urban Joint Planning Area, and shall include an agreement for appropriate cost sharing for new or upgraded services and facilities during a period specified in the agreement. This element shall include a schedule (which may be phased) and financing plan for**

providing services and facilities to the area and shall address necessary coordination with any special purpose districts.

- e. the plan shall adequately protect critical areas, pursuant to mutually agreed upon standards, including wetlands, streams, geologically hazardous areas, wildlife and habitat conservation areas, flood prone areas, and critical aquifer recharge areas;**
- f. the plan shall provide for reciprocal notification of development proposals within the Urban Joint Planning Area, along with opportunities to review such proposals to propose mitigation measures for adverse environmental impacts on City, County or independently provided services and facilities and/or to adjacent land uses; and**
- g. the plan shall provide for the protection of and restoration of salmon habitat and be required to meet the requirements of the state salmonid policies and the Endangered Species Act. No action will be taken without public involvement and participation of interested property owners, Tribes, and appropriate agencies and groups.**

Resolution of the issues specific to each joint planning area, as reflected in an adopted inter-local agreement, shall be considered a condition precedent to full inclusion of the Urban Joint Planning Area in the County’s designated Urban Growth Area. The County and each

City will amend its respective Comprehensive Plan as necessary to incorporate the provisions of the joint plan.

Target Date: 1998, immediately following adoption of the Comprehensive Plan..

Urban Study Areas

UGA-14 Adoption of a joint plan and inter- thereupon recognized as part of the Urban Growth Area. The joint plan and interlocal agreement will be adopted as an amendment to the County's Comprehensive Plan. The County will revise applicable zoning classifications for the affected lands to conform to the adopted plan and inter-local agreement. Any portions of an Urban Joint Planning Area that are not needed to accommodate projected growth in the near-term but which are considered suitable for inclusion in the Urban Growth Area in the long-term (i.e., subsequent 20-year planning periods) may be retained in Urban Reserve. Any portion of the Urban Joint Planning Area that is determined to not meet the criteria for inclusion within the Urban Growth Area shall be re-designated as Rural.

An Urban Study Area designation is intended to recognize that a specific property or geographic sub-area may be appropriate for inclusion in an Urban Growth Area but that additional planning and discussion are necessary to determine a range of issues, including the most appropriate land uses.

The Comprehensive Plan map recognizes the Department of Natural Resources Illahee property as an Urban Study Area. This designation recognizes that there are multiple legitimate interests involved in making an appropriate decision on designation and use of the subject property. The local neighborhood and broader community, for example, have an expressed interest in land use decisions and the management of environmental resources. In the case of Illahee, the property owner also has a statutory economic mandate. Kitsap County and the City of Bremerton have also considered public acquisition and use of the property.

Implementation Strategies & Programs

1. Urban Joint Plans. Working with Cities, special purpose districts and affected property owners, the County will use the Urban Joint Planning Area process defined in the Comprehensive Plan to determine how to recognize or adjust the Urban Joint Planning Area designations shown on the Comprehensive Plan map. The County will commit staff resources to support the Urban Joint Planning Process according to a work program and timetable mutually agreed upon with the Cities. Each Urban Joint Plan should adopt a specific work program and schedule.

The Study Area designation and process are intended to provide an opportunity to recognize and accommodate these multiple interests through a facilitated multi-party planning process. In the interim, to preserve planning options, Urban Study Area properties shall be zoned Urban Reserve.

Rural Village Study Areas are also designated on the Comprehensive Plan Map for the Suquamish and Manchester areas. These study areas, and supporting policies, are described in the Rural Element of the Comprehensive Plan.

UGA-15 The 1998 Comprehensive Plan map designates the Illahee property as an Urban Study Area. This designation is intended to lead to preparation of a consensus-based sub-area plan for the property that reflects the opportunities and constraints affecting the site and that resolves issues relating to land use, environmental resources, services and facilities, and governance. The plan should strive to meet the property owner’s interests while recognizing concerns affecting the broader community, and should strive to achieve a balance of land uses that accommodate the variety of interests while protecting environmental resources.

service within the Urban Joint Planning Area, and shall include an agreement for appropriate cost sharing for new or upgraded services and facilities during a period specified in the agreement. This element shall include a schedule (which may be phased) and financing plan for providing services and facilities to the area and shall address necessary coordination with any special purpose districts; and

c. the plan shall adequately protect critical areas, pursuant to mutually agreed upon standards, including wetlands, streams, geologically hazardous areas, wildlife and habitat conservation areas, flood prone areas, and critical aquifer recharge areas.

UGA-16 Kitsap County will consult with the property owner(s), the City of Bremerton, interested Tribes, and local residents to select and appoint an advisory committee consisting of a balance of interests who will work to develop a plan for the property. The advisory committee will adopt rules of procedure, a work plan and timetable to guide its work. The governmental entities will share the costs of the planning process.

UGA-17 The participants will execute a memorandum of agreement memorializing the agreements developed during the planning process. This memorandum of agreement is intended to guide the activities of the individual jurisdictions, agencies and other interested parties in their future actions regarding the Study Area. The governmental entities should adopt any Comprehensive Plan amendments required to implement the study area plan, including re-designation of any portion of the property determined not appropriate for an Urban designation. The plan may be considered a sub-area element of the applicable Comprehensive Plan(s).

a. the plan shall identify the types, density/intensity and location of land uses anticipated within the planning area. Planned uses are expected to be urban in character and density, should include provision for open space and/or urban separators; and

b. the plan shall identify responsibilities for providing services and facilities and associated levels of

Implementation Strategies & Programs

1. Study Area Plans. Work with DNR, the City of Bremerton, Tribes and local residents to develop a sub-area plan for the Illahee property. The plan will address land use, services and facilities, environmental resources and other topics in a consensus-based forum. The County will convene, facilitate and staff an advisory committee representing a balance of interests who will develop recommendations for future use of the property. *Target Date: 1998-1999.*

[Descriptions of Designated UGAs moved to Land Capacity Appendix]

Urban Residential Land Capacity Analysis

An urban residential land capacity analysis is intended to identify the amount of land available for residential development within the UGA boundaries. The Growth Management Act requires that counties designate sufficient land in their UGAs to accommodate a 20-year population projection. The residential land capacity analysis is used in conjunction with a population-based growth target to determine if UGAs are adequate for the intended growth. For details on the methodology and assumptions used to create

Goals and Policies

The goals and policies contained in this chapter, as well as those found within the Rural Lands Chapter, describe the Comprehensive Plan's development pattern.

A. Comprehensive Plan Land Use Map

the UGA growth target and land capacity analysis, see the Population Appendix.

Existing Lot Aggregation for Tax Purposes

Over the years, the Kitsap County Assessor's Office has aggregated parcels under single ownership for tax purposes. These aggregated parcels are reflected as one parcel on the county's base parcel map. The number of aggregated parcels in the county is unknown and cannot be easily determined. For the purposes of the plan, these parcels, which have been aggregated by the County for tax purposes, shall be considered legally existing lots of record.

If, at the request of the property owner, the segregation of these parcels into individual lots would require a change in the adopted Comprehensive Plan designation, this change can be processed as an Emergency Amendment, at no charge, to the Comprehensive Plan outside of the normal annual review process. In submitting such a request it will be incumbent on the property owner to demonstrate why a change in designation is justified.

The Comprehensive Plan Land Use Map shows the land uses that are permitted by the plan. The official zoning map has been revised to be consistent with the Comprehensive Plan. The Plan also shows the locations of Urban Joint Planning Areas – which will be planned with Cities and considered for inclusion in the Urban Growth Area – and Urban Study Areas, which are subject to further planning to determine appropriate uses. A two-tiered plan designation (e.g. Urban Reserve/Urban Residential) is applied to some Urban Joint Planning Areas to indicate the likely future land use designation subject to satisfaction of

plan conditions. Rural Village Study Areas are also designated -for Suquamish and Manchester; these locations will be used as demonstration projects to develop detailed criteria, guidelines and standards for compatible rural development.

CP-1 The Comprehensive Plan Land Use Map is adopted as part of this Plan. It designates the proposed general distribution, location and extent of the uses of land for urban and rural uses, including, where appropriate, for housing, commerce, industry, recreation, open spaces, public utilities and facilities, agriculture, forestry and other uses. A large scale official version of the Comprehensive Plan Land Use Map showing property boundaries is on display with the Department of Community Development.

Comprehensive Plan Amendment Process

Kitsap County’s Comprehensive Plan is intended to be a living document that will actively guide future growth. To be effective, it must also be able to respond to changes in conditions or assumptions. The Plan – including policies, land use map designations and implementing regulations – will be subject to ongoing monitoring and evaluation. This will help ensure that appropriate changes are considered so the plan continues to accomplish its objectives. An amendment process to consider proposed changes is identified.

CP-2 Amendments to the Comprehensive Plan Land Use Map or policies will be considered once per year. A schedule for submitting and considering proposed amendments and necessary application forms will

be developed by and available from the Department of Community Development. The process for proposing Comprehensive Plan amendments shall consist of submittal of a complete application to docket the proposed amendment for consideration, review of the proposal by staff, completion of environmental review to address direct and cumulative impacts of proposed amendments, and public hearings and consideration by the Planning Commission and Board of County Commissioners.

CP-3 Kitsap County’s Urban Growth Area designations must be reviewed at least every ten years. The Urban Growth Area will be considered more frequently pursuant to the benchmarks, monitoring and evaluation program described in this Plan. Proposed amendments will be considered periodically by Kitsap County through a public process. Any amendments must be justified based on the following criteria:

- a. a change in population forecasts or allocations that cannot be accommodated within the existing Urban Growth Area; or**
- b. a significant change in conditions, circumstances or assumptions that was not anticipated at the time the Urban Growth Area was calculated or defined; or**
- c. data, based on established benchmarks and monitoring programs, indicating that Kitsap County and/or the cities is not meeting established targets for the types or densities or intensities of development.**

CP-4 A proposed Comprehensive Plan amendment must consider alternatives for responding to the change or new data, document why expansion of the Urban Growth Area or change to Comprehensive Plan polices or land use map is necessary and appropriate under the circumstances, and evaluate the environmental impacts of the proposed change. Any amendments must be consistent with the Growth Management Act, County-wide Planning Policy, applicable Comprehensive Plan policies and other requirements of federal, state and/or local laws.

CP-5 Any amendments to Comprehensive Plan policies or the Urban Growth Area should be accompanied by necessary changes to adopted development regulations required to maintain consistency, along with any necessary changes to adopted capital facility programs, transportation improvement programs or other adopted County plans or programs.

CP-6 As part of the first annual review of the Comprehensive Plan, Kitsap County will establish a process to identify and reconcile any asserted Comprehensive Plan mapping errors, and to allow individual property owners to request property-specific revisions to the Comprehensive Plan land use map. The Department of Community Development will develop an application form for submittal of map revision requests. Map changes will be considered according to the criteria in policy CP-4.

CP-7 The Kitsap County Comprehensive Plan may be r applicant or property owner. The nature of the emergency and proposed amendment shall be explained to the Board of County Commissioners, which shall decide whether or not to allow the proposal ahead of the normal amendment schedule.

Intergovernmental Coordination

CP-8 Kitsap County will work with the Port Gamble and Suquamish Tribes to execute agreements which provide a framework for cooperative discussion on comprehensive planning issues among governments and ensure that the Tribes are consulted on issues within their interests. The parties will jointly determine the appropriate contents of the agreements and a schedule for completing them.

CP-9 Kitsap County will work with the Cities, Tribes, property owners, local residents, and special purpose districts through the urban joint study area process defined in the Comprehensive Plan. This process will provide a framework for

ongoing planning and decision making concerning local land use and public service issues.

B. Residential Development

The intent of the Comprehensive Plan is to encourage most new growth to occur within the urban growth areas depicted on the plan map.

TABLE LU-2 Land Use Designation Acreages for Unincorporated Kitsap County

Plan Designation	Parcel Acres
Airport	185
Business Park	239
City	32,991
Forest Resource Lands	2,725
Highway/Tourist Commercial	988
Industrial	3,045
Industrial Urban Reserve	1,938
Interim Rural Forest	49,432
Military	8,260
Mineral Resources	2,922
Neighborhood Commercial	274
Open Space	2,013
Parks	2,387
Public Facilities	1,002
Regional Commercial	438
Rural Protection	27,181
Rural Residential	78,959
Tribe	4,065
Urban Commercial	11
Urban High Residential	282
Urban Low Residential	9,794
Urban Medium Residential	377
Urban Reserve	7,485
Urban Restricted	1,567
Total	238,559

The intent is to encourage urban growth through higher densities and infill incentives while providing for rural residential living as

an alternative housing choice. Public services and capital facilities will be provided to support planned growth. This plan includes seven residential classifications which range in density: Rural Residential (which replaces Rural Medium), Rural Protection (which replaces Rural Low), Urban Reserve (outside of UGAs), Urban Restricted, Urban Low, Urban Medium, and Urban High.

For rural residential designations, goals and policies, see the Rural Lands Chapter.

Urban Residential Designations

Urban Residential areas are designated within the urban growth areas on the Comprehensive Plan Land Use Map. These lands are classified into five types by density: Urban Restricted, Urban Low, Urban Medium, Urban High Density Residential, and Urban Reserve. Minimum densities shall be considered in the zoning ordinance for the urban areas.

Urban Restricted: The Urban Restricted Designation is applied to those areas within urban growth areas which have been identified as critical areas and regulated pursuant to the Critical Areas Ordinance, or are planned as greenbelts or urban separators, and are therefore appropriate for lower density development. These areas include significant salmon spawning streams, wetlands and steep slopes. The intent is that development would be limited in these areas to protect these environmentally sensitive areas within UGAs. Non-residential development would also be limited. Actual allowed densities will be determined at the

time of application following a review of the site and potential impacts to the critical area.

Urban Low-Density Residential: A density of five to nine dwellings per acre is allowed within the Urban Low Density

Residential Designation. These areas are, or will be, provided with public sewer and water. Urban residential development is often characterized by single-family houses on individual lots within subdivisions.

Higher densities will be encouraged in residential areas within UGAs to maximize the return on public investment in infrastructure and to promote affordable housing. At the same time, the importance of neighborhood preservation and compatible land use designations will be recognized. Design guidelines should be developed to help ensure that new, higher density development is compatible with established residential areas.

Consideration should be given to permitting duplexes on double lots, triplexes on triple lots, and four-plexes on quadruple lots. Eventually, zoning for minimum lot sizes will reflect the existing adjacent development pattern and the communities' ability to provide adequate infrastructure to support increasing densities.

Urban Medium-Density Residential: A density of 10 to 18 dwelling units per acre is allowed within the Urban Medium Density Residential Designation. These areas are, or will be, provided with public sewer and water. Permitted residential development includes duplexes, townhouses, multiple-family dwelling and small lot single family residences.

These areas are intended to recognize existing development patterns, to maximize the return on public investment, to facilitate public transit and to promote affordable housing. These areas should have good access to major streets, commercial services and public open space. Design guidelines should be developed to help ensure that new, higher-density development is compatible with established residential areas.

Urban High-Density Residential: A density of 19-24 dwelling units per acre is allowed within the Urban High-Density Residential Designation. These areas are or will be provided with public sewer and water and other urban services..

This designation encourages higher densities within the UGAs where a full range of public services are available or planned . These areas may be located on or near major transportation corridors and/or ferry terminals, proximate to commercial services and public open spaces. This type of development is intended to support and facilitate public transit and to promote pedestrian and other non-motorized transportation, and promote affordable housing.

Within this designation there may be a mix of land uses, including residential and professional offices. Any non-residential uses will be developed at a higher standard due to the residential mix. Possible standards to ensure compatibility include design guidelines, setbacks, walls, screening, open spaces and vegetative buffers, taking into consideration existing development patterns. Actual zoning will be further broken down into categories dependent upon the intensity

of adjacent developments and available infrastructure capability.

Urban Reserve: The Urban Reserve designation is used on the Comprehensive Plan Map to indicate areas that are potentially suitable for inclusion in the Urban Growth Area. Urban Reserve areas are intended to recognize:

- a. designated Urban Joint Planning Areas, to reflect areas proposed by the Cities for designation as an Urban Growth Area and which are subject to a joint planning

process;

- b. designated Urban Study Areas, which are intended to resolve issues regarding potential land uses; and
- c. lands contiguous or adjacent to designated Urban Growth Areas which are deemed necessary to hold in reserve for potential future inclusion within an Urban Growth Area in response to future needs as reflected in revised or updated population or employment forecasts or allocations.

These areas are given an interim low density designation of 1 dwelling unit per 10 acres as a means of preventing establishment of land uses or land use patterns that could foreclose planning options and eventual development or redevelopment at higher urban densities. Designated Urban Reserve lands that are determined to not be needed or appropriate for urban development pursuant to a defined planning process will be re-designated as Rural through the Comprehensive Plan amendment process.

Residential Goals

- 1. To encourage most new growth to locate within designated Urban Growth Areas at higher densities.
- 2. To provide guidelines and incentives to ensure that higher density development is appropriate in scale and design and enhances community livability.
- 3. To provide a variety of housing types within Urban Growth Areas to meet the housing needs of all Kitsap residents.
- 4. To provide public services and capital facilities to support planned growth.
- 5. To encourage infill developments on vacant land within UGAs that has been bypassed in the development process.

6. To encourage urban medium- and high-density residential uses to be located near commercial areas and public open space on sites with good access to major streets and served by public water and sewer.
7. To encourage land use patterns which ensure compatibility with established residential areas.
8. To encourage the maintenance and enhancement of views.

Urban Residential Policies

- LU-1** Kitsap County adopts a target of 5 dwelling units per acre as the average density for new development within designated Urban Growth Areas. This average density target is adopted as a means of using land more efficiently, providing services and facilities at lower public cost, encouraging use of public transit, and encouraging more affordable housing.
- LU-2** Where densities are expressed as a range on the Comprehensive Plan Land Use Map and/or in the Kitsap County zoning code, the lower end of the density range should be considered as a minimum density for new development within urban residential classifications. All new residential development within the Urban Growth Area should achieve these minimum densities except where lower densities are appropriate to recognize the presence of critical areas – including streams, wetlands, fish and wildlife habitat, geologically hazardous areas, flood-prone areas and aquifer recharge areas – and to recognize

the existence of neighborhoods or subdivisions which have little vacant land and little or no opportunity for infill or redevelopment.

LU-3 Density incentives should be developed and applied in the Urban Growth Area to encourage the provision of affordable housing, significant open space, community amenities, transportation-oriented planning and high quality design.

LU-4 Kitsap County will use the monitoring and evaluation program established to implement Comprehensive Plan policy UGA-5 as a means to identify any pattern of significant under-building within various residential zoning classifications. In the event that development is not achieving established target densities, Kitsap County will identify and develop a strategy and program for remedying any regulatory problems inhibiting achievement of established targets. Failure to achieve target densities shall not be used as a basis for amending the Urban Growth Area until such program has been implemented.

LU-5 Following the adoption and initial implementation of this Plan, Kitsap County should encourage innovative, high quality infill development and redevelopment in existing developed areas within the Urban Growth Area. Possible approaches may include a variety of regulatory, incentive and program strategies. Guidelines should address the following issues:

- a. preservation of historic and

- natural characteristics of neighborhoods and sites;
- b. provision of community space, pedestrian mobility and safety;
- c. creation of usable open spaces, community facilities and non-motorized access;
- d. design variety through lot clustering, flexible setback requirements and mixed attached and detached housing types; and
- e. design variations in multi-family buildings such as

variations in facades, roof lines and other building design features.

LU-6 A system of incentives should be developed to make small, vacant parcels within urban growth areas more attractive for development at higher densities.

LU-7 The zoning ordinance will allow for the approval of accessory dwellings within each residential zone.

LU-8 The zoning ordinance shall establish specific design standards for medium- and high-density developments to ensure compatibility with existing low-density neighborhoods.

Implementation Strategies & Programs

1. Urban Design. The County will develop standards and guidelines intended to encourage development of high-quality, higher density development in the Urban Growth Area. This evaluation will include consideration of revised site planning requirements, zoning standards, design guidelines and appropriate incentives for

achieving objectives for urban design. *Target Date: 1999*

C. Commercial Lands

As the county's population increases, so does the need for commercial land. The Comprehensive Plan recognizes four types of commercial areas and one type of business park designations: Neighborhood, Tourist/Highway, Urban, Regional Commercial and Business Park.

Commercial land use in Kitsap County takes many forms. The strip commercial activities along Wheaton Way in east Bremerton, the large warehouse-type stores east of Clear Creek in Silverdale, the Kitsap Mall in Silverdale, Suquamish's village center, and the commercial uses at Sedgwick Road and Highway 16 near Port Orchard, are all distinct examples of the various types of commercial development found throughout the county. Each of these examples has its own history, character and purpose.

Kitsap County's commercial areas provide several important functions. First, the lands developed for commercial activities help to ensure that the residents and traveling public are able to obtain goods and services in a convenient manner. Second, commercial activities provide employment opportunities for the residents of the county. Third, regional commercial uses help to bring dollars into the county from residents of other counties who come here to take advantage of a wide choice and variety of goods and services. Finally, our commercial areas help create the image of our county. Since our commercial areas are generally located on major travel routes, they are more visible to visitors and residents than any other type of land use.

As the community continues to try to diversify its employment base, some residents are

mindful of the important role that commercial land plays in producing jobs. Some residents desire that everyone be given the opportunity to realize maximum gains from their property.

However, time and experience have proven that total reliance on the market to dictate commercial land use patterns yields uncertainty and an awkward mixture of land uses and development patterns so unstable that they threaten all investments. Historically, zoning has resulted from abuses of complete freedom of land use which has endangered life, health and property values in other parts of the country. It is the intent of the Comprehensive Plan to direct commercial activity into areas where it can develop harmoniously, with minimal conflict among uses. It is also intended to provide lands necessary to meet future employment projections and residents' needs.

As is the case with other land uses, some existing commercial developments should be recognized even though future land uses will be discouraged from occurring in a similar pattern, such as strip commercial development along roads. Strip commercial developments have caused many problems in terms of traffic congestion, inappropriate mixed uses and visual chaos. Each business along the street becomes a place to turn, greatly reducing the street's traffic capacity as well as increasing by many times the number of potential accident situations. This pattern has promoted single-occupancy vehicle use rather than transit or other forms of high-occupancy vehicle use and contributed to air pollution, energy waste and further traffic congestion. The length of the commercial strip, often backed by residential development, greatly increases the number of land use conflicts between property owners. The businesses were designed to face the street, and site improvements aimed at enhancing the visual image usually are in the front part of the property. Little or no thought is given to the

rear yard areas which abut backyard outdoor living spaces of adjoining residences. Commercial demand and residential uses often have been intermixed along the street.

This haphazard mixing of commercial and residential uses is the antithesis of integrated, visually pleasing, and functional, mixed-use developments that can occur in planned commercial centers. Retail and service commercial uses on the first floor with residences on the second and above floors of planned centers can reduce auto trips, provide housing and maximize the use of urban land and infrastructure.

Since commercial areas are almost invariably located along traffic arteries or at major intersections, they are seen by more people each day than any other part of the county. For most residents and visitors, they create our community's image, even though they occupy less than 1% of our land area. Community design standards are needed to augment Comprehensive Plan policy and zoning regulations in order to improve the appearance of existing commercial areas and to ensure attractive new commercial development. Median strips can solve or relieve some of the traffic problems, and special site development standards relating to setbacks, fences and screening can reduce conflicts with residential uses. Control of the number and size of signs does a great deal to maintain some sense of visual order.

Commercial development along the highways of the county will become an even more pressing issue as the population grows and the traffic along the highways increases. Thus far, Kitsap County has been generally free of commercial clutter along its major north-south highways (Highways 3 and 16). However, pressure for development can be expected to grow very intense as these highways carry a higher volume of traffic and as improvements

are made to interchanges, such as Highway 16 at Mullenix Road and Highway 3 at Highway 305. The County should find ways to contain future commercial development at the interchanges, if it is to occur at all. It is very important to prevent the beginning of commercial strips along the highways of the county. In addition, strict appearance standards for new commercial development at the highway interchanges should be developed to protect the image of the community. Finally, only those uses which require access and traffic volumes afforded by highway interchanges should be allowed near interchanges.

Designated commercial land uses should be reasonably scaled to future needs, using population and employment forecasts and market assessments to identify any need for additional commercial land uses over time. Kitsap County should also develop policy and criteria to allow for the expeditious approval of future designations as commercial when there is a demonstrated need. The commercial centers identified on the Comprehensive Plan Land Use Map are intended to fulfill this requirement. The various commercial center designations described below include both population and spacing criteria. It is important to understand that the intent is that both population and spacing criteria must be met prior to approving new centers.

Neighborhood Commercial: These commercial centers occur on smaller sites and provide for the daily and/or quick-stop shopping needs of the immediate neighborhood in which they are located. The site size may vary in order to accommodate the provision of certain services, such as stormwater facilities, as a requirement of development approval. These centers should not detract from the residential environment in which they are found. Appropriate standards dealing with lot coverage, landscaping,

parking, signage and other considerations shall be included in the zoning ordinance to regulate the site design of these centers.

Future residential development will indicate a need for additional neighborhood commercial centers as growth occurs. New locations should be based upon demonstrated need. In urban areas, these centers shall be spaced a minimum of one-half to one mile apart, and should be located at the intersection of major streets (known as major collectors).

Examples of uses appropriate for this designation include supermarkets, drug stores, small grocery store, restaurants, laundry and dry cleaning establishments, branch banks, video rental and delicatessens. The intent is to recognize these commercial areas and reinforce them through appropriate design standards.

For a discussion of neighborhood commercial centers in rural areas, see Rural Lands Chapter.

Highway/Tourist Commercial: The plan recognizes that some areas are needed to serve the traveling public and those commercial establishments which require large acreage sites and a high degree of visibility from the highways. Typical uses include motels and restaurants and drive-up restaurants. These areas are found along major traffic corridors within urban areas and at appropriate highway interchanges.

The plan recognizes that tourism is a rapidly growing part of the economic development of the county. Permitted uses should focus on catering to the needs of the tourist, including visitor services and accommodations. An example of an area which is appropriate for a Tourist/Highway Commercial designation is the historic settlement of Port Gamble. Bethel Road near the Highway 16 overpass is an example of an area characterized by many

uses which require large sites for outside storage of goods and a high degree of visibility from the highway.

Urban Commercial: Medium- to large-sized commercial centers which occur on sites ranging in size from 10 to 20 acres. The site size may need to be increased to accommodate requirements of development approval, such as stormwater facilities. Appropriate standards dealing with lot coverage, landscaping, parking, signage and other considerations shall be included in the zoning ordinance to regulate the site design of these centers. These commercial centers provide for the shopping and service needs of large sections of urban Kitsap County. Examples of uses include superstores, department stores, automotive parts and sales, hardware and home improvement stores along with smaller stores found within neighborhood commercial centers. The center located at Bethel and Lund in South Kitsap County is an example of this type of center. It is intended that mixed-use centers that include residential uses on the second and above floors of new commercial centers be allowed.

This designation also serves to recognize existing commercial land use patterns. These land use patterns often occur in the form of emerging commercial strips. This land use pattern often results in traffic congestion and a poor visual image. New commercial strips are discouraged and new commercial uses in the form of centers are encouraged. It is recommended that steps be taken to develop appearance standards which are designed to enhance both the existing and future commercial area image.

Future residential development will indicate a need for additional urban commercial centers as growth occurs. New locations should be based upon demonstrated need. These centers should be spaced two to four miles apart and

serve a population of approximately 10,000 to 20,000 people. These centers should be located at the intersection of major streets (known as principal arterials).

Regional Commercial: These commercial centers provide for the shopping and service needs of the entire region. Generally these centers will contain two or more major department stores along with several shops of the same kind for comparative shopping.

Generally, these centers should be spaced at least eight miles apart and have a site requirement of at least 40 acres. The population served by these centers may range in size between 150,000 to 250,000 people. On the east side of Puget Sound the Tacoma Mall, Sea-Tac Mall, South Center Mall, downtown Seattle, Northgate Center and Alderwood Mall are examples of regional commercial centers. The Kitsap Mall is an example of a regional commercial center in this county.

A regional commercial center will attract free-standing commercial services that take advantage of the center's customer traffic. Care should be taken to minimize adverse traffic impacts. Special design considerations may be appropriate to protect the visual integrity of the area surrounding the regional commercial center. Appropriate standards dealing with lot coverage, landscaping, parking, signage and other considerations shall be included in the zoning ordinance to regulate the site design of these centers.

Commercial Goals

9. Focus most commercial growth within Urban Growth Areas where most of the County's future population growth will be guided and where public services and facilities will be focused.

- 10. Identify an amount of land and variety of sites for commercial land uses that are reasonably scaled to the needs of the community.
- 11. Focus commercial land uses in defined areas and minimize future strip commercial development.
- 12. To encourage the development of an attractively designed commercial land use pattern that ensures a convenient and adequate supply of goods and services to the residents of the county as well as the traveling public.
- 13. To recognize existing commercial development patterns.
- 14. To provide suitable and sufficient opportunities for commercial and service activities within the urban areas and encourage intensive development of these areas.
- 15. To recognize and protect the character of the county’s historical “old town” commercial areas.
- 16. To encourage mixed-use development including retail, professional offices, personal services and high-density residential in the form of centers at selected locations within the urban area.

Commercial Land Use Policies

LU-9 Kitsap County should designate sufficient land for anticipated commercial land uses on its Comprehensive Plan Land Use Map. Designation of new commercial areas should consider county-wide population and employment forecasts and the local

needs of the surrounding community.

LU-10 Kitsap County should develop standards for commercial development that identify appropriate site size for different types of centers, appropriate types of uses, and guidelines for design that encourage attractive and efficiently functioning centers.

LU-11 Commercial areas should be compact to encourage pedestrian and non-motorized travel and transit use.

LU-12 Along Highways 3 and 16, future commercial development may be allowed when based upon demonstrated need for specific uses appropriate to these locations, contained at the interchanges and subject to strict visual appearance standards.

LU-13 Strip commercial developments shown on the Comprehensive Plan Land Use Map along major roads and highways shall not be extended; infill in these areas will be encouraged.

LU-14 No new strip commercial shall be permitted along major or secondary routes.

LU-15 Commercial uses along major streets and highways in urban growth areas shall be subject to special development standards relating to landscaping, setbacks, signs and median strips.

LU-16 All commercial development shall

be subject to special development standards relating to setbacks, landscaping, physical buffers, screening, signs, building heights and design review.

LU-17 Commercial developments which abut residential zones or residential uses shall be subject to special setback and screening provisions.

LU-18 The Zoning Ordinance should allow for attractive, integrated, mixed-use development within planned commercial centers to provide affordable housing and reduce auto trips.

Implementation Strategies & Programs

1. Commercial Uses. Kitsap County will review its development standards for commercial development to ensure that they address site size, use and design for different types of commercial activities. Supplemental regulations or development guidelines will be considered, as appropriate, for parking,

access, signs, view protection, landscaping, and other issues relating to the quality, appearance and functioning of commercial

- ! diversifying the County’s economic base to become less dependent on the U.S. Navy;
- ! providing enough available, serviced land in sites of sufficient size to allow expansion of existing businesses and attraction of new industries;
- ! focusing most future employment growth within designated Urban Growth Areas;
- ! encouraging development of high quality business parks of sufficient size to meet market needs; and
- ! treating potential business park and industrial sites as a resource that should be protected from competing or conflicting

areas. *Target Date: 1999.*

D. Business & Industrial Lands

The Comprehensive Plan Land Use Map designates land for business park and industrial activities. These designations are intended to promote economic development, which is one of the Growth Management Act’s fundamental planning goals. Kitsap County is pursuing this goal in tandem with the Act’s other goals, including reducing sprawl, guiding urban growth to appropriate areas, protecting the environment and providing adequate public services and facilities.

The larger topic of economic development is addressed in a separate chapter of this Plan. The Economic Development appendix to the Plan also shows the County’s work supporting a need for a sufficient supply of land to accommodate employment growth, to enhance and diversify the local economy, and to foster the community’s economic well-being. Some of the economic-related land use issues that need to be addressed through the Comprehensive Plan include the following :

uses.

The discussion below describes the business and industrial designations used on the Land Use Plan map. These include Business Park, Light Industrial, Heavy Industrial and Waterfront Industrial.

Business Parks. The plan provides for integrated grouping of small to medium-sized businesses within an attractive, park-like setting. The intent is to allow for flexibility in the amount of space within each individual business dedicated to office use, warehousing and/or light manufacturing operations.

Development of the park should be on a site of at least seven acres in size and be based on an overall master plan approved by the County.

Industrial Lands. The Industrial Lands designation covers a wide variety of Industrial Uses and locations. Generally these activities require reasonable accessibility to the highway system. In addition, dependable power, public water and sites relatively free of natural development limitations are necessary. Depending on uses, public sewer may also be necessary.

Waterfront sites with Industrial zoning should be reserved for Industrial uses which are water dependent or water related and are consistent with uses permitted in the Shoreline Management Master Program.

Industrial sites located adjacent to an Airport Zone should be reserved for Airport/Aircraft-related uses.

Goals

- 10. To encourage industrial activities and their related land uses as a means to create new jobs and improve the overall tax base of the county.
- 11. To identify and protect sufficient land area for future industrial use.
- 12. To encourage any future industrial uses located near residential uses or on sites visible from public roadways to develop in an industrial-park setting.

Business & Industrial Policies

LU-19 Most future employment growth should be accommodated in the designated Urban Growth Area. Existing business and industrial activities in the Rural area may

continue but should not be expanded. Limited new or expanded business and industrial activities may be permitted within defined Rural Villages, Rural Communities or Rural Industrial Areas designated in the Comprehensive Plan as appropriate for limited and contained growth, infill and redevelopment.

LU-20 Maintain an industrial lands inventory report which identifies vacant land without major natural limitations and which is or could be zoned for industrial use.

LU-21 Land use activities other than industry should generally be discouraged from locating within industrial areas with the exception of worker convenience uses such as restaurants, banks, and auto service stations.

LU-22 Encourage new industrial activities to locate in the areas most conducive to industrial development; e.g., few or no natural limitations to development, reasonable accessibility to major streets and highways, available services and facilities.

LU-23 Industrial park developments may be allowed in all industrial designations and shall include a landscaped setback, berms, walls or other structures to adequately buffer the industrial activities from adjacent residential land uses.

LU-24 The outside storage of equipment or materials within industrial parks shall only be allowed when screened from adjacent properties or public

roadways.

LU-25 The zoning ordinance should contain minimum performance standards for noise, vibration, smoke and particulate matter, odors, heat and glare and other aspects as appropriate which shall ensure compatibility with adjacent land uses including residential neighborhoods.

(Resource Lands subsection moved to Rural Chapter.)

E. Open Space and Greenways

The following section includes goals and policies regarding open space land and a summary of the Kitsap County Greenways Plan..

Open Space

Open space, in the broadest sense, may include any space which is not occupied by buildings. The values of open space are frequently discussed in terms of the recreational opportunities it provides, or the wildlife habitat preserved, but just as important is how open space – including tree lined roads, pastoral fields, wooded ravines, wooded hillsides, and views of the water and mountains -- defines the physical character of a community.

The amount, quality and integration of open space in our communities is a major factor in determining the quality of our lives. Preservation of open space is also compatible with economic development and growth. The experience of other areas of the country demonstrates, in fact, that coordinated planning for open space is part of a successful and sustained economic development strategy.

This plan defines open space as land (and

water) which is not developed (or minimally developed), or which is in some manner dedicated or managed to ensure it will remain that way. It includes lands owned by the public and private owners. It may be enjoyed visually even if physical access is not available. Examples of open space include: lands which are managed for forestry and agriculture; golf courses, parks, public plazas within urban areas; cemeteries; lands on which property owners have granted conservation easements; lands which the property owner and the County have contractually agreed to preserve through an open space tax agreement; lands set aside as open space as part of a discretionary permitting process; lands preserved through regulatory constraints; lands acquired by public agencies as wildlife habitat; and lands owned and managed by private conservation organizations. There are many ways by which open space can be preserved, and many people and organizations who can participate in preserving it.

The importance of open space in Kitsap County is reflected in a number of documents which have been created in the recent past. Examples include: the County's Open Space Plan, which establishes a current use taxation program and sets out standards and procedures for that program; the Park, Recreation and Habitat Plan, prepared at the direction of the Fair and Parks Department, recommends acquisition and development of park and open space lands throughout the county; the Greenways Plan has broad ranging recommendations for the preservation of linear open space corridors throughout the county; various community and rural design plans recommend open space preservation; watershed action plans have been or are being prepared for most of the county; and each incorporated municipality has a Parks and Recreation Plan.

Kitsap County is embarking on an effort to consolidate the essential elements of these documents into a single, comprehensive Open Space Plan which will be adopted as an element of the County’s Comprehensive Plan at the first annual update. The new Open Space Plan is intended to provide a “game plan” which will enable the County to move forward in a coordinated and effective way.

Goals

- 19. To preserve open spaces in rural and urban areas which contribute to community character; protect resources and ecologically sensitive areas; and enhance recreational, educational and aesthetic opportunities.
- 20. To achieve a countywide connective system of open space that provides open space within and between urban growth areas and, where feasible, connects important open space lands through trails, greenways and/or wildlife habitat corridors.
- 21. To preserve open space in Kitsap County through the use of a variety of preservation options.
- 22. To provide effective stewardship and management of open space lands, particularly through the formation of public-private partnerships.

Policies

LU-26 Lands identified in county and city open space plans shall be top priority for public acquisition or preservation efforts, and shall at a minimum include:

- X Natural shorelines and waterfront

that provide significant wildlife habitat, passive recreation or access opportunities;

- X **Important green spaces in urban growth areas and lands which connect or adjoin existing publicly owned areas or privately preserved lands;**

- X **Lands not under the protection of critical areas regulations, or critical areas which provide valuable education or public access opportunities;**

- X **Areas with important scenic values, such as the farmland north of Waaga Way and the Howe Farm;**

- X **Areas identified as critical fish and wildlife habitat;**

- X **Existing pockets of old growth forest.**

LU-27 Publicly owned, undeveloped road ends, tax-title lands and rights-of-way should be evaluated for use as trails, wildlife corridors, water access or other open space uses, and where valuable for those uses, shall be recovered.

LU-28 Lands preserved at public expense shall be selected based upon objective criteria, and the criteria and properties to be acquired shall be reviewed periodically.

LU-29 Kitsap County shall continue to use the Conservation Futures Levy for open space preservation.

LU-30 Kitsap County shall designate the

County's portion of the compensating tax for removal of property from open space classification to be used for open space preservation.

LU-31 Update and revise the County's 1987 Open Space Plan (pertaining to Current Use Tax Assessment) to reflect the goals and policies of the adopted Comprehensive Plan. Specifically, lands identified in the adopted Countywide Open Space System shall have priority for current use tax assessment, and current use tax assessment criteria shall be further defined.

LU-32 Develop and maintain an open space inventory to evaluate the implementation of the Open Space Plan, and update the open space overlay during Comprehensive Plan revisions to reflect refinements to natural systems identification and land status changes.

LU-33 The Open Space Plan shall serve as a basis for the countywide greenways planning process. Upon adoption of the greenways plan, it shall become an amendment to the Comprehensive Plan.

LU-34 Minimum sizes for buffers and wildlife corridors should be established based upon scientifically known needs of particular wildlife. Where feasible, open space corridors shall include vegetative buffers and riparian zones.

LU-35 Parks, open space parcels, wildlife habitat corridors, trails and

educational facilities should be connected, where feasible, throughout Kitsap County.

LU-36 Establish an active program to encourage donation of open space and conservation easements.

LU-37 Kitsap County should notify landowners of their potential role in the Open Space Plan, and shall pursue open space preservation of private lands with willing landowners.

LU-38 To the extent possible, open space in planned unit developments shall be contiguous within the site plan and should be encouraged to be contiguous with preserved open spaces on adjacent sites. Public access for trail linkages shall be encouraged.

LU-39 Continue to encourage preservation of historic or working farm land, particularly through tax policy, conservation easements, innovative design criteria and the establishment of a small farms institute as recommended by the Rural Policy Roundtable, to encourage small farms. A historic Kitsap County working farm should be preserved for educational and scenic purposes.

LU-40 Kitsap County shall preserve open space using a variety of tools, including, but not limited to, tax incentives; conservation easements; mitigation; land and habitat restoration; development design criteria (e.g. clustering); encouragement of private land preservation efforts; acquisition of

key parcels; and sensitive areas and rural areas policies and regulations. The County should work with the Department of Natural Resources' Natural Area Preserve Program and the Natural Resource Conservation Area Program to preserve open space.

LU-41 Open space preservation efforts should be coordinated among federal, state, local and tribal governments, school districts, port districts, water districts, landowners, developers and land conservancies to provide an integrated, effective open space system for Kitsap County.

LU-42 Open space planning should be coordinated with Pierce, Mason and Jefferson Counties to more effectively preserve watersheds, wildlife and scenic views and provide meaningful recreational opportunities, particularly along Hood Canal.

LU-43 Work with the federal government to preserve open space on military properties.

LU-44 Kitsap County shall work with interested community groups to distribute resource material and provide referral services.

LU-45 The County shall encourage homeowners associations and property owners to work with parks agencies and land trusts to effectively maintain buffers and open space within and around developments. The County should form active partnerships with

community groups to effectively maintain natural areas, trails and greenways.

LU-46 Publicly owned open space areas should be identified and/or publicized with signs or brochures. Environmental, cultural or historical education should be considered in selecting open space projects.

LU-47 Stewardship issues shall be considered when acquiring open space, and where significant issues exist, the County shall form ad hoc stewardship committees which may include neighbors, community groups and affected government agencies to recommend stewardship and management plans.

LU-48 Access should not be required of all open space sites and should be limited in ecologically sensitive open space areas.

Greenways

The Kitsap County Greenways Plan is a plan that addresses how a range of elements (e.g. recreational and commuter bikeways and trails, scenic resource and wildlife corridors) can work together as a system to link together a variety of destinations, such as parks, schools, places of employment, shopping areas and transit facilities. In addition, the system can provide access to a variety of scenic, educational, and interpretive resources. The connecting links will consist primarily of built facilities, such as commuter and recreational bike routes, pedestrian trails and equestrian trails, but also may include other, undeveloped corridors intended to maintain the underlying scenic and natural resources of Kitsap County. The resultant network will

work with other existing and proposed facilities and policies to enhance the quality of life in Kitsap County.

The Greenways Plan crosses political boundaries to a large degree, and is drawn from, coordinated and integrated with plans from the Department of Public Works, the Department of Fair and Parks, the Department of Community Development and the Open Space Council. The Plan also is coordinated with, and relates to, relevant plans of the incorporated municipalities.

Implementation Strategy: The Kitsap County Greenways Plan shall be reviewed and considered for adoption within one year of adoption of the Comprehensive Plan. (Copies of the Greenways Plan report are available at the Kitsap County Public Works Department. For a summary of the plan, see the Land Use Appendix.)

The following goals and policies of the Greenways Plan are incorporated, by reference, into the goals and policies of the Comprehensive Plan.

Kitsap County Bicycle Facilities Plan. Recommended goals and policies of the Transportation Component of the Greenways Plan provide for on-road non-motorized transportation facilities (bicycle and pedestrian) as indicated on the Bicycle Facilities Plan as well as provide for future/additional “branch” facilities.

Kitsap County Off-Road Trails Plan. Recommended goals and policies of the Recreation Component provide for recreation through the provision of bicycle, pedestrian and equestrian off-road trail facilities as indicated on the Off-Road Trails Plan, as well as provide for future/additional “branch” facilities, both

of which expand the network of non-motorized transportation facilities.

Roadside Scenic Resource Corridors Plan. Recommended goals and policies of the Scenic Resource Component provide for maintaining and enhancing the quality of existing roadside scenic landscapes and for the formation of scenic touring routes, as indicated on the Roadside Scenic Resource Corridors Plan, as well as provide for future/additional corridors. These corridors in turn serve to protect and enhance the investment in corresponding bicycle facilities from the Bicycle Facilities Plan.

Wildlife Corridors Plan. Recommended goals and policies of the Natural Resource Component provide for the preservation of aquatic and terrestrial wildlife movement corridors, including existing regulated habitat areas and the relevant connections between them as indicated on the Wildlife Corridors Plan, as well as provide for future/additional corridors.

F. Historic Preservation

The specific goal for historic preservation outlined in the Washington State Growth Management Act requires Kitsap County to identify and encourage the preservation of lands, sites and structures that have historical or archaeological significance. In order to adequately document and preserve important aspects of our past, the county and its cities must develop a coordinated approach to the identification and preservation of our historic, archaeological and cultural resources. The following goals and policies are intended to further clarify and direct efforts toward implementation of an effective historic preservation plan. (For more information on historic preservation efforts in Kitsap County,

see the Land Use Appendix.)

Goals

- 23.** Improve identification and evaluation of historic, archaeological and cultural sites and resources throughout Kitsap County.
- 24.** Increase recognition of historic, archaeological and cultural resources throughout Kitsap County.
- 25.** Protect, conserve and enhance historic, archaeological and cultural sites and resources through a systematic, comprehensive planning approach, including land use and building code regulations.
- 26.** Coordinate and cooperate with local, state and national historic and cultural preservation organizations.

Policies

- LU-49** Working with the Kitsap Historical Society, other organizations and interested citizens, Kitsap County should fully inventory historical, archaeological and cultural resources, including districts and landscapes, that provide unique insights into the history and development of the county.
- LU-50** Working with the Kitsap Historical Society, other organizations and interested citizens, Kitsap County should develop guidelines for the evaluation of potential impacts to significant historical, archaeological and cultural resources from development activity.

LU-51 Kitsap County should encourage the preservation and rehabilitation of historic structures through the adoption of building code amendments for historic structures.

LU-52 Historic districts (those identified now and in the future), cultural resource areas and specific historic sites and structures should be integrated into zoning and planning maps.

LU-53 The Kitsap County Zoning Ordinance should be revised to include provisions to permit the review of individual development, redevelopment and demolition plans to ensure protection and minimize the impacts on cultural, historic and archaeological resources.

LU-54 Assistance should be provided to developers, landowners, the construction trade and interested citizens, regarding appropriate re-use and rehabilitation of identified historic sites and buildings.

LU-55 Assistance should be provided to developers, landowners, the construction trade and interested citizens, in obtaining grants and receiving available tax incentives for the re-use and rehabilitation of identified historic sites and buildings.

LU-56 Public awareness of cultural resources should be increased through educational and interpretive projects that highlight sites included on the county inventory or those eligible for inclusion in local, state or national

registers for historic places.

LU-57 Awareness by County employees, developers, landowners and interested citizens should be increased through training about cultural heritage preservation issues, including state and federal penalties for disturbance, destruction or removal of archaeological resources.

Implementation and Financing Strategies

Integration of planning is essential at all levels to assure successful implementation of a preservation program. In Kitsap County, ordinance and procedural changes, among other things, are needed to implement our goals and policies. The following are a range of strategies that may be considered in achieving the Historic Preservation goals and policies of this Chapter.

- # Train volunteers to participate in the development of a county inventory of historic places. Include interested citizens and representatives from communities and local historic preservation organizations.
- # Develop and encourage self-guided tours which highlight cultural resources on the county inventory.
- # Install interpretive signs for sites on the county inventory (with landowner approval).
- # Host educational seminars that will highlight cultural resources on the county inventory or those that may be eligible for inclusion.
- # Waive or reduce permit and impact fees for re-use or rehabilitation projects that are

consistent with surrounding land uses.

- # Provide flexibility in the county zoning codes for uses on historical sites that are compatible with surrounding land use.
- # Develop an educational effort oriented towards the general public regarding cultural resources: what they are, where they are, what their significance is and how they can be integrated and compatible with surrounding land uses.
- # Develop additional funding sources or minimize costs to supplement current county funding for the preservation of historic, archaeological and cultural resources. Possible funding sources are: research grants, user fees, use of volunteers and penalties for the violation of preservation policies.

G. Drainage, Flooding & Stormwater Runoff

Review of Drainage and Flooding

Kitsap County’s natural drainage system does not contain significant portions of any major rivers. The upper reaches of the Union and Tahuya Rivers are located in the Southwest portion of the County. The county’s land mass is primarily drained through a large number of small streams with most typically averaging less than 50 cubic feet per second of flow. The Kitsap Water Resources Inventory Area (WRIA) contains approximately 521 rivers and streams consisting of approximately 665 linear miles of drainage (KPUD - Kitsap Initial Basin Assessment). The landmass geology tends to consist of fairly shallow soils underlain by densely compacted glacial till often resulting in perched water tables and shallow horizontal ground water flow. The topography and shape of the land mass is such that there are few areas of serious flooding

even during periods of high rainfall and heavy runoff. There are, however, isolated areas where the hydraulic capacity of urban runoff systems and small streams is inadequate to convey flows resulting in short duration nuisance flooding during periods of extreme rainfall. The County also contains a number of small closed depressions which present flooding problems during periods of high groundwater and runoff. Some of these closed depressions are defined and protected as wetlands pursuant to the Critical Areas Ordinance.

Identified areas with runoff or significant flooding problems, and current or planned actions to correct problems are identified below:

1. Myhre Rd. @ Silverdale Way (All Star Lanes, Parker Paint, Don Panchos etc.) - currently the subject of a flood reduction study funded by Kitsap County.
2. Manchester (Polk Avenue, Alaksa Avenue, Crowell problem, N. End of Nebraska Ave., Marten and Virginia Ave.) - currently the subject of a stormwater basin study to determine solutions to a variety of runoff related problems.
3. Point No Point (Buck Lake Road to Lighthouse area) - currently the subject of a flood reduction study.
4. Suquamish (Augusta, Angeline, Geneva area) - a contract is being negotiated for a drainage study for this area.
5. Navy Yard City (L Street, M Street, Merrill Pl., G Street) - retrofit projects are being accomplished as opportunities present themselves.
6. Converse Ave. (Sherlyn, Kerry Lane, Carlson Lane, Bethel at Sedgewick,

Estonia).

7. Gorst (Old Belfair Hwy. just south of S/R3) - no action at this time.
8. East Bremerton (Echo Drive, Bentley Drive) - no action at this time.
9. McWilliams Court (Between Pheasant Run and Mosher Creek) - conveyance capacity study and preliminary design complete;. will be constructed as a retrofit subject to negotiation of easements.
10. Anderson Creek (Anderson Hill and Anderson Landing area) - no action at this time.

Kitsap County Surface and Stormwater Programs

Kitsap County's stormwater programs consist of two major components. The Surface and Stormwater Management (SSWM) program is a comprehensive multi-agency flood and non-point pollution control program. Agencies currently drawing funding from the SSWM program include the Kitsap County Department of Public Works, the Bremerton-Kitsap County Health District, and the Kitsap Conservation District. The Public Works portion of the SSWM program is charged with the responsibility for implementing a number of program elements aimed at correcting existing flooding problems. These program elements include stormwater basin planning, capital improvements, drainage system inspection, stormwater system operations and maintenance, and retrofit of existing stormwater facilities. Programs are funded through the institution of a fee based on impervious surface coverage. The Capital Improvement and Retrofit elements of the program fund the construction of facilities and projects which correct existing runoff quantity related problems. Smaller capital improvement projects to correct existing

system deficiencies are carried out by SSWM maintenance crews as system retrofits.

The Development Review and Permitting section of the Stormwater program is responsible for developing stormwater standards and reviewing land development proposals for compliance. Kitsap County has adopted stormwater standards (Ordinance #199-1996) for new development and re-development. These standards meet or exceed the technical requirements for stormwater management contained in the Department of Ecology's Stormwater Management Manual for the Puget Sound Basin (SWMMP SB) as required by the Puget Sound Water Quality Management Plan (PSWQMP). These standards will be used by Kitsap County to implement its responsibilities under the Growth Management Act, the Puget Sound Water Management Plan and other requirements of law.

As flood prone areas are identified they are analyzed and projects to correct flooding are identified. The specific projects identified during the planning process are rated using set criteria and are then placed into a project priority array. Final designs are completed for high priority projects and construction is carried out under SSWM's capital improvement program element. SSWM staff work with a Stormwater Advisory Committee consisting of program agencies, citizens, tribes, cities, and state officials. The Committee provides input into the prioritization of capital projects as well as providing SSWM with a broad range of input regarding program direction and implementation.

The stormwater design standards require performance of an engineering analysis of areas upstream and downstream of proposed land development projects to determine

potential impacts. In the project planning process, applicants are required to develop mitigation strategies for control of both stormwater quantity and quality. Mitigation strategies must address the predicted impacts of the proposed project on upstream properties, downstream drainages, and receiving waters.

Existing Polluting Discharges

A baseline water quality monitoring program is an on-going component of Kitsap County's SSWM program. In addition to the county's water quality monitoring programs, the Washington State Department of Ecology and the State Department of Health also monitor water quality in the county's receiving waters. Based on their own monitoring data and data input from others, the Department of Ecology produces a list (the 303d list) of impaired or threatened waters requiring additional pollution controls. Water bodies listed on the 303d list are identified below. The majority of the listed lakes and creeks experience fecal coliform, temperature, turbidity and/or phosphorus. The bays, harbors and larger water bodies experience more complex pollution problems:

- Eagle Harbor**
- Port Orchard, Agate Passage, and Rich Passage**
- Sinclair Inlet**
- Dyes Inlet and Port Washington Narrows**
- Port Gamble Bay**
- Liberty Bay**
- Minter Creek**
- Little Minter Creek**
- Burley Creek**
- Bear Creek**
- Union River**
- Dogfish Creek**
- Grovers Creek**
- Horst Creek**

**Wright Creek
Blackjack Creek
Annapolis Creek
Beaver Creek
Clear Creek
Barker Creek
Big Beef Creek
Kitsap Lake**

The 303d list includes a number of water bodies that have polluted sediments as a result of past industrial and municipal discharges.

Since the passage of the Clean Water Act, industrial dischargers have been regulated and permits with strict effluent limitations have been required through the National Pollutant Discharge Elimination System (NPDES), a federal program implemented at the state level. The NPDES program has been successful in eliminating polluting industrial and municipal “point discharges.” There are a variety of sources of funds, including potential grant funding, that might be used to clean up polluted sediments left from past industrial and municipal operations.

Non-Point Pollution Abatement and Planning Programs

To address diffuse pollution, also often referred to as “non-point” pollution, Kitsap County has developed Watershed Management Plans for the Dyes and Sinclair Inlet drainage basins and is completing development of Watershed Management Plans for the Upper Hood Canal and Liberty

Basin Planning

*Stormwater system GIS
Drainage basin infrastructure
planning
Aid to existing spill response
programs
Wellhead protection*

Capital Improvements

Construction of maintenance waste

Bay/Miller Bay watersheds under the WAC 400-12 process. These plans identify non-point pollution problems and provide a number of action recommendations that should be implemented to better control non-point pollution and improve the quality of receiving waters. Watersheds for which non-point pollution plans have been developed or are under development include the Dyes and Sinclair Inlet watersheds and Upper Hood Canal and Liberty Bay/Miller Bay watersheds

SSWM’s drainage system inspection element identifies water quality problems as a part of routine inspection activities. All of the SSWM program agencies respond to citizen generated water quality concerns by fielding personnel to perform on-site review and field screening to determine the validity of concerns. Standard monitoring and source tracking methodologies are used to determine the seriousness and extent of the problems and to identify their sources. After the sources have been identified appropriate actions are taken to correct the problems. Sources of non-point pollution typically include but are not limited to illegal dumping, illicit discharges, failed on-site sewage systems, urban runoff, and agricultural problems.

Kitsap County’s SSWM provides funding for a number of non-point pollution control related elements. These program elements include:

*processing facilities
Regional stormwater facility
construction
Fish passage barrier elimination,
flood reduction, water quality
improvement projects*

Operations and Maintenance

Drainage system inspection (public and private)

Stormwater system operation and maintenance

Retrofit of existing facilities

Maintenance waste testing and disposal

Water quality revolving loan fund

Public Education

Stream/valuable habitat/stormwater facility signing, catch basin stenciling

Community outreach (school presentations, community meetings and events, pamphlets and brochures)

Public Involvement

Customer service

Stream Team

Stormwater Advisory Committee

Recreational Shellfish Program

Water Quality Monitoring

Stormwater impact monitoring

Sampling in response to public concern

Best management practices monitoring

Baseline surface water quality monitoring

Boat waste and on-site sewage system programs

Boat waste control program

On-site sewage system survey program

On-site sewage system operation and maintenance program

On-site sewage system complaint response program

Moderate Risk Waste Management

Household hazardous waste collection program

Small quantity generator program

Oil and Antifreeze recycling program

Agricultural Programs

Agricultural best management practice installation/maintenance

Resource preservation and enhancement

Education

The sub-elements listed under the major program headings are evaluated annually and adjusted as necessary to address specific issues and sources of non-point pollution identified in local watershed action plans and the Puget Sound Water Quality Management Plan.

Goals

1. Manage stormwater to protect shellfish beds, fish habitat, and other resources; to prevent the contamination of sediments from urban runoff; and to achieve standards for water and sediment quality by reducing and eventually eliminating harm from pollutant discharges.
2. Reduce harmful non-point sources of pollution to Puget Sound and other water bodies.
3. Mitigate erosion, sedimentation and stormwater runoff problems related to land clearing, grading and development.
4. Protect property from excess stormwater runoff, erosion and sedimentation.
5. In cooperation with neighboring jurisdictions, Tribes and interested citizens, develop and implement watershed action plans to reduce and prevent non-point pollution.
6. Reduce harm from wastes generated by existing and future on-site sewerage

systems.

7. Reduce harmful discharges from agricultural practices.
8. Provide technical support to the public in stormwater management practices.

activity shall be controlled so that the peak rates and volumes of runoff leaving the post-developed site do not exceed the capacity of receiving drainage conveyance facilities; do not increase the potential for stream bank erosion; and do not add significant volume to an off-site closed depression.

Policies

SW-1 Kitsap County will consider and adopt ordinances and programs to control stormwater runoff through approaches including but not limited to the following:

- a) adopt a stormwater technical manual that meets the state minimum requirements;
- b) control off-site effects of runoff pollution, erosion, flooding and habitat damage;
- c) protect natural drainages, habitat and wetlands;
- d) implement source control and treatment best management practices; and
- e) require adequate stormwater facilities concurrent with development.

SW-4 All sites meeting the definition of a major development shall, through the application of best management practices, provide permanent facilities for the enhancement of runoff quality.

SW-5 Individuals responsible for operation and maintenance of stormwater facilities shall operate and maintain their facilities in accordance with the requirements of the Stormwater Management Ordinance and Design Manual.

SW-6 As the first priority in stormwater management, stream bank erosion control best management practices shall utilize infiltration to the fullest extent practicable.

SW-2 All surface water and stormwater entering a project site in its predevelopment state shall be received at the naturally occurring or otherwise legal location. All surface and stormwater leaving a project site shall be discharged at all times during and after development at the naturally occurring or otherwise legally existing locations so as not to be diverted onto or away from downstream properties.

SW-7 Encourage the preservation of natural drainage systems.

SW-8 Encourage the use of source control and implement mitigative actions to control nonpoint source pollution.

SW-9 Maintain wetland hydrology and provide stormwater treatment prior to discharge into wetlands.

SW-3 Runoff resulting from development

SW-10 Educate the public, businesses and industries about stormwater impacts and source controls.

SW-11 Use watershed and basin plans as a means to reduce stormwater impacts and non-point pollution and to coordinate with neighboring jurisdictions.

SW-12 Adopt agricultural best management practices to control and reduce harmful discharges to surface waters.

H. Aquifer Recharge Areas

The Natural Systems Chapter of the Comprehensive Plan identifies goals and policies for identifying and protecting Aquifer Recharge Areas. The Plan recognizes two categories of recharge areas – Critical Aquifer Recharge Areas and Recharge Areas of Concern. These are shown on a map in the Map Book.

Critical Aquifer Recharge Areas are intended to protect significant drinking water supplies from contamination. These areas include one-year travel zones surrounding Group A wells, the Hansville Recharge Area, and specified five-year travel zones in Wellhead Protection Zones.

Recharge Areas of Concern include specified areas with permeable surface soils, areas above shallow aquifers and areas of small well concentrations (Group B systems).

Critical Aquifer Recharge Areas and Recharge Areas of Concern are protected through a combination of low density land use designations on the Comprehensive Plan Land Use Map (and corresponding zoning designations), and implementation of the Kitsap County Critical Areas Ordinance.

Rural and Resource Lands Chapter

Rural Character in Kitsap County

Kitsap county's rural area consists of a unique and sensitive balance of differing land features, landscape types and land uses. Rural land uses consist of both dispersed and clustered residential settlements, farms, and small-scale commercial uses that serve rural residents as their primary client. Rural landscapes encompass the full range of natural features, including forested expanses, rolling meadows, ridge lines and valley walls, distant vistas, streams and lakes, shorelines and other sensitive areas.

The rural area is, however, more than just a description of physical characteristics. For the residents of Kitsap County, the term rural also defines a philosophy of living and a quality of life. This quality of life includes a sense of quiet, community and a slower pace of life.

It is this multi-faceted physical character and lifestyle that County residents wish to maintain and enhance through the Comprehensive Plan.

This Rural and Resource Lands Chapter is divided into the following sections:

Introduction

The Introduction describes the intent of the Rural and Resource Lands Chapter.

The Planning Context section discusses the requirements of the Washington Growth Management Act

The Existing Characteristics and Issues section provides a description of rural lands within the context of Kitsap County and summarizes prior rural planning efforts.

The Goals & Policies provide direction in the following areas:

Rural Lands Goals set the framework for how future growth in Kitsap County's rural area will be guided by the Comprehensive Plan;

Rural Area Designations establishes the criteria for designation of rural lands;

Rural Public Services and Facilities describes the appropriate levels of service for rural areas;

Rural Residential Lands provides direction for rural residential development patterns;

Rural Communities and Villages describes potential areas that may be appropriate for more intensive development and lays out a ~~framework and policy direction~~ for planning in those areas; and

Resource Lands provides resource designations and policy direction for resource use in the rural area.

The intent of the Rural Lands Chapter is to preserve and enhance the rural character of Kitsap County. This chapter designates areas in Kitsap County as appropriate for rural and resource activities, both residential and non-residential, over the long term. The Comprehensive Plan is intended to preserve and protect rural character by reducing the inappropriate conversion of undeveloped rural land to more intensive uses.

Of the many reasons which motivate people to live in Kitsap, an attractive rural environment is one of the most frequently cited. Rural characteristics -- including the abundance of trees, perception of low-density development patterns, access to recreation, views of water and mountains, and a quiet, unregimented atmosphere -- all have a strong appeal to new and old residents alike. Because these characteristics can change or diminish as population grows, the challenge for the Comprehensive Plan is to preserve the function, appearance, and lifestyle of the rural area in the face of continued population growth in the County.

The Rural and Resource Lands chapter contains descriptions of rural land uses as well as goals and policies to carry out the chapter's purpose. The provisions of this chapter are distinct from those for Urban Growth Areas. It is the intent of the plan that development be planned, directed and monitored to ensure that the type and amount of growth is consistent with the Kitsap County-wide Planning Policies and with this Comprehensive Plan.

The goals and policies of other chapters, such as Land Use, will further aid the County in the preservation and enhancement of Rural and Resource Lands.

Planning Context

The Growth Management Act provides that "Counties shall include a rural element including lands that are not designated for urban growth, agriculture, forest or mineral resources. The rural element shall permit appropriate land uses that are compatible with the rural character of such lands and provide for a variety of rural densities and uses and may also provide for clustering, density transfer, design guidelines, conservation easements and other innovative techniques that will accommodate appropriate rural uses not characterized by urban growth" (RCW 36.70A.110(5)).

Decisions by the Central Puget Sound Growth Management Hearings Board (Board) are another source for policy direction in the rural area. The primary direction from the Board which guided composition of the 1998 Plan is summarized below:

An overall pattern of urban growth is prohibited in the rural area and on resource lands. "Pattern" in the context of residential development means the number, location and configuration of lots.

A residential land use pattern of 1 and 2.5 acre lots is an urban land use pattern. The intensity of physical improvements on rural land can, alone, determine whether a proposal crosses the line between permissible rural growth and impermissible urban growth.

While counties have the authority to allow pre-existing urban intensity uses to continue in the rural area, the expansion or enlargement of such uses is prohibited.

The citizens of Kitsap County also wish to maintain the rural character that makes the county unique. By identifying the features that contribute to the important rural qualities in the county, these features can be preserved and protected for future generations. This chapter of the Plan is intended to achieve the goals of the Growth Management Act and further the desires of the County residents.

Existing Characteristics and Issues

Rural areas of Kitsap County typically have a variety of land uses. These include residential (both stick-built and manufactured), home-based businesses, commercial activities serving the daily needs of rural residents, industrial activities and resource-based activities such as forestry, agriculture and mineral extraction. Commercial and industrial areas are scattered throughout the county and contain a variety of uses.

A variety of parcel sizes occurs in Kitsap County's rural areas. These reflect historical land use practices, and range from small, urban-sized lots in existing communities (i.e. 2,250 square foot lots in Driftwood Keys and Indianola) to several square miles (sections) of undivided land in forested areas (as in the Holly area). Within this range are lots and parcels of every imaginable size and shape. Subdivisions have occurred in both a planned and unplanned fashion over the years. Some developments have

occurred through a planned unit development (PUD) process that allowed up to one dwelling unit per acre in an organized, planned and clustered fashion. Other divisions occurred through a large-lot platting process with very little County review. Still others occurred through the short-subdivision process with slightly more County involvement. This has resulted in a rural platting pattern that is hard to serve with utilities and public services, and creates problems for future planning. Distinctions between urban and rural development are blurred; both types are scattered and intermixed across the County's landscape.

The level of public services in rural areas is lower than one would find in urbanized areas. Rural areas generally are less accessible, with narrow two-lane roads. Fire flow is limited or nonexistent, septic systems and private wells prevail, and emergency response times are longer than in more urban areas.

Protection and preservation of "rural character" is a significant issue. This character is very difficult to define since each person has his or her own perception as to what it is. Recent efforts in local community planning and design studies have attempted to address this issue and are listed as follows:

- 1990 County-Wide Growth Management Act Symposium "The Next 100,000"
- Rural Policy Roundtable (1993)
- Hansville Community Plan (1993)
- Suquamish Community Plan (1993)
- South Kitsap Rural Design Study (1993)
- Kingston Community Plan (Spring 1993)
- Voices of Kitsap (January 1996)
- The County Greenways Plan (June 1996)

RURAL AND RESOURCE LANDS

These planning efforts are described in Appendix 10 to this Comprehensive Plan. These efforts vary in their geographic focus and emphasis. Some have been partially implemented, while others remain as goals for future consideration. Taken together, however, they have resulted in a fairly complete list of the key characteristics of the rural area, which includes the following:

- # Two-lane roads with gravel shoulders;
- # Driveways disappearing into the forest with no house visible;
- # Trees as a backdrop to open fields and meadows;
- # Mountain or water vistas;
- # Agricultural lands, including rolling pastures and meadows;
- # Farm buildings, including original farmhouses;
- # Clusters of housing at the water's edge;
- # Sense of community;
- # Quietness;
- # Stream corridors, wetlands and floodplains; and
- # Forested areas.

Recognizing these characteristics, it is possible to develop a general idea of what the citizens of Kitsap County perceive "rural" to be and to manage growth in a way that continues and enhances these features. Consistent with those perceptions, it is the overall intent of this plan to:

- # Preserve and enhance the rural character of Kitsap County;
- # Allow and encourage continued resource-based activities within the rural areas;
- # Develop zoning and other development regulations consistent with implementation of this plan.

- # Consider design criteria which will guide development in the rural areas, including provisions for housing design and buffers along rural roads.
- # Protect, enhance and comprehensively map critical areas and natural environmental systems;
- # Address the provision of adequate and appropriate infrastructure in the rural area through capital facilities programs;
- # Ensure that all new development conforms to all provisions of the Uniform Fire Code as adopted by Kitsap County including those provisions pertaining to access and minimum fire flow requirements;
- # Provide adequate and safe transportation systems within rural areas, pursuant to appropriate road standards, which preserve and enhance rural character;
- # Require that all new rural development conforms to the Coordinated Water System Plan of Kitsap County; and
- # Adopt adequate and appropriate levels of service standards for public services including public water service, and fire and police protection in the rural areas.

This Plan recognizes that, because of historical land use practices, the rural area currently contains greater development capacity than required to accommodate planned rural growth over the next twenty years. This Plan does not intend to create significant additional capacity in the rural area overall. While the Plan recognizes past development patterns, it does not perpetuate urban growth in the rural area. Lifestyle and housing options will need to be reconciled over time with the need to clearly define and manage rural growth.

Goals and Policies

Goals and policies contained in this section address issues related to appropriate development and environmental protection within rural areas in order to preserve and enhance the county's rural atmosphere.

Goals

1. To retain the rural character of the county outside of designated urban areas.
2. To establish development standards which help preserve the county's rural character.
3. To provide a variety of densities in the rural areas to make more efficient use of land, maximize the return on public infrastructure investment, and provide for affordable housing opportunities.
4. To encourage the clustering of residential uses in certain rural and resource areas.
5. To maintain appropriate levels of service for public services and facilities in rural areas.
6. To protect natural resource lands from incompatible adjacent uses.
7. To preserve and enhance natural resource-based activities, such as agricultural, forestry, mineral extraction and aquaculture (as addressed and defined in the Kitsap County Shoreline Management Plan) in the rural areas.
8. To minimize the conflict between forestry and residential land uses.

9. To retain land suitable for timber production and encourage the continued practice of forestry within the county.
10. To identify and evaluate incentives for landowners to conserve shorelines and resource lands and to continue resource-based activities.
11. To ensure proper installation, use and maintenance of septic systems.

Policies

Rural Area Designations

RL-1 The rural area designations shown on the Kitsap County Comprehensive Plan Land Use Map include areas that meet one or more of the following criteria:

- # **Areas not designated for urban growth or as natural resource lands, where a possibility exists for less intensive agriculture, forestry and mineral resource management and utilization;**
- # **Areas not needed for the next 20 years to provide land for population or employment growth;**
- # **Areas which serve as a buffer between resource activities and conflicting land uses;**
- # **Areas where the open-space character of the land is to be protected for scenic qualities, recreational activities and environmental functions;**
- # **Areas in which significant environmental constraints make the area generally unsuitable for intensive urban development;**
- # **Areas where existing and future uses do not typically require urban-level services and facilities and services are not readily available;**

Areas where a rural area designation will help foster more logical boundaries for urban public services and infrastructure.

RL-2 Land use designations in the rural area include the following:

Urban Reserve: The Urban Reserve designation is used on the Comprehensive Plan Map to indicate areas that are potentially suitable for inclusion in the Urban Growth Area. Urban Reserve areas are intended to recognize:

- a. designated Urban Joint Planning Areas, to reflect areas proposed by the Cities for designation as an Urban Growth Area and which are subject to a joint planning process;
- b. designated Urban Study Areas, which are intended to resolve issues regarding potential land uses; and
- c. lands contiguous or adjacent to designated Urban Growth Areas which are deemed necessary to hold in reserve for potential future inclusion within an Urban Growth Area in response to future needs as reflected in revised or updated population or employment forecasts or allocations.

These areas are given an interim low density designation of 1 dwelling unit per 10 acres as a means of preventing establishment of land uses or land use patterns that could foreclose planning options and eventual development or redevelopment at higher urban densities. Designated Urban Reserve lands that are determined to not be needed or appropriate for urban development pursuant to a defined planning process will be re-designated as Rural through the Comprehensive Plan amendment process.

Rural Residential. This designation is intended to promote low-density residential development consistent with rural character. This designation is applied to areas that are relatively unconstrained by environmentally

sensitive areas or other significant landscape features, and also recognizes areas that are already committed to a pattern of smaller rural lots. The maximum residential density in the Rural Residential designation shall be one dwelling unit per five acres.

Rural Protection. The objective of this designation is to promote low-density development in keeping with rural character and to protect significant environmental features. Environmental features may include significant visual, historic, natural features, wildlife corridors, steep slopes, wetlands, streams and adjacent critical areas. A residential density of one dwelling unit per 10 acres is appropriate for this designation.

Forest Resource Lands. These lands meet the criteria for designation of forest resource lands of long-term commercial significance. The forest resource lands criteria is discussed in detail in Resource Lands Inventory section of the Land Use Appendix. The primary use for these lands is commercial timber production. A residential density of 1 dwelling unit per 40 acres is allowed in this designation as long as it does not interfere with timber management and harvesting activities.

Interim Rural Forest. This designation is applied to larger parcels of land in contiguous blocks that are forested in character, that have been actively managed for forestry and harvested, or that are currently taxed as timber lands pursuant to state and county programs. These lands have been considered for designation as long-term commercial forestry and are subject to ongoing litigation regarding their status. Lands not meeting the criteria for Forest Resource lands designation will remain in the Interim Rural Forest designation until completion of Phase II of the forestry review process. This designation permits timber harvesting and management, along with resource-supporting commercial or industrial activities, and residential uses at a density of 1 dwelling unit per 20 acres.

Date: First Annual review of amendments for the County Comprehensive Plan.

Existing areas characterized by more intensive development – defined in this chapter as *Rural Communities, Rural Villages* and *Commercial/Industrial Areas* – may be designated in the future according to the provisions of the Plan. Future designations must consider the mandate to preserve rural character, ensure compatibility with adjacent land uses, and the requirement to effectively limit and contain such areas.

RL-3 Kitsap County will use the land monitoring and evaluation program established to help implement the Comprehensive Plan to track the type, location, amount and rate of growth in the rural area. Growth will be evaluated to ensure that it is consistent with Plan assumptions and policies. Based on the findings of this monitoring, the County will consider the need to further evaluate or limit the amount or rate of growth in the rural area or to modify its development regulations to ensure that rural character is maintained and that urban growth does not occur in the rural area.

Implementation Strategies and Programs

1. Interim Rural Forest. The County has initiated a two phased process to review forestry issues. Phase I of the forestry review process focused on criteria for designation of forest resource lands as defined under the Growth Management Act. The County will undertake a second phase of the forestry review process, which will assess those lands designated as interim Rural Forest that do not meet the criteria for designation as Forest Resource Lands. Issues to be addressed during Phase II of the forestry review may include appropriate uses, residential density, incentive programs to encourage continued timber production, habitat protect, and retention of existing rural character. *Target*

2. Rural Capacity and Lot Aggregation.

(a) The County’s land monitoring and evaluation program, developed pursuant to this plan, will track and report on the amount and rate of growth occurring in the designated rural area annually. The County will identify any trends that are inconsistent with the goals and policies of the Comprehensive Plan.
 (b) Kitsap County recognizes the substantial number of existing lots located in the designated rural area as a result of past practices. Existing capacity is significantly greater than the rural target population allocation for the twenty-year planning period. The County will research and evaluate possible incentives that could be used to encourage the aggregation of existing small lots in the rural area. The County will review this information in the context of actions that may be considered pursuant to RL-3.

Rural Public Services and Facilities

RL-4 Kitsap County, cities adjacent to the rural area and other agencies providing services to the rural area should adopt standards for facilities and services in the rural area that protect basic public health and safety and the environment, but are financially supportable at rural densities and do not encourage urban development.

RL-5 Public spending priorities for facilities and services within the rural area should be as follows:

- | | |
|--|---|
| <p># Maintain existing facilities and services that protect public health and safety; and</p> <p># Upgrade facilities and services when needed to support planned rural development at rural service level standards but not to create capacity for urban growth.</p> | <p>program will include consideration of the following issues:</p> |
| <p>RL-6 Extension of sanitary sewer service shall generally not be allowed in the rural area “except in those limited circumstances shown to be necessary to protect basic public health and safety and the environment and when such services are financially supportable at rural densities and do not permit urban development” (RCW 36.70A.110(4)).</p> | <p># Appropriate buffer widths from property boundaries, existing and potential resource uses, other residential development, rights-of-way and other appropriate factors;</p> <p># Design to preserve environmentally sensitive areas and to harmonize with topography and landscape features;</p> <p># Design to maintain or enhance predominant rural character, scenic views and open space corridors;</p> <p># Need, feasibility and cost of service delivery to the cluster development;</p> <p># Maximum appropriate number of units to be accommodated in individual clusters and separation between clusters;</p> <p># Potential use of density bonuses or transfer of development rights as an incentive to encourage cluster development and retain important rural resources;</p> |
| <p>RL-7 Road and access standards should provide all-weather access for emergency response vehicles while preserving and enhancing rural character.</p> | <p># Mechanisms to preserve those portions of parcels dedicated to open space uses, such as conservation easements;</p> <p># Means to encourage resource activities and to ensure compatibility between resource and residential land uses;</p> |
| <p>Rural Residential Lands</p> | |
| <p>RL-8 Permit residential uses in rural areas consistent with the existing and planned rural character of the area in which they locate.</p> | <p># Appropriate provisions to preserve rural character;</p> <p># Specification of open space requirements or criteria such that open space is not a secondary requirement;</p> |
| <p>RL-9 The designated rural area should have low residential densities which can be sustained by minimal infrastructure improvements, cause minimal environmental degradation, and which will not cumulatively create the future necessity or expectation of urban levels of service.</p> | <p># Incentives such as density bonuses for open space;</p> <p># Locating cluster development carefully to avoid checkerboard patterns;</p> <p># Mandatory clustering in areas where extensive critical areas exist or where there are undesignated high-quality resource lands; and</p> |
| <p>RL-10 Kitsap County will consider a clustering program for residential development in the rural area. This</p> | |

Limiting the use of clustering such that clustering does not become the predominant pattern of development throughout the rural area.

RL-11 Kitsap County will consider development of a program to preserve undeveloped rural shorelines as open space. The objective of the program would include, but is not limited to, preservation of rural shorelines in an undeveloped state, including appropriate provision of public access to shorelines. This program should address the following issues:

- # Minimum parcel size and shoreline frontage requirements;
- # Protection of sensitive areas including steep slopes;
- # Appropriate receiving areas for development capacity and density transferred from open space parcels; this could include transfers to contiguous, unconstrained upland parcels in the same ownership (internal transfer), or transfer to other designated receiving sites in the urban or rural areas (external transfers), such as Rural Villages designated pursuant to this chapter;
- # Provisions for clustering, subject to the guidelines developed pursuant to RL-9;
- # a reasonable density bonus to encourage preservation of shorelines;
- # Compatibility of the proposed development and receiving site with rural character and any adjacent resource activities;
- # a management plan for resource activities occurring on or adjacent to the transfer site;

- # Covenants, conservation easements, or other mechanisms to ensure preservation of the shorelines as open space; and
- # Appropriate planning and review requirements for each shoreline open space proposal.

RL-12 Design standards, development practices and private covenants for subdivisions in the rural area should not include extensive paved surfaces, marked changes in grade from pre-development site conditions, elaborate entrance signs, extensive lawns and other landscaping, regulation of house color or design or other features typical of urban or suburban residential development.

Implementation Strategies & Programs

1. Rural Clustering. Develop provisions that permit clustering of residential development in Rural areas. The program should address the issues identified in Policy RL-10. The process for developing the provisions should include public involvement and the participation of interested property owners and Tribes. *Target Date: 1999-2000.*

2. Shoreline Open Space Preservation. Develop a program that explores opportunities for preserving undeveloped rural shorelines as open space. Mechanisms may include transfer of development capacity to upland areas. The program should address the issues identified in Policy RL-11. The process for developing the provisions should include public involvement and the participation of interested property owners and Tribes. *Target Date: 1999.*

Rural Communities and Villages

A 1997 amendment to the Growth Management Act permits counties to define “limited areas of more intensive development” subject to a number of guidelines and criteria (RCW 36.70A.070(5)(d)). These amendments provide an opportunity to help reconcile Kitsap County’s historical land use pattern with the requirements of GMA.

As exceptions to the types of development generally permitted in rural areas, these areas allow identification, recognition and designation of existing areas with established development patterns. These existing areas may be permitted to accommodate limited additional growth through infill, new development or redevelopment. The types of growth permitted include intensification or new development of small-scale recreation or tourist uses that rely on a rural setting or location; and intensification of isolated non-residential development or new development of isolated cottage industries and isolated small-scale businesses. The areas may contain public facilities and services, which must be limited to what is necessary to serve the limited area and which does not permit low density sprawl.

“Limited areas of more intensive development” must have been in existence as of July 1, 1990. Each area must be defined and contained by a logical outer boundary that limits and contains the extent of more intensive development. The boundary must be delineated predominantly by the built environment (i.e., existing development) but may include limited undeveloped land. Establishment of the boundary must address: the need to preserve the character of existing natural neighborhoods and communities; physical boundaries; prevention of abnormally irregular boundaries; and the ability to provide public facilities and services. Counties must adopt measures to ensure that these areas are limited and contained.

In January, 1998, Kitsap County prepared an issue paper summarizing past efforts to define

local rural character; the requirements for designating limited areas of more intensive development; potential criteria for designating these areas; and descriptions of a range of “candidate areas” that could be categorized and considered for designation as rural “communities,” “villages,” and commercial or industrial areas. The issue paper is contained in Appendix 10. A series of discussions and public workshops were also held to determine participants’ preferences for the rural area; photographs documenting the results of a visioning survey are also contained in Appendix 10. The Planning Commission also held a public hearing in February, 1998 and provided guidance on these rural issues.

This Comprehensive Plan outlines the series of steps that should be performed to formally designate limited areas of more intensive development in the rural area. This includes refining the list of potential candidate areas; developing criteria for locating physical boundaries; identifying the types and amount of growth that should be allowed to occur within designated areas; and developing implementing regulations and design guidelines to ensure that development occurs in a manner consistent with rural character. These issues will be addressed in an implementation program that the County will pursue over the next one-to-two years. Policies are provided at this time to create a framework for carrying this work forward. Two demonstration projects are recommended – for Manchester and Suquamish – which will be used to help develop and test criteria for designating Rural Villages and for defining a process that will be used to consider future designations.

The area of Suquamish was chosen as the first demonstration site and resulted in the Suquamish Rural Village Subarea Plan. It was completed in April 1999 by the Kitsap County Department of Community Development and a citizen advisory group, known as the Suquamish Community Council, in cooperation with the Suquamish Tribe. This

plan by the Kitsap County Board of Commissioners on April 19, 1999, under Ordinance # 232-1999. Through this demonstration project, it was concluded that further testing needs to be done to determine what similarities or differences may exist in developing criteria for other limited areas of more intensive rural development throughout the County. Citizen advisory groups will be a key component in this process.

Categories of Potential Candidate Areas

Existing areas in rural Kitsap County that may be considered for designation as “limited areas of more intensive development” include the following:

Predominantly Residential Areas. These occur in different sizes and scales with relatively small lots and a dense land use pattern. These areas typically have a strong sense of identity and are commonly thought of as a distinct neighborhood or community. Some small-scale commercial services may be present. Most of these existing residential areas are located along the shores of Puget Sound or Hood Canal, surrounding lakes or adjacent to ferry terminals. Many were originally platted as vacation or recreational subdivisions and, over time, developed into permanent residences and defined communities. Smaller areas may have community water systems and individual septic systems, while larger areas may be served by public or community water and/or water systems. Larger areas of this type may have a broader range of local commercial services, institutional facilities (schools, churches, meeting halls), and recreational services such as parks, boat launches and playgrounds.

Mixed-Use Areas. These existing unincorporated areas are characterized by a relatively broad mix of residential, commercial, community, recreational and often industrial activities. Land uses and

densities are essentially urban in character and are typically served by public water and sewer. They are generally larger and more diverse than the predominantly residential areas described above. While these areas could also be considered for inclusion in the Urban Growth Area (based on existing densities and the presence of urban services), they are located at some distance from the urbanized portion of the county and from existing cities. While some growth potential exists, there may also be facility constraints to extensive development (e.g., sewer facility limitations).

Commercial and Industrial Areas.

Commercial and industrial areas are dispersed throughout Kitsap County and include both isolated sites devoted to a relatively small-scale commercial/ industrial uses and existing areas of more intensive development. Typical examples of the range of commercial and industrial uses in the rural area of the county includes cross-roads commercial development (gas station, mini-mart or grocery store); neighborhood shopping centers; isolated heavy commercial or industrial businesses; and small industrial parks. Uses are not necessarily “rural” in character (i.e., supporting agriculture or other “traditional” rural activities). These areas may be currently served by on-site or public sewer and water.

The Comprehensive Land Use map identifies a number of commercial and industrial properties in the rural areas. The sites designated on the map include existing developed parcels and undeveloped land. The boundaries of these areas are considered preliminary and will be reevaluated and redefined as appropriate to meet the rural provisions of the Growth Management Act and this plan. The undeveloped portions will be considered for future development pursuant to criteria in RL-24. Kitsap County will use a master planning process to establish the final boundaries of these limited areas of more intensive development. These include Streible’s Corner, Pioneer Way, Lemolo, St.

RURAL AND RESOURCE LANDS

Hwy. 3, George's Corner, Bond Rd./Gunderson Rd., Luoto Ct., Hansville and S'Klallam.

Categories and examples of candidate areas potentially meeting the general descriptors for these types of rural places are summarized below. These lists are representative not exclusive; additional areas may be considered.

- # Rural Community – predominantly residential with some commercial and community services. Examples include Indianola, Hansville, Driftwood Key, Southworth, and Sunnyslope;
- # Rural Village – a mixed-use community, with a broad mix of land use and densities, and community, recreational, institutional services and public facilities; there may be different scales of villages. Representative examples include Manchester, Suquamish and Keyport;
- # Industrial or Commercial – isolated areas (approximately 28) of generally small-scale commercial or industrial activity, ranging in size from .5 acres to 20 acres. Uses include light manufacturing, construction, storage yards, and machinery rebuilding and repair. Representative examples include Sunnyslope, Parkwood, Long Lake, Hansville, Dickey Road, Luoto Court, Pioneer Way, Streibles Corner (Bond Rd.) and Lemolo.
- # Rural Historic Town – a designated historical town with potential for residential, mixed use, commercial, and limited industrial/waterfront development or redevelopment that can be done in keeping with the historic character of the area. Port Gamble is the only example of this category.

RL-14 A Rural Community consists primarily of residential development at varying densities, but also provides for a limited mix of non-

residential uses – such as churches, schools, grocery stores, community centers, or other similar uses – to serve local residents. A gathering place to promote a sense of community is an important feature of a Rural Community.

- RL-15 A Rural Village serves as an activity center for the surrounding rural area and may include several or all of the following land uses, if supported by necessary utilities and other services and if scaled and designed to protect rural character:**
- a. Retail, commercial and industrial uses to serve the surrounding rural population and to provide support for resource industries and tourism.**
 - b. Residential development, including single family dwelling housing on small lots.**
 - c. Public facilities and services, such as community services, churches, schools, and fire stations.**

RL-16 New development should be designed to strengthen the desirable characteristics and the historic character of rural communities and villages, be supported by necessary public facilities and services, and be compatible with historic resources and nearby rural or resource uses. Development should be kept compact, promoting pedestrian travel within the designated area.

RL-17 Existing small isolated commercial developments that are currently legal uses in the rural area should be recognized. Existing development should not be expanded beyond the limits of the existing zoning unless and until such areas are designated according to the policies and process established for designating limited areas of more intensive development.

RL-18 Commercial and industrial development in the rural area may locate in designated rural villages and communities, if utilities and other services permit, to provide employment, shopping, services and housing opportunities that will reinforce the health of these communities and convenience of rural residents.

RL-19 Subject to criteria that will be developed by the Planning Commission and interested citizens, the Planning Commission and elected officials should identify and designate rural areas of more intensive development, consistent with the requirements of GMA.

RL-20 Limited areas of more intensive development should be evaluated, defined and designated according to criteria that accomplish the intent of these policies and the Growth Management Act. The criteria would be used to help interested citizens, the Planning Commission and elected officials identify and designate rural areas of more intensive development.

RL-21 Changes to land use designations for limited areas of more intensive development should be addressed via a local community planning process. This process would incorporate local knowledge, experience and preferences to determine appropriate area-specific land uses, development standards, design guidelines, and public service needs. Specific issues that should be considered in this planning process include:

A Appropriate area boundaries.

- # Rural character of the subject area and surrounding area.
- # Appropriate mix of uses, densities and intensities.
- # Feasibility, cost and need for public services.
- # Significant natural constraints or features to be preserved.
- # Provision for a monitoring and evaluation process.
- # Benefits to the local community

RL-22 The planning process for each limited area of more intensive development should include use of an advisory committee composed of area residents, interest groups, Tribes and county representatives. Kitsap County should develop a scope of work for each area which outlines the structure of the planning process, the proposed schedule, issues to be addressed, and roles of the various participants.

RL-23 Two demonstration projects should be conducted and evaluated to help develop practical information regarding workable criteria and procedures for considering future designations within the rural area. Manchester and Suquamish are recommended for consideration as Rural Villages. They are designated Rural Village Study Areas on the Comprehensive Plan map. The boundaries shown on the Plan Map are considered preliminary and for the purpose of allowing a planning process to move forward. Such mapped boundaries are not intended at this time to fulfill all the requirements for designation of boundaries of limited areas of more intensive development.

RL-24 For identified commercial/industrial areas, changes to permitted uses and development standards should be permitted through a master plan

process. This process would incorporate local knowledge, experience and preferences to determine appropriate area-specific land uses, development standards,

- # Appropriate area boundaries.
- # Rural character of the subject area and surrounding area.
- # Appropriate mix of uses and intensities.
- # Feasibility, cost and need for public services.
- # Significant natural constraints or features to be preserved.
- # Provision for a monitoring and evaluation process.

RL-25 In general, development regulations for industrial development in designated industrial areas should consider the following:

- # Greater setbacks, reduced building height, floor/lot ratios, and maximum impervious surface coverage standards in comparison to standards for urban industrial development.
 - # Maximum protection of sensitive natural features.
 - # Building and landscape design that respects the aesthetic qualities and character of the rural area, and provides substantial buffering from the adjoining uses and scenic vistas.
 - # Building colors and materials that are muted, signs that are not internally illuminated and site and
1. To protect natural resource lands from incompatible adjacent uses.
 2. To preserve and enhance natural resource-based activities such as agriculture, forestry, mineral extraction and aquaculture (as addressed and defined in the Kitsap County Shoreline Management Plan) in the rural areas.

design guidelines, and public service needs. Specific issues that should be considered in this planning process include:

- # building lighting that is held to the minimum necessary for safety.
- # Uses requiring substantial investments in infrastructure such as water, sewers or transportation facilities shall be scaled to avoid the need for public funding of infrastructure.

RL-26 Home-based cottage-type businesses and industries shall be allowed and encouraged in the rural areas, provided such activities are compatible with the site and surrounding area.

Resource Lands

This Comprehensive Plan and Map designates rural, forest, agricultural lands and mineral resource lands. The classification and designation of resource lands and activities is intended to help keep these lands available for resource production. These resource-based uses are often intermixed or occur together with residential development within the county's rural areas.

Goals

3. To identify and evaluate incentives for landowners to conserve resource lands and continue resource-based practices.
4. To encourage the preservation of lands identified as commercial quality aggregate deposits.
5. To identify commercial-quality mineral deposits in Kitsap County including, but

not limited to, aggregates, sand, rock and metals.

- 6. To discourage the conversion of identified aggregate lands to uses incompatible with extraction activities.

Policies

Resource Land Designations - Agricultural Lands

Agricultural land is defined by the Growth Management Act as “land primarily devoted to the commercial production of horticulture, viticulture, floriculture, dairy, apiary, vegetable, or animal products or of berries, grain, hay, straw, turf, seed, Christmas trees, or livestock, and that has long-term commercial significance for agricultural production” (WAC 365-190-050). Long term commercial significance “includes the growing capacity, productivity and soil composition of the land for long-term commercial production, in consideration with the land’s proximity to population areas, and the possibility of more intense uses of the land.”

Agricultural activities in the county consist primarily of small hobby farms. According to the Census of Agriculture, commercial farming activities are very limited. Prime agricultural soils are scattered throughout the county. In some instances, areas with the best agricultural soils (such as Silverdale) have already been developed with other uses. For these reasons, this plan does not propose lands for designation as prime agricultural lands. In the event of new data on agricultural lands or activities in the county, this issue could be revisited.

RL-27 At this time, the County finds no areas of long-term commercial significance for agricultural use and therefore, does not designate agricultural resource lands at this time.

RL-28 Although there are no areas within the county considered for suitable for long-term commercially significant agricultural production, farming and agricultural activities are an important rural activity. As such, they are allowed and encouraged in the designated rural areas of the county.

Forest Lands

The GMA requires that counties identify and protect “...forest lands that are not already characterized by urban growth and that have long-term significance for the commercial production of timber.” Forest land is defined as “land primarily devoted to growing trees for long-term commercial timber production on land that can be economically and practically managed for such production.”

The GMA lists a number of factors that should be considered in making this determination, including existing land use, soils, availability of public facilities and services, compatibility with surrounding comprehensive plans, and economic factors.

Portions of Kitsap County are heavily forested and are held in both small and large tract ownership. In the larger tracts, a few major timber owners actively harvest, log or cultivate their land for commercial forest production. Many other forest lands are on smaller parcels, some of which are less than 40 acres in size. These smaller parcels are forested on a limited basis or are used for other commercial forestry activities.

Existing land use patterns surrounding the commercial forest areas impact the potential for forestry in some areas. Some urban level residential densities along the shoreline and suburban densities scattered throughout the county have resulted in a development pattern in which much of the forested areas of the county are within one mile of developed residential areas. In these areas, large-scale

commercial forestry activities may not be feasible.

The Plan establishes an interim rural forestry designation that recognizes existing and potential forestry activities and acknowledges that forestry uses are appropriate in rural areas of the county. The interim designation recognizes that Kitsap County needs additional time to resolve the forest resource land and related rural land use issue. The delay in the Superior Court decision, coupled with the accelerated work program for the Comprehensive Plan, resulted in insufficient time available to address the issue adequately. The interim designation will preserve the County's options during this review.

At the time of adoption of the revised 1998 Comprehensive Plan, Kitsap County began a two-part approach to resolving the forest resource issue in the Comprehensive Plan. Phase I included a review of long-term commercial forestry in Kitsap County and adoption of criteria for designating forest resource lands.

In Phase II of the forestry review process the County will convene an advisory committee of interested parties to discuss and recommend a potential program for encouraging forestry activities within rural areas. This program would apply to rural forested lands that have been determined to not meet the criteria for designation as resource lands of long-term commercial significance, and may include development of guidelines and criteria for clustered residential development, at appropriate densities, in conjunction with rural forestry. The advisory committee, appointed by the Board of Commissioners, will be comprised of affected property owners, neighborhood and environmental interests and Tribes, and will strive to reach consensus; the County may hire a mediator or facilitator in furtherance of this objective.

The County's intent is to complete phase II in time for inclusion with the First Annual

review of amendments for the County Comprehensive Plan.

RL-29 Areas appropriate for rural forestry are recognized through an Interim Rural Forestry designation. The interim forestry designation permits on-going forestry activities, supporting resource-based uses and residential development at a maximum density of one dwelling unit per twenty acres. This interim designation will be reviewed following completion of Phase II of the forestry review process.

RL-30 As part of future review and consideration of issues in Phase II of the forestry review process questions associated with parcel size, appropriate uses and land use compatibility, retention of existing rural character, and forest cover characteristics, will be addressed.

Mineral Resource Lands

The intent of the mineral resource designation is to protect identified significant sand, gravel and rock deposits. Commercial quality deposits should be recognized as non-renewable resources and managed accordingly.

At this time, information on commercial-quality deposits is limited. Areas with mineral deposits have been identified primarily through the use of surface mining permits issued by the Washington Department of Natural Resources (DNR). In addition, individual property owners have provided information regarding mineral resource designations on their properties.

RL-31 Mineral resource sites with valid surface mining permits through DNR, and sites identified by individual property owners shall be given a Mineral Resource designation on the Land Use Plan Map. This designation

permits mineral resource extraction activities and accessory supporting industrial uses. Residential uses are also permitted, to a maximum density of one dwelling unit per twenty acres.

RL-32 This Mineral Resource designation will serve as interim protection of mineral resource areas until a comprehensive geologic study is undertaken to determine the extent of additional mineral deposits. Appropriate long-term designations and revision of this chapter may follow this study.

Rural Resource Incentive Programs

The purpose of rural resource incentive programs is to promote the continued viability of resource-based activities in designated areas and to minimize the potential for conflict between these uses and surrounding residential areas. Two potential programs are described in this plan. These are residential clustering and transfer of development rights.

Residential Clustering. Residential clustering provides a means to plan and design sites so as to provide substantial separation from resource-based activities, to preserve resource lands, yet to permit an appropriate level and form of rural residential development.

RL-33 Clustering shall be permitted and encouraged in all designated natural resource areas of the county, subject to the provisions of Policy RL-34, below, consistent with preservation of rural character and subject to the rural provisions of the Comprehensive Plan and the Growth Management Act.

RL-34 The County will develop and consider a clustering program for residential development in designated resource areas. This

program has a target date of the year 2000 and shall include consideration of the following issues:

- # Appropriate buffer widths from property boundaries, existing and potential resource uses, other residential development, rights-of-way and other factors.
- # Design to preserve environmentally sensitive areas and to harmonize with topography and landscape features.
- # Design to maintain or enhance predominant rural character, scenic views and open space corridors.
- # Need, feasibility and cost of public service delivery to the cluster development.
- # Maximum appropriate number of units to be accommodated in individual clusters.
- # Potential use of density bonuses as an incentive to encourage cluster development.
- # Minimum site size.

Transfer of Development Rights.

Transfer of development rights (TDR) permits the “right to develop” (measured in residential units) to be severed from one property (the “sending” site) and transferred to another location (the “receiving” site). The sending site is preserved in its existing state and the receiving site may be developed at a higher density. A properly devised TDR program could act as an incentive for preservation of shoreline areas, forest lands, agricultural lands and mineral resource lands in Kitsap County.

RL-35 The County shall consider creation of a TDR program for appropriate designated resource lands. Development of such a program should consider the following:

Identification of appropriate “sending” and “receiving” sites. The transfer of development rights may be limited to specific parcels, land use designations or geographic areas. Transfers of rights could be considered from a designated resource site or area to a Rural Village, designated according to the Comprehensive Plan, or to defined locations within the Urban Growth Area.

Identification of the appropriate number of units that may be transferred consistent with maintaining land use compatibility and that are necessary to create an effective incentive.

Provisions for protection of significant landscape features, environmental sensitive areas, scenic views, rural character, and open space corridors.

Measures necessary to ensure that land use impacts to properties adjacent to the receiving site are mitigated.

Potential use of density bonuses to encourage TDR participation at critical “sending” locations, such as shoreline areas, significant stands of timber or other identified areas.

Monitoring and evaluation procedures to ensure that proposed “receiving” locations have adequate public services and facilities to absorb the additional development and that rural character is maintained.

Resource Lands Activities

RL-36 Industrial uses associated with mineral resource extraction or forestry activities are also permitted in designated Mineral Resource and Interim Forestry areas.

RL-37 Agriculture, mineral and forestry uses shall be allowed and

encouraged in the rural areas of Kitsap County. Such uses should not be considered to constitute a nuisance within rural areas if conducted within generally accepted management practices and in compliance with applicable laws which regulate such activities.

RL-38 Land use activities within or adjacent to resource lands shall be sited and designed to minimize conflicts with and impacts on resource lands. Mitigation may be accomplished through the use of setbacks, buffers and other requirements.

RL-39 In all rural areas, the following language shall be attached to both plats and building permits: *“Notice: the subject property is within or near land in which resource activities are permitted and encouraged, including a variety of activities which may not be compatible with residential use for certain periods of limited duration. In addition to other activities, these may include noise, dust, smoke, visual impacts and odors resulting from harvesting, planting, surface mining, quarrying, application of fertilizers, herbicides, and associated reclamation and management activities. When performed in accordance with state and federal law, these resource activities are not subject to legal action as a nuisance.”*

RL-40 The use of Best Management Practices (BMPs) for all resource activities is encouraged.

Forestry

RL-41 Normal Best Management Practices, such as spraying, logging, slash burning, shall not be impeded within the designated Forest Resource Lands

and Interim Forestry area, provided all applicable environmental laws and regulations are followed.

RL-42 In the rural areas adjacent to designated Forest Resource Lands and Interim Forestry lands, no residential building shall be allowed within 100 feet from any property line unless (1) the applicant for a building permit acknowledges the possible occurrence of resource activity on the adjacent property, and (2) waives any damages which might occur to the residence or occupants because of such activities which are conducted within generally accepted management practices and in compliance with applicable laws which regulate such activities. Such waivers must be filed with the County Auditor.

RL-43 Kitsap County should notify nearby landowners and occupants of the likely continued use of lands designated Forest Resource Lands and Interim Rural Forestry for resource production.

RL-44 Kitsap County should work with the Department of Natural Resources, Tribes, community groups and private forest landowners to promote long-term preservation of forest lands.

RL-45 Incentives for continued resource uses should be developed, including but not limited to:

- # Providing relief from special levies, assessments, and/or local improvement districts
- # Instituting density transfers
- # Promoting economies of scale through cooperative resource management and marketing for small landowners.
- # Developing expedited permit review processes for forestry-related

activities which involve stewardship, habitat restoration, and/or resource management plans that include “best management practices.”

- # Cooperating with state agencies and tribes to expedite regulatory review and technical assistance to cooperating landowners.
- # Establishing incentives for consolidation of non-conforming and non-buildable lots.
- # Requiring subdivision site designs to minimize conflict with nearby forestry activities.
- # Encouraging fee-simple purchase, less than fee-simple purchase, purchase with leaseback or other methods to acquire forest land.

RL-46 Kitsap County shall consider adopting the 1997 Urban-Wildland Interface Code as part of its wildfire protection program.

Mineral Resources

RL-47 Commercial quality mineral resource deposits are recognized as non-renewable resources and managed accordingly.

RL-48 In the rural areas adjacent to designated Mineral Resource lands, no residential building shall be allowed within 100 feet from any property line unless (1) the applicant for a building permit acknowledges the possible occurrence of resource activity on the adjacent property, and (2) waives any damages which might occur to the residence or occupants because of such activities which are conducted within generally accepted management practices and in compliance with applicable laws which regulate such activities. Such waivers must be filed with the County Auditor.

- RL-49** Presently, the plan recognizes those sites with valid surface mining permits from the State Department of Natural Resources as well as those which have been identified by the property owner as mineral resource lands. Those mineral lands which now appear on the Land Use Plan Map which have been identified by the property owner must submit a geologic study, conducted by a qualified geologist, pertaining to the presence of commercial quality mineral deposits by the second annual review of the plan in order to keep such a designation. Mineral Resource lands may only be added or deleted during the annual review of the adopted Comprehensive Plan. Any additions or deletions will be based upon submission of a geologic study, conducted by a qualified geologist, pertaining to the presence, or lack of commercial quality mineral deposits.
- RL-50** A geologic study to identify commercial quality deposits shall be undertaken after the adoption of the comprehensive plan. Such a study, where feasible, should be undertaken in conjunction and cooperation with other geologic studies as required, such as the study of aquifers.
- RL-51** Information regarding significant commercial quality deposits identified in the survey shall be shared with the property owners. If extraction is viable, can be provided with services and can be made compatible with surrounding land use, the County should encourage the development of the resource.
- RL-52** The County shall consider the need for long-term supplies of mineral resources and establish criteria so that it may, if necessary, designate deposits of long-term commercial significance.
- RL-53** Exhausted mining sites are required to be reclaimed in a manner consistent with the adopted Comprehensive Plan.
- RL-54** The County shall coordinate with the State Department of Natural Resources to ensure that future reclamation plans are consistent with the comprehensive planning for the site and surrounding area.

Natural Systems Chapter

This Natural Systems Chapter is divided into the following sections:

The Introduction describes the intent of the Natural Systems Chapter and its relationship to Kitsap County's vision of the future and other Comprehensive Plan chapters.

The Planning Context discusses the requirements of the Growth Management Act and the Countywide Planning Policy as they relate to policies that preserve the County's natural environment.

The Natural Systems Goals and Policies are divided into the following areas:

- A. Geologically Critical Areas** address land uses in geologically unstable areas.
- B. Aquifer Recharge Areas** address protection of ground water quality and quantity.
- C. Surface Water Resources** address protection of quality and quantity of the county's streams, wetlands, lakes and marine waters of Puget Sound.
- D. Frequently Flooded Areas** address land use issues in frequently flooded areas.
- E. Plant, Fish and Wildlife Habitat Conservation Areas** address issues related to protection of wildlife habitat.
- F. Air Quality** addresses air quality issues.

Planning Context

Introduction

As Kitsap County continues to grow, the impact of that growth on the natural environment becomes even more apparent. Access to attractive natural areas and the recreational opportunities made available by fish, wildlife, clean water and open spaces play a large role in enhancing the quality of life in Kitsap County. In order to adequately meet the need for protection, preservation and enhancement of natural systems and resources, the Natural Systems chapter provides a framework for understanding natural systems as they relate to each other, to land use planning and to the regulatory process.

Critical areas include wetlands, critical aquifer recharge areas, fish and wildlife habitat areas, frequently flooded areas and geologically hazardous areas; this chapter summarizes the benefits of and threats to each of these environmental factors. The implementation of the policies outlined in the chapter will aid in the protection and enhancement of these areas. The Natural Systems Chapter works with other chapters within the Comprehensive Plan to protect critical areas and natural features. The Land Use Chapter helps protect sensitive areas by directing intense development away from them and into areas more suitable for industrial uses and increased density. This chapter also works with the Housing Chapter by keeping the community attractive to residents, and retaining the features that contribute to a high quality of life.

The framework for this section is based on the goals of the Growth Management Act,

NATURAL SYSTEMS

Vision 2020 and the Kitsap Countywide Planning Policies. Specifically, the Growth Management Act requires comprehensive plans to protect the environment and enhance the state=s high quality of life, including air and water quality and the availability of water.

The chapter includes policies to protect natural systems and to manage development in hazardous areas while recognizing that development will affect the environment. These policies seek to minimize the impacts of development by preserving and protecting key environmental features, natural systems and resources while increasing predictability; providing for timely and consistent decisions; and allowing for some economic use of properties whenever possible.

Goals and Policies

The Natural Systems Chapter provides a series of goals, objectives and policies to guide future growth in a manner that preserves the county=s natural environment. The natural systems considered are: Geologically Critical Areas, Aquifer Recharge Areas, Surface Water Resources, Frequently Flooded Areas, Fish and Wildlife Habitat Conservation Areas and Air Quality. Natural systems are specifically addressed in this plan because of their sensitivity to development and because of the human health, property and ecological risks associated with unsuitable development. For a more detailed discussion of each of these systems, please reference the Natural Systems Appendix.

As efforts such as the Kitsap County Groundwater Management Plan are completed and a better understanding of the complex hydrology of the county is refined, it is understood that this Comprehensive Plan, including this section on goals and policies, will be amended accordingly. The Groundwater Management Plan will specifically require State Environmental Protection Act (SEPA) declarations, an environmental impact statement, and concurrence from local jurisdictions with the recommendations.

A. Geologically Critical Areas

NATURAL SYSTEMS

Geologically critical areas are places highly susceptible to erosion, landslides, earthquakes or other geologic events. In Kitsap County, the most hazardous of these areas are typically found along the marine shoreline, stream valleys and the steep slopes of Gold and Green Mountains. In many cases, these areas may be extremely desirable for development because of their scenic views or water and beach access, but their development may endanger people, property, public welfare and surface water resources. For these reasons, areas that may be geologically unstable must be designated as critical areas.

For purposes of this plan and implementing regulations, geologically sensitive areas fall into two categories: Geologically Hazardous Areas and Areas of Geologic Concern. These areas are categorized according to the presumed severity of their geologic conditions. Geologically Hazardous Areas pose the more serious threat to life and property.

Geologically Hazardous Areas

1. Areas with slopes greater than 30% and mapped by the Coastal Zone Atlas or Quaternary Geology and Stratigraphy of Kitsap County as Unstable (U), Unstable Old Slides (UOS) or Unstable Recent Slides (URS), as defined in Table NS-1 of Natural Systems Appendix.
2. Areas with slopes greater than 30% and deemed by a qualified geologist to meet the criteria of U, UOS or URS.

Areas of Geologic Concern

1. Areas designated U, UOS or URS in the Coastal Zone Atlas or Quaternary Geology and Stratigraphy of Kitsap County, with slopes less than 30%; or areas found by a qualified geologist to meet the criteria for U, URS, and UOS with slopes less than 30%.
2. Slopes identified as Intermediate (I) in the Coastal Zone Atlas or the Quaternary

Geology and Stratigraphy of Kitsap County, as defined in Table NS-1 of Natural Systems Appendix; or areas found by a qualified geologist to meet the criteria of I.

3. Slopes 15% or greater, not classified as I, U, UOS, or URS, with soils classified by the Natural Resources Conservation Service as A highly erodible \equiv or A potentially highly erodible \equiv (See Table NS-2 of Natural Systems Appendix.)
4. Slopes 15% or greater with springs or groundwater seepage not identified in numbers 1, 2, or 3 above.
5. Seismic areas subject to liquefaction from earthquakes such as hydric soils, as identified by the U.S. Natural Resources Conservation Service, and areas that have been filled with additional soil materials to enhance buildability. In many cases, fill areas are former wetland areas.
6. Areas that are known or suspected to be of concern or hazard but are not previously documented.

Goals

The two preceding designations utilize existing information; as more information on geologic conditions in Kitsap County becomes available, these designations may be revised. The following goals and policies apply to geologically critical areas in Kitsap County.

1. Protect public safety and health, maintain water quality and habitat, minimize erosion of soils and bluffs, and diminish the public cost of repairing areas from damage due to landslides, erosion and seismic activities.
2. Consider geologically critical areas in designating land use and zoning classifications.
3. Maintain and update a county map for land use planning and regulatory purposes

NATURAL SYSTEMS

which depicts geologically hazardous areas and areas of geologic concern.

4. Develop a critical areas ordinance which addresses land use controls in geologically critical areas.
5. Protect the forested slopes and ridgelines designated as geologically critical areas. Formulate design criteria for development in areas of geologic concern.

Policies

NS-1 Development in geologically critical areas should occur in a manner that poses no hazard to health or property and that minimizes impacts to the natural environment.

NS-2 The geologically critical areas map shall be based on information from the Coastal Zone Atlas of Washington, the Report Quaternary Geology and Stratigraphy of Kitsap County, and other available geotechnical reports.

NS-3 Hydric soils shall be delineated on a wetlands map and development on these soils shall be in accordance with wetlands policies and regulations.

NS-4 Where information about extensive fill areas is known, fill areas shall be depicted as areas of geological concern.

NS-5 The geologically critical areas map shall be updated regularly to reflect the latest information.

Aquifers and wellhead information has been used in developing the land use element of the Comprehensive Plan. On going review of the aquifer and wellhead information will be necessary to determine the need for future

NS-6 Building and land use applications in geologically critical areas will be reviewed to see that public health, safety and welfare are protected.

NS-7 Prohibit development in geologically hazardous areas unless the site is demonstrated by a qualified geotechnician to be suitable for building.

NS-8 Establish development standards in geologically critical areas that promote maintenance of existing vegetation, discourage clearing of ridgelines and slopes for scenic vistas and stormwater drainage impacts.

NS-9 Kitsap County will encourage building sites to be located away from critical areas like steep slopes and breaks-in-slopes.

B. Aquifer Recharge Areas

Groundwater constitutes more than 80% of the water used in the county. Groundwater moves through the ground to replenish aquifers are known as Aquifer recharge areas.

The quality and quantity of groundwater in an aquifer is closely linked to the aquifer's recharge area. Although much information is lacking regarding the location of aquifers and recharge areas, it is generally believed that, to a varying degree, most of the county provides recharge to one or more aquifers.

adjustments in the Comprehensive Plan and implementing development regulations.

In order to protect potable groundwater from contamination, aquifer recharge areas and the waters that flow through them must be protected from degradation and contamination. Some aquifers are more vulnerable to contamination due to their shallow depth, overlying geology, soils, topography.

For purposes of this plan and implementing regulations, aquifer recharge areas are classified in two categories: Critical Aquifer Recharge Areas and Areas of Concern.

Critical Aquifer Recharge Areas

This category delineates those areas which recharge aquifers that are used as or have the potential to be used as a significant potable water supply and have been deemed to be highly susceptible to the introduction of pollutants. Land-use activities within certain distances from wells have potential to impact groundwater.

1. For example, in a one-year travel protection zone, it takes one year for groundwater to travel to a well. These zones, when around Group A wells (15 or more connections) are considered Critical Aquifer Recharge Areas.
2. The Hansville Aquifer Recharge Area (an environmentally sensitive area under the county's SEPA Ordinance) also has been designated a Critical Aquifer Recharge Area.
3. Five year time of travel zones in Wellhead Protection Areas are included as Critical Aquifer Recharge Areas under the following condition: The five year time of travel zone is included when the well draws its water from an aquifer that is at or above sea level and is overlain by permeable soils without an underlying protective impermeable layer.
7. Evaluate potential impacts on groundwater quality and quantity during the development and redevelopment review process. Consider the cumulative impacts

Aquifer Recharge Areas of Concern

This category indicates those areas that are evaluated to provide recharge to aquifers which provide or have the potential to provide potable water, and are vulnerable to contamination. These areas will be delineated based upon three criteria:

1. Areas with surface soils that permit easy percolation of water, and therefore contaminants, including the following Natural Resources Conservation Service soil types: Grove (11,12,13), Indianola (18,19,20,21), Neilton (34,35,36), Norma (37,38), Ragnar (41,42,43,44,45,46,47).
2. Surface areas above shallow, principal aquifers (less than 300 feet below sea level), and which are not separated from the underlying aquifer by an impermeable layer.
3. Areas of small-well concentration (four or more Group B water systems and/or private wells per quarter-quarter section) as identified by Kitsap County Public Utility District No. 1.

Goals

5. Preserve and protect aquifer recharge areas and prevent degradation of the quality of and quantity groundwater.
6. Develop criteria for designating critical recharge areas and aquifer recharge areas of concern. Identify and map critical recharge areas vulnerable to contamination per minimum guidelines.

of existing and future development on surface water quality.

NATURAL SYSTEMS

8. Enhance the quantity and quality of stormwater recharge.
9. Maintain a groundwater education program for county residents and businesses.

Policies

NS-10 Within one year of adoption of the Comprehensive Plan, the county should work with the Kitsap Public Utility District to assess designation of additional Critical Aquifer Recharge Areas and further refine the designation of Aquifer Recharge Areas of Concern.

NS-10a Kitsap County will initiate review of further aquifer and wellhead information to determine the need for revisions to the Critical Areas Ordinance, Zoning Ordinance and other implementing development regulations to ensure that impacts to groundwater quality and quantity are minimized. This will be particularly important within urban growth areas where the highest intensity of land use will occur resulting in a high percentage of impermeable surfaces.

NS-11 Coordinate with public and private water purveyors and other jurisdictions to designate wellhead protection areas as required by the Washington State Department of Health.

NS-12 Kitsap County should require proposed projects which present a threat to a critical aquifer recharge area to provide geologic or hydrologic information to evaluate the proposal.

NS-20 Where feasible, Kitsap County should encourage the use of Agray water (treated wastewater) for irrigation or reuse, to promote

NS-21 In areas with evidence of significant saltwater intrusion, the County

NS-13 Project design should address the extent and mitigate the recharge limiting effect of impermeable surfaces or other factors affecting groundwater recharge.

NS-14 Within Critical Aquifer Recharge Areas, the County should limit land uses listed by the EPA Office of Drinking Water exhibit titled AOperations with Potential Threat to Groundwater. Within Aquifer Areas of Concern, listed land use should require appropriate safeguards and/or mitigation.

NS-15 Kitsap County should evaluate proposed projects for their potential adverse impacts upon groundwater quality and quantity.

NS-16 Kitsap County shall implement the recommendations of the Kitsap County Groundwater Management Plan when adopted, using resources available to accomplish higher priority actions first.

NS-17 The County shall carefully evaluate proposed land uses of reclaimed sand and gravel mines due to the susceptibility of aquifers underlying these mine areas.

NS-18 Kitsap County should work with appropriate agencies and jurisdictions to conduct studies to determine the quantity and quality of recharge that can be expected from septic systems.

NS-19 Kitsap County should consider the impacts of sewer plans on groundwater quality and quantity.

water conservation and enhance aquifer recharge.

should employ actions specified by the state.

NS-22 Coordinate with the Kitsap Public Utility District and other jurisdictions and government agencies to pursue funding for groundwater and wellhead protection efforts.

NS-23 Kitsap County and appropriate agencies and jurisdictions should develop a pilot retention and recharge program to evaluate technologies that retain and recharge stormwater.

NS-24 Kitsap County should work with appropriate agencies and jurisdictions to implement a public education program that promotes water conservation and emphasizes the proper installation and maintenance of septic systems and the proper use and disposal of fertilizers and pesticides including the use of non-toxic alternatives where possible.

C. Surface Water Resources

Kitsap County's surface water resources include all streams, wetlands, lakes and marine waters of Puget Sound. The quality and quantity of these waters is important for public health, fish and wildlife habitat, recreational and commercial pursuits such as shellfish harvesting, fishing and tourism. A network of streams carries water from the county's uplands to lakes, wetlands and the marine environment. A system of freshwater and saltwater wetlands which stretches throughout the county also plays a vital role in filtering and storing water.

15. Develop and implement a countywide Surface and Stormwater Water Management Program Quantity for water and quality. .

16. Improve existing water quality so that water bodies may be removed from the State's 303d List of Impaired

The quantity and quality of the county's surface waters are greatly affected by land use activities. Due to the continuity between ground and surface waters, many of the actions necessary to protect surface water resources are similar to those necessary for preservation of groundwater quality and quantity. The county's surface water resources are mapped based upon information provided by the U.S. Fish and Wildlife Service's National Wetlands Inventory, the Natural Resources Conservation Service and the Washington State Department of Natural Resources; and are shown in Figure NS-8 of the Natural Resources Appendix. As more information becomes available, this map will be revised.

Goals

10. Protect the water quality of rivers, streams, lakes, wetlands, Puget Sound and Hood Canal while allowing for compatible growth and development.

11. Evaluate potential impacts to surface water quality during the development review process.

12. Increase the accuracy of information about wetland and stream locations and types.

13. Develop a critical areas ordinance which protects surface water resource areas including fish and wildlife habitats and wetlands.

14. Enhance and restore degraded wetland, stream and shoreline areas.

Water Bodies under the Federal Clean Water Act.

NATURAL SYSTEMS

17. Educate county residents and businesses about the natural environment and the benefits of healthy surface water resources.

Policies

NS-25 Kitsap County shall safeguard surface water resources by only allowing development that is compatible in critical areas such as steep slopes, wetlands, shorelines and riparian corridors.

NS-26 Kitsap County shall consider cumulative impacts of existing and future development on surface water quality.

NS-27 Kitsap County should minimize and mitigate for impervious surface associated with development.

NS-28 The County's geographic information system should map the wetlands and streams identified in delineations for site plans and development proposals and should map the findings of professionally conducted local wetlands inventories.

NS-29 The County should support and encourage community groups to sponsor professionally conducted local wetlands inventories.

NS-30 Kitsap County shall encourage best management practices in the use of herbicides and pesticides near surface waters or drainage ditches.

NS-31 Kitsap County shall require construction activities to use best

NS-38 Kitsap County should identify degraded streams and wetlands, and develop restoration plans for those water bodies.

NS-39 Kitsap County shall work with the Kitsap Conservation District to encourage development of a farm

management practices to minimize erosion and siltation problems.

NS-32 The County shall require native vegetation buffers along streams and wetlands to protect the functions and values of those surface waters.

NS-33 Kitsap County shall strive to achieve no net loss of wetland function and acreage in the short term, and a measurable gain of wetland function and acreage in the long term, in the following manner: Avoid direct impacts on wetlands and buffers; minimize direct impacts to wetlands and buffers; and mitigate impacts through creation, restoration, or enhancement of wetlands or buffers.

NS-34 Kitsap County may require larger scale projects to monitor their impacts to surface water quality.

NS-35 Kitsap County should require conversion forestry activities to be carried out in a manner consistent with adopted surface water policies and standards.

NS-36 Kitsap County shall refer to the recommendations of adopted Watershed Action Plans in refining the critical areas ordinance.

NS-37 Kitsap County should design and implement a wetlands mitigation banking program which uses the Clear Creek drainage basin as a pilot project.

management plan and limit livestock access to streams and

wetlands, to protect water quality and fish and shellfish habitat.

NS-40 Kitsap County should recognize adopted watershed action plans as part of the Comprehensive Plan, and coordinate the implementation of plan recommendations. Where appropriate, recommendations which apply to all watersheds should be implemented on a countywide basis.

NS-41 The County=s Surface and Storm Water Management Program should include a basin approach to stormwater facility planning.

NS-42 The Countywide Surface Water Program should address agricultural and forestry technical assistance, on-site sewage inspections, boater waste reduction and moderate-risk waste (e.g., household cleaners, lawn care products) reduction.

NS-43 The County should establish a countywide water quality monitoring program.

NS-44 The County=s Surface Water Program shall support and coordinate volunteer stream and wetland restoration and preservation efforts.

NS-45 The County shall design and provide educational materials about surface water resources.

D. Frequently Flooded Areas

Frequently flooded areas are lands inundated with water during periods of high rainfall, extreme high tides or strong coastal winds. They typically lie adjacent to streams, rivers, lakes and coastlines and include wetlands associated with these areas. During intense storms, properties located in frequently flooded areas are prone to severe damage. Development in these areas may be hazardous not only to the property owner, but may also aggravate flood conditions on neighboring lands and compound damage to the natural environment.

Kitsap County is not as prone to catastrophic flooding as other counties in the Puget Sound region, due to a lack of major river systems, a preponderance of embayments which soften wave velocities and the presence of steep bluffs along much of the shoreline. Despite this, some coastal and riparian flooding occurs, and localized flooding from drainage problems exists.

The Federal Emergency Management Agency (FEMA) has identified areas throughout Kitsap County that are susceptible to 100-year flood events, known as 100-year floodplains. Other areas inventoried include V-Zones, which are places along the shoreline susceptible to damage from high velocity waves. Areas depicted on FEMA=s National Flood Insurance Program maps as V-Zones and 100 year floodplains are designated frequently flooded areas. Other areas of frequent flooding may be designated as more information becomes available.

Goals

18. Reduce the risk of damage to property, life and the natural environment from flooding. Prevent development on floodplains that might have the potential to damage property or increase height, flow or velocity of floodwater.

NATURAL SYSTEMS

- 19.** Prevent land use in floodplains that may degrade water quality during times of flooding.
- 20.** Reduce the occurrence of flooding due to drainage problems and increased stormwater runoff.

Policies

NS-46 Discourage development in frequently flooded areas except when no conditions will be created which will be injurious to life, property or natural systems in time of flooding.

NS-50 The natural vegetation in floodplains should be maintained, where feasible, to minimize runoff into streams and reduce the risk of increased stream flow, stream velocity and coastal flooding.

NS-51 Where streams flow through watersheds shared by the county and other jurisdictions, the county should pursue coordinated basin management.

NS-52 Prohibit the location of hazardous materials and solid waste facilities in floodplains.

NS-53 Work with the Bremerton-Kitsap County Health District to discourage the location of on-site sewage systems in floodplains.

NS-54 Development regulations should require site design that minimizes impervious surfaces, limits grading and protects areas of undisturbed vegetation in order to decrease

Habitat conservation areas are places critical to the survival of Kitsap County's diverse plant, fish and wildlife communities. These areas include a variety of terrestrial, freshwater and marine habitat types and also encompass structural habitat elements such as

NS-47 In frequently flooded areas, improvements to existing structures shall be constructed using methods and practices that minimize flood damage.

NS-48 Diking and bank protection which may alter the natural hydrology of streams should be minimized, except where used to enhance habitat.

NS-49 Prohibit the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas.

stormwater runoff and hydrologic changes in drainage basins.

NS-55 To reduce runoff and related flooding, new development should provide facilities that maintain the quantity of runoff, flow peaks and flow durations at pre-development levels.

NS-56 Through the Surface and Storm Water Management Program, Kitsap County will inventory drainage basins to identify existing and future stormwater drainage problems.

NS-57 Where wetland functions are altered or displaced, replacement shall occur within the drainage basin.

E. Plant, Fish and Wildlife Habitat Conservation Areas

forested shorelines or standing dead trees (snags).

Recent proposed listing of chinook and summer chum salmon stock under the Endangered Species Act (ESA) and the likely

NATURAL SYSTEMS

proposed listing of other anadromous fish species, has greatly increased the concern for habitat protection and restoration in the Puget Sound area.

Protection and restoration of habitat conservation areas and other habitat is key to protecting the biological diversity of Kitsap County and the Puget Sound region. As development changes the face of the landscape, habitat critical to some species is lost or degraded. These losses can be minimized or reduced through land use policies and regulations which address critical habitat issues, as well as through acquisition or preservation of habitat for open space.

2. Areas identified by the Department of Natural Resources as significant plant communities or known habitat for federal or state listed endangered, threatened, candidate and sensitive plant species.
3. Freshwater and saltwater wetlands (including lakes and ponds under 20 acres) as identified by the U.S. Fish and Wildlife Service National Wetlands Inventory, Natural Resources Conservation Service, Department of Natural Resources or other professionally conducted wetlands inventories.
4. Streams and riparian areas, particularly those which provide habitat for wild anadromous fish or in which fish rearing facilities or release activities exist.
5. Marine habitat areas identified as kelp and eelgrass beds, herring and smelt spawning areas or shellfish beds.

In addition, a number of habitat elements in Kitsap County are important to the well-being of fish and wildlife species. These elements include large parcels of contiguous

24. Protect, enhance and restore aquatic habitat areas, such as streams, wetlands, lakes, shellfish beds, herring and smelt spawning areas, and kelp and eelgrass beds.

A complete inventory of existing or historic habitat types in Kitsap County does not exist. Much of the information available comes from a variety of sources and is specific to certain wildlife species or plant communities. Habitat Conservation Areas are described below. Where they are known, they are mapped in Figure NS-11 found in the Natural Systems Appendix.

Designation

1. Areas identified by the Department of Fish and Wildlife as Priority Habitat, including habitat for federal or state listed endangered, threatened, candidate and sensitive species.

undeveloped acreage, snags and downed trees, natural shorelines, mature trees along shorelines and wetlands, urban natural areas and habitat corridors. A complete inventory of where these habitat elements exist in Kitsap County has not been conducted. The preservation of important habitat elements is important to the survival of certain species, and areas rich in these elements should be identified as habitat conservation areas. As more information becomes available, the designations and maps will be revised.

Goals

21. Preserve the biological diversity of Kitsap County and Puget Sound.
22. Identify and protect habitat conservation areas and other important habitats throughout the county.
23. Develop a critical areas ordinance and development regulations which protect habitat conservation areas and important habitat elements.
25. Encourage voluntary protection of species and habitat.

NATURAL SYSTEMS

26. Identify species of local importance within Kitsap County.

27. Work to restore anadromous fish runs in Kitsap County.

NS-59 Kitsap County shall maintain and update a countywide inventory of existing plant, fish and wildlife habitat and shall make appropriate information available to the public.

NS-60 The County shall work with other government jurisdictions to protect habitat areas and corridors which cross jurisdictional boundaries.

NS-61 The County should work to minimize habitat fragmentation and protect open space and connective corridors.

NS-62 The County shall consider the impacts to habitat conservation areas and fish and wildlife populations in designating land use and zoning classifications.

NS-63 The County's Open Space Plan should be amended to include the findings of a future habitat inventory and habitat protection plan.

NS-64 Trail systems through habitat conservation areas should be carefully sited to minimize impact to fish and wildlife species.

NS-65 To protect fish and wildlife habitat, the County should consider

NS-69 The County shall encourage developers to protect continuous corridors of native vegetation

Policies

NS-58 Kitsap County shall work with appropriate state agencies and community organizations to conduct a thorough, countywide inventory of habitat types and areas with important habitat elements. Based upon this inventory, a habitat protection plan should be developed that recommends areas most in need of protection or restoration.

requiring vegetative buffers along streams, lakes, ponds and marine shorelines. Larger or enhanced buffer areas may be required to adequately protect priority fish and wildlife species.

NS-66 Buffer enhancement or restoration shall be required where buffers have been degraded or removed during new development.

NS-67 The County shall review building permit applications located within identified habitat conservation areas and should forward to the Department of Fish and Wildlife or the Department of Natural Resources for review those which may pose a potential adverse impact.

NS-68 Kitsap County will work with local, state and federal agencies, area tribes, and adjacent jurisdictions to review county programs and regulations in order to develop recovery plans for anadromous fish species proposed for listing under the Federal Endangered Species Act.

wherever possible, to disturb as little natural vegetation as feasible and to enhance or restore wildlife

NATURAL SYSTEMS

habitat by transplanting or planting native vegetation in the developed landscape.

NS-70 Encourage cluster development to protect fish and wildlife habitat and where possible plan cooperatively with adjacent property owners to provide maximum habitat potential.

NS-71 During the review of conversion option harvest plans, the county

NS-73 The County should work with the Department of Fish and Wildlife and local tribes to inventory man-made blockages of fish passageways and prioritize removal of blockages or otherwise restore stream corridors.

NS-74 Minimize sedimentation and turbidity in fresh and marine waters through measures which control stormwater runoff and reduce stream and shoreline erosion.

NS-75 The County should provide information about existing government and private programs pertaining to voluntary habitat protection, enhancement and restoration.

NS-76 The County should encourage private-public partnerships to restore and enhance fish and wildlife habitat.

F. Air Quality

A number of activities associated with urban and rural land uses generate air pollution, including traffic, industrial emissions or byproducts, open burning and wood stoves and fireplaces. When certain weather conditions prevail, pollutants emitted from

29. Kitsap County will meet or exceed the requirements of the federal Clean Air Act Amendments and state Clean Air Washington Act.

shall consider long-term impacts to habitat conservation areas and important habitat elements.

NS-72 The County shall work with other jurisdictions, agencies and private landowners to reduce nonpoint source pollution and implement the recommendations of approved watershed management plans.

human activities do not easily disperse, and poor air quality becomes worse.

Air pollution can cause or exacerbate temporary and chronic health problems including bronchitis, asthma and other lung problems and has been linked to cancer. Excessive air pollution may indirectly cause damage to vegetation or impact water quality and may contribute to global problems, like ozone depletion or global climate change.

At this time, air quality in Kitsap County generally meets or exceeds national and state environmental standards. As the county becomes more urbanized and emissions from traffic, industry, land clearing and domestic burning increase, air pollution may begin to exceed health standards. Areas exceeding air quality standards are subject to stringent state and federal pollution control requirements, which may impact economic development goals, increase pollutant control costs to local governments and affect use of residential wood stoves and outdoor burning.

Goals

28. Ensure clean air for all residents of Kitsap County, and eliminate emissions of harmful pollutants, especially toxins and ozone-depleting chlorofluorocarbons.

30. Coordinate land use, economic development and transportation plans

NATURAL SYSTEMS

to minimize or reduce air pollution emissions and concentrations.

Policies

NS-78 The County shall work with the state and local fire districts to

NS-79 To reduce air pollution from outdoor burning, Kitsap County should provide solid and Agreen yard waste collection service at a reasonable cost in urban residential areas, and shall promote on-site, wood-waste recycling facilities at land-clearing operations.

NS-80 The County should encourage the use of alternatives to wood as primary sources of heat in residential areas.

NS-81 To reduce air pollution from traffic, Kitsap County shall promote higher residential densities and job bases within urban growth areas, thus providing greater access to efficient public transportation and other modes of transportation (e.g., walking and cycling).

NS-82 Kitsap County shall discourage siting of commercial, industrial or public facilities where projected air pollution emissions would cause health or smoke/odor nuisance problems to adjacent or nearby land uses such as hospitals, schools or residential neighborhoods.

NS-83 Kitsap County shall work together with other jurisdictions, the Puget Sound Air Pollution Control Authority and the Puget Sound Regional Council to obtain federal and state programs and funding that promote clean air protection and enhancement, particularly through transit planning and attraction of nonpolluting businesses.

enforce adopted air pollution control standards for stationary-source emitters, such as business and industry, and area-wide source emitters, such as wood stoves, fireplaces and outdoor fires.

Economic Development Chapter

for a streamlined approval and permit process.

Introduction

This Economic Development Chapter is divided into the following sections:

The Introduction describes the intent of the Economic Development Chapter and its relationship to Kitsap County's future vision.

The Planning Context discusses the requirements of the Growth Management Act and the Countywide Planning Policy.

Kitsap County's Economic Base provides a brief discussion of economic trends and a summary of a land supply and demand analysis performed to identify an appropriate amount of land for desired employment uses.

The Economic Development Goals and Policies are divided into the following areas:

- A. Economic Development and Diversity** addresses how Kitsap County can foster diverse economic activities.
- B. Industrial and Business Land Capacity** addresses the provision of sufficient industrial land.
- C. Cooperation and Partnership** addresses for intergovernmental cooperation and private-public partnerships.
- D. Education and Job Training** addresses maintaining and attracting a well-educated population.
- E. Permit Process** addresses the need

A stable and diverse economy supporting family-wage jobs plays a significant role in maintaining the vitality and quality of life within a community. A healthy tax base provides for schools, parks, infrastructure, public safety and other public facilities and services. Economic development activities help to build strong, sustainable communities. At the same time, economic prosperity must not come at the detriment of the natural environment, which itself is an important asset to attract and retain businesses and skilled workers. The balance between the environment and the economy increasingly is called "sustainable economic development."

Activities that seek to nurture a healthy economy involve far more than just business leaders and local governments. Members of labor, neighborhood, social service, environmental, cultural and educational groups are all concerned with how employment and economic vitality affect our daily lives and our community.

The context of economic development itself has changed during recent years. In the past, economic development was a locally or regionally driven process, occasionally affected by state or national concerns. Technological advancements are pushing the world toward a more "global" economy. As communities experience the impacts of this new economy, they must focus some of their business retention, expansion, formation and recruitment efforts upon those industries that are able to respond to global trends or are linked to the global economy and expected to grow. These key industries are predicted to be

the primary generators of basic employment in the future.

Local economic policy and initiative will play an ever-increasing role in shaping the global competitiveness of Kitsap County industry. These policies and initiatives must focus on trade, transportation, communication, skilled labor, research and a regulatory and taxation framework that promotes sound economic expansion.

In addition, Kitsap County's economic development policy requires that we develop, maintain and monitor a streamlined approval and permit process. We must take a proactive stance in attracting suitable industry and commerce to the county, measure our performance, promote intergovernmental cooperation and make a commitment towards consistency and predictability for all parties. By implementing such, we will be recognized and stand out as a leader in economic development in a very competitive market.

The Economic Development Council of Kitsap County (EDC) is a non-profit agency responsible for facilitating and fostering economic development and diversification in Kitsap County. The EDC held an Economic Diversification Summit in March 1993, 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 to foster economic development and diversification within Kitsap County. The EDC will be an ongoing partner with Kitsap County, its businesses and its citizens to help make the Comprehensive Plan's economic vision a reality.

Kitsap County's Economic Needs

Planning Context

The Growth Management Act, in an attempt to encourage local governments to anticipate, prepare for and respond to different economic trends, requires that jurisdictions' comprehensive plans encourage economic development consistent with other community policies and provide for the economic needs of all citizens, including the unemployed and disadvantaged.

Kitsap County's Countywide Planning Policy also calls for policies to promote economic development. In addition, the Countywide Planning Policy seeks to encourage coordinated economic growth among all jurisdictions within Kitsap County. Kitsap County has prepared this Economic Development Chapter to meet these requirements and community desires for a productive and sustainable economy .

Economic Development Goals, Trends and Needs

Background information in Appendix A of this Comprehensive Plan, which is summarized below, provides an overview of

Kitsap County's economy; objectives for economic diversification; and an assessment of land supply and demand. Important input to this information included an *Industrial Land Market Analysis* published by the EDC in 1994; this was reviewed and adapted as appropriate to meet the needs of the

- X focuses on economic diversification to reduce dependence on military employment;
- X 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
- X provides, through Comprehensive Plan designations, an adequate supply of land to accommodate targeted employment growth.

This should include a variety of site types and sizes to meet the varied economic needs of small and growing businesses.

These principles are incorporated into the Comprehensive is Plan's goals and policies and reflected in land use map designations.

Kitsap County's economy relies heavily on employment by the federal government at five military installations and facilities and by military-related businesses. In 1995, these facilities employed approximately 33% of the total work force in Kitsap County. Non-military employment is led by professional services, retail and services, and public administration.

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

Comprehensive Plan.

Consensus developed at the 1993 Economic development Summit sponsored by the EDC resulted in recommendations and a marketing strategy that:

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. 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.

Use of natural resources, such as forestry, fishing and agriculture, have historically been a significant source of economic stability in Kitsap County. Although there are still viable employment opportunities to be found in Kitsap County's natural resources, the economic vitality of this sector has been decreasing since 1980.

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. 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%. Kitsap County's tourism and recreation-related industries have benefitted from local population growth.

(For more detail on Kitsap County's economic conditions and trends, see the Economic Development Appendix.

Employment Trends

The Puget Sound Regional Council estimates that an additional 33,967 employable people will reside in Kitsap County in 2012. The

Employment Security Department of Washington State reports that the available work force (those residents either employed or seeking employment) in Kitsap County in 1992 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 Kitsap County will need to plan for over the 20-year period of this comprehensive plan.

Over the next 20 years, jobs within the service and retail sector are expected to continue to grow -- mirroring a national trend toward economic dominance of the service sector. Government employment and manufacturing are predicted to increase only slightly or remain stable.

However, significant reductions in the federal work force would have major impacts on these employment forecasts. That's because 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 county's low (2.5%) percentage of manufacturing, however, is indicative of the 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 its ripple effects on the dependant service and retail industry.

Land Capacity Analysis

Employment Land Supply & Demand

Appendix A of this Comprehensive Plan also contains a detailed analysis of the projected demand and supply of land for employment uses in Kitsap County over the next 20 years. It describes the approach and methodology relied on in the Comprehensive Plan to designate an appropriate amount, location and distribution of commercial, industrial and business park lands. The general approach is to: identify forecast jobs (using Washington State Employment Security Department data and local goals); estimate land needs based on typical building configurations and use patterns; calculate appropriate deductions and market factors to compensate for land constraints and market effects; and use these

data as the basis for Comprehensive Plan land use designations.

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 were compiled in a

mathematical model or formula that was used to estimate how many acres of land are needed to accommodate expected jobs.

Future Employment Targets.

Washington State Employment Security Department’s employment projections (through 2020) have been used as the starting point for planning. These were adjusted to reflect the local economic development objective of increasing Kitsap County’s share of manufacturing jobs over the next 20 years from its current 2.9 percent of total non-agricultural jobs to 9 percent over 20 years. The jobs forecasts for the manufacturing sector have been increased to achieve this target. The adjusted forecasts result in targets of approximately 26,000 new jobs between 1992 and 2012, and an additional 7,000 new jobs by 2017.

Building Types/Configurations. Based on observations in the market place (regional and local), some portion of jobs that may be categorized as commercial will actually locate in industrial zones or buildings (e.g. a business consulting firm located in an industrial park); the same applies to jobs categorized as industrial in nature. An adjustment was made to more accurately reflect the type and amount of employment land and space that will be needed considering the types of buildings that businesses are likely to locate in.

Translating Employment Projections into Land Demand

The number of projected new employees in commercial and industrial categories was converted into gross acres of land using a number of ratios and factors. The ratios – which include estimates of square feet per employee and lot coverage -- were developed based on examination of the approaches of other jurisdictions in the region and research into national trends

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). Based on a survey of ratios of commercial space per employee used by other jurisdictions in Washington, 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 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. Research of Puget Sound jurisdictions development standards (King, Snohomish, Pierce and Clark counties) and an analysis of industrial developments built in Kitsap County over the last four years yielded an average of lot coverage of 38 percent. A similar analysis of other jurisdictions and recent development was performed for commercial development. A similar survey of jurisdictions and analysis of local development practice yielded an average of 32 percent for commercial development.

Calculating Developable Land

To account for the complexities and uncertainties of development markets, land capacity analyses typically identify a number of factors – referred to as discount, reduction, deduction and market factors – that are used to arrive at a more accurate calculation of needs. Discounts are typically made for land that is constrained by or used for critical areas, road right-of-way, and public facilities such as parks. 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 – expressed as an addition to supply -- is appropriate to ensure that adequate developable land is available.

Redevelopment. The industrial and commercial reduction factors differ somewhat from those identified for residential lands. 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. Future disposition or reuse of U.S. Government properties is unknown, 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. A 32 percent reduction for critical areas was identified through the East Bremerton study area analysis for residential land uses (see Appendix 4). Unlike the residential land capacity approach, no adjustment was made to reflect potential on-site density transfers. Given the size, lot coverage and footprint of typical commercial and industrial buildings, it is not likely that on-site density transfers would be practical nor do existing code provisions permit transfers of non-residential density.

Road Right-of-Way. A 17 percent reduction was used for road right-of-way; this is the low end of the range used in most Puget Sound jurisdictions.

Public Facilities. A 15 percent deduction for public facilities was applied to account for land that will be used parks, schools, utilities and similar uses.

Market/Safety Factor. Land capacity studies typically include a market or safety factor which represents an amount of land that

is added to supply to account for uncertainties in operation of land markets. It provides a margin of safety to ensure that land supply is not constrained. The market factor also acknowledges that urban land markets are complex and imperfectly understood. An oversupply is intended to avoid disequilibrium in land markets, which can adversely effect land costs.

Most of the discussion of market factors – in planning literature and Hearings Board decisions – has occurred in a residential context. Following a recommendation in a CTED report on residential land capacity methodology, the Central Puget Sound Hearings Board has established a 25 percent market factor as a “bright line” for residential capacity in Urban Growth Areas.

Kitsap County is preliminarily using a 50 percent market factor for industrial and business park uses and a 25 percent factor for commercial uses in the 1998 Plan. Based on the County's research, it is recognized that there is no empirical evidence strongly supporting the use of any specific market factor percentage; the literature identifies recommended market factors ranging from zero to 300 percent.

The context of Kitsap County economic development activities warrants use of a market factor higher than 25 percent for business park and industrial uses. The County's economic performance, particularly in basic employment categories, has been weak relative to state averages. The historical dependence on military employment leaves the County extremely vulnerable. It has also developed clear economic diversification objectives 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 economic development, to provide the County with a competitive tool at this stage of its

planning for economic growth, and to enable it to effectively market and attract targeted businesses.

The 50 percent market factor is also intended to address two issues regarding availability. First, the discount and reduction factors used in the industrial land methodology does not include a separate factor for unavailable lands; a factor of 15 percent was used for residential lands. The higher market factor for industrial lands incorporates consideration of unavailability. Second, a significant portion of estimated supply – specifically the Port of Bremerton’s industrially zoned land – is limited to lease tenure 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.

Allocating Employment Demand Among Jurisdictions. Currently, there are no agreed upon regional or local policies that address how future employment should be allocated among jurisdictions from a regional perspective. The Kitsap Regional Coordination Council (KRCC) intends to take this matter up in the near future. In the interim, this Comprehensive Plan makes a provisional allocation of future employment growth to ensure that economic development is addressed county-wide.

The current ratio of developed industrial land in the region’s jurisdictions (based on assessor’s data) was used as a guide to allocate future industrial employment growth. As a result, 11 percent of industrial jobs was

allocated to the Cities and 89 percent to the County. For commercial employment categories, a 45 percent City/55 percent County split was applied to mirror the population City/County population allocation reflected in the County-wide Planning Policy.

Comprehensive Plan Designations

The 1988 Comprehensive Plan 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. The map reserves 1,904 acres of the designated industrial land for the employment needs of the 2013-2017 period; this land is designated Urban Reserve to preserve planning options until the appropriate Comprehensive Plan amendments can be made.

The Plan map designates several large industrial/business park sites as Urban Joint Planning Areas (with an Industrial/Urban Reserve Plan designation). These sites are considered provisionally suitable for inclusion in the Urban Growth Area and for non-residential development. However, there are outstanding issues concerning service provision or governance that must be resolved through dialogue between the County and Cities. Please refer to the Land Use Element of this Plan for a discussion of Urban Joint Planning Areas.

Consistent with the policy of treating employment land as a resource that needs to be protected, Kitsap County is also using Urban Reserve designations in the Comprehensive Plan to identify and preserve industrial and business park land for the needs of the 2013-2017 planning period. The land capacity monitoring and evaluation program

committed to in this Comprehensive Plan will track employment land absorption and market activity over time and make any necessary adjustments to supply.

Kitsap County intends to guide most future commercial and industrial growth to designated Urban Growth Areas. Existing industrial and commercial development in the Rural Area is recognized on the Plan Map. Some future growth of these existing areas may be permitted in the context of designating “limited areas of more intensive development” in the Rural Area; please refer to the discussion in the Plan’s Rural Element.

Goals and Policies

Economic development will be implemented through the goals and policies in this chapter, as well as in the Land Use Chapter and map designations adopted as part of this plan.

A. Economic Development & Diversity

Kitsap County should create and encourage a business environment that is supportive of a variety of economic uses in order to diversify the local economy and reduce its reliance upon the federal government. Kitsap County government can help by supporting the EDC’s efforts of enlisting state and federal agencies, the cities, the chambers of commerce, port districts, public and private utilities, labor organizations, industry and private sector entrepreneurs, educators, U.S. Navy bases, tribes, environmental groups and other interested stakeholders to assist in creating a

business environment that will foster a healthy and diverse economy.

However, Kitsap County recognizes that it is virtually impossible to plan a community’s future without an examination of its economic base and its tax base. Therefore, the County endorses the need for a subsequent market study to identify industries best suited for local expansion.

Goals

1. To continue to maintain and enhance the quality of life in Kitsap County as growth occurs.
2. To promote and support a healthy, diverse economy that provides for a strong and diverse tax base, encourages expansion of business, industrial and employment opportunities to attract new industry to Kitsap County, and fosters new industry that is environmentally responsible and consistent with Kitsap County’s Comprehensive Plan Land Use Chapter and its policies.
3. To encourage economic growth and diversification to minimize long-term and short-term cyclical unemployment and to become less economically dependent on government spending and commuter jobs outside of Kitsap County.
4. To implement long-term economic policies which will encourage and assist planners in developing an economic and market analysis and strategy to support employers and their needs, and thus meet diversification and employment objectives and improve the county’s tax base.
5. To improve competitiveness in economic development by encouraging and developing incentives for business growth, expansion and relocation.
6. To support and coordinate economic

expansion and diversification with the development of capital facilities, public and mass transit and transportation, urban governmental services and balance business and industrial development with environmental protection. Consider both public/private costs and benefits in guiding the location of development (See Kitsap County Comprehensive Plan, Part II, Chapter 2, Section 1.5.2.E and Chapter 4, Strategic Economic and Investment Plan).

7. To recognize a wide variety of cultural, tourism, and active recreational programs with regional and neighborhood facilities, providing well-rounded recreational and tourism opportunities.

8. Economic development will be concurrent with the existing capacity of required capital facilities.

Policies

ED-1 Kitsap County shall encourage and support the retention, formation and expansion of enterprises, including home-based businesses and existing businesses, as well as fostering an environment that invites entrepreneurial innovation.

ED-2 Kitsap County shall encourage and assist local industries to diversify, identify and attract new industries that will provide economic expansion and employment growth.

ED-3 Kitsap County will plan public facilities with capacity to adequately serve commercial and industrial development in order to promote diversification and improve employment opportunities.

ED-4 Kitsap County will utilize the recommendations of the internal or contracted economic studies matching land use planning to

projected employment increases.

ED-5 Kitsap County will encourage business and industry incubation by offering special incentives to encourage participation in the county-wide EDC Business Incubation System. Potential incentives may include adjusted fees, tax abatement and referral, special development considerations, business incubator facility, and financing.

ED-6 Kitsap County will encourage, assist resident labor force, including dislocated workers from Department of Defense layoffs.

ED-7 Kitsap County will allocate funding recommends that each agency increase and prioritize its recruitment activities. Examples of priority activities are marketing studies and materials, promotion and staffing for implementation of activities. (See Kitsap County Comprehensive Plan, Part II, Chapter 2, Section 1.5.2.E. and Chapter 4, Strategic Economic and Investment Plan).

ED-7a Incentives should be developed and implemented at the federal, state and local levels. The marketing study can identify, compare, recommend and monitor potential business incentives.

ED-8 Developments which contribute to community improvements (i.e., contributions to culture, recreation, tourism, public improvements, business incubator system facilities, open space and other community projects) will receive development

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incentives that, at a minimum, economically match the contribution or otherwise create the necessary incentives required for capital formation and investment.

ED-9 Kitsap County will make a commitment to diversifying its economic base by striving to increase employment in primary jobs (such as manufacturing and high tech) to: 5% by 2000; 8% by 2010; and 9% in 2015.

B. Industrial Land Capacity

The following goals and policies address the county's need to provide for sufficient industrial land to meet estimated demand.

Goals

9. To provide a variety of adequately and strategically located industrial planned areas, within designated urban growth areas. Industrial development in the Rural Area may be increased consistent with provisions in the Rural Element of the Plan for allowing limited growth in existing areas of more intensive development.

10. To provide additional urban industrial-zoned lands to further the economic diversification goals and needs of Kitsap County.

11. To cooperate with the Port of Bremerton in developing investment strategies for the Bremerton National Airport to support and enhance its role as a general aviation and industrial commercial facility consistent with the Airport Master Plan and to facilitate planning for capital facilities which best use the airport's remaining undeveloped and underutilized areas.

Policies

ED-10 Kitsap County will promote and environmental protection.

ED-11 Kitsap County will support designation of a sufficient supply of industrial land in urban growth areas. Development of industrial land outside urban growth areas may be appropriate provided that the industrial use is consistent with rural character and consists of infill, development or redevelopment of existing areas of commercial or industrial development, is a small-scale industrial use, or serves rural or resource activities. Such areas will be designated according to the process defined in the Rural Element of the Plan. Existing industrial uses in the Rural Area may continue but may not be expanded except pursuant to such process.

ED-12 Kitsap County shall provide industrial-zoned lands in the urban area to accommodate and encourage industrial development in the county, thereby furthering the economic diversification goals and needs.

ED-13 Kitsap County may provide land for employment activities in the rural area to provide jobs for rural residents provided that such growth is compatible with surrounding rural areas and rural character.

ED-14 Kitsap County will seek to minimize conflicts between residential and non-residential uses by protecting future needs and identifying potential sites for commercial, industrial, institutional and public uses. Criteria for sites should be based on adopted standards, access to existing or planned

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transportation improvements and existing or potential utility provisions.

ED-15 Kitsap County will work with cities, local districts and the private sector to establish a common, ongoing method to monitor the supply of developable commercial and industrial sites, and to improve opportunities for the expansion of existing facilities and the establishment of new economic enterprises. The Kitsap County Geographic Information System may be used as a regional data base for this information.

ED-16 Kitsap County will zone lands identified in the Comprehensive Plan for industrial and commercial use. To achieve this, criteria will be developed through economic and market studies to identify and reserve suitable sites for industry and commerce.

ED-17 Kitsap County will encourage the full utilization and development of industrially and commercially zoned areas, will promote revitalization within existing developed industrial and commercial areas to take advantage of the significant investments in existing buildings and infrastructure, and will endeavor to minimize economic impacts of revitalization on existing businesses.

C. Cooperation and

Kitsap County’s economic development policy requires that we promote intergovernmental cooperation and public-private partnerships.

Goal

12. To provide capital improvements, as needed by commerce and industry, through intergovernmental cooperation and public-private partnerships (See Kitsap County Comprehensive Plan, Part II, Chapter 2, Section 1.5.2.E and Chapter 4, Strategic Economic and Investment Plan).

Policies

ED-18 Kitsap County shall improve the effectiveness of capital improvement programs by encouraging greater coordination between local governments and between the public and private sectors in their capital improvement investments, (e.g., water resource development, sewage treatment, transportation and utility corridors and coordination of private development with those programs).

ED-19 Kitsap County will work with the assistance financing, will be encouraged to keep costs down.

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D. Education and Job Training

A well-educated workforce is important to remain competitive in the global marketplace. The following policies are directed at maintaining and attracting a well-educated population.

Goals

Partnerships shall, maintain and support higher educational opportunities, in addition to educational facilities and curriculum in local education institutions, to provide a quality work force of trained, re-trained, skilled, educated and motivated employees.

14. To ensure an adequate supply of housing affordable by most of the wage earners in the county.

15. To recognize the value of a culturally diverse population.

Policies

ED-20 Kitsap County shall improve employment opportunities for minority groups, Department of Defense (DOD) dislocated workers and the disadvantaged as a result of a physical handicap, lack of training, or educational opportunity, through implementation of the County's Affirmative Action Plan, continued participation in human resource programs, and by building on statewide initiatives in education, vocational education and training.

ED-21 Kitsap County will support efforts by educational institutions to improve and expand vocational, post-secondary and higher education programs to assure highly skilled, educated and technically trained resident work force.

E. Permit Process

Kitsap County's economic development policy requires that we develop, maintain and monitor a streamlined approval and permit process. We must evaluate and revise our system, take a proactive stance in attracting suitable industry and commerce in the county, measure our performance and make a commitment towards consistency and predictability for all parties.

- X provision of new infrastructure or payment of impact fees;**
- X implementation of transit oriented site planning and traffic demand**

Policies

ED-22 Kitsap County will develop a dedicated per

ED-23 Kitsap County will revise and provide

F. Major Industrial Developments

The Growth Management Act permits counties to establish, in consultation with cities, a process for reviewing and approving major industrial developments outside designated Urban Growth Areas. Major industrial developments are defined as master planned locations for a specific manufacturing, industrial or commercial business that requires a large parcel of land not available within an Urban Growth Area; or a resource-based industries requiring a location proximate to natural resource activities.

ED-24 Kitsap County will work with the region's cities to develop a process for considering the siting of major industrial development, as that term is defined in RCW 36.70A.365, outside of Urban Growth Areas.

ED-25 Review and approval of major industrial development outside the Urban Growth Area shall include consideration of at least the following criteria:

- management programs;**
- X adequate buffering of adjacent rural areas;**
- X establishment of development**

- regulations that prevent urban growth from occurring in rural areas;
- X mitigation of adverse impacts on designated resource lands;
- a. consistency with adopted critical area regulations; and
 - b. demonstration, pursuant to a developable land inventory, that a suitable site is not available within an Urban Growth Area.

G. Implementation Strategies and Programs

1. Economic Development Summit. In cooperation with the private sector, Kitsap County will sponsor an economic development summit. The summit will seek broad participation and the input of Kitsap County businesses and residents regarding the rate and nature of future economic growth. A purpose of the summit will be to confirm and/or amplify, as appropriate, the industries and numerical targets that are the focus of public and private economic development marketing activities. Based on the results of the summit, the County will review the assumptions in its Comprehensive Plan regarding employment forecasts and land capacity, and consider any appropriate changes. The results of the land monitoring and evaluation program established pursuant to this plan and the Growth Management Act will also be considered. *Target Date: 1998.*

Housing Chapter

This Housing Chapter is divided into the following sections:

The Introduction describes the intent of the Housing Chapter and its relationship to Kitsap County's vision of the future and other Comprehensive Plan chapters.

The Planning Context discusses the requirements of the Growth Management Act and the Countywide Planning Policy as they relate to housing policies.

The Housing Needs section defines the housing needs that Kitsap County faces over the 20-year planning period.

The Housing Goals and Policies are divided into the following areas:

- A. Affordability** addresses issues to assist Kitsap County meet current and future demand for affordable housing.
- B. Housing Supply** recognizes the need to provide safe, adequate and sanitary housing.
- C. Special Needs Housing** focuses on providing affordable housing for residents with special needs and/or are low-income.
- D. Monitoring** addresses the need to ensure consistent application and evaluation of housing policies.

Introduction

Housing conditions have a direct impact upon the quality of life that Kitsap County citizens enjoy. County residents place a high value on having a safe, comfortable, unique and affordable place to live. These factors must be taken into consideration in any comprehensive planning process to ensure that Kitsap County's high quality of life is maintained and that all segments of the county's population have access to adequate, affordable housing.

During the lifetime of this comprehensive plan, there will be an increasing demand for affordable housing units throughout Kitsap County. In order to meet the demands of the future housing market, the plan encourages single-family residences on smaller lots and multi-family projects in specific locations. Furthermore, this section notes that it will be necessary for regulatory agencies and private developers to "team up" to encourage and support organizations dedicated to promoting the construction of a variety of affordable housing types throughout the county.

This chapter includes goals and policies that will work to ensure all present and future residents of Kitsap County have the opportunity to obtain adequate housing. Other chapters in this document tie in with the Housing Chapter to help achieve the overall goal of improving the quality of life in Kitsap County.

Planning Context

The Growth Management Act requires cities and counties to encourage the availability of affordable housing for all income levels at a variety of housing densities. Local jurisdictions are also encouraged to preserve existing housing resources in their communities.

The adopted Kitsap County Countywide Planning Policy also calls for strategies that consider the need for affordable housing and parameters for its distribution. The Countywide Planning Policy requires coordination between local jurisdictions via the Kitsap Regional Planning Council (now called the Kitsap Regional Council) to ensure a reasonable distribution of all housing types throughout the county.

This chapter includes policies that will achieve the goals of the Growth Management Act and the Kitsap County Countywide Planning Policy.

Housing Needs

Adequate housing is a basic need of Kitsap County residents and an issue of countywide concern. As Kitsap County's population grew 49.9% between 1980 and 1995, so did the need for affordable housing as increased demand led to a rise in housing prices. Thus, to adequately plan for Kitsap County's housing needs requires an understanding of demographic and economic trends as well as an inventory and analysis of existing and projected housing needs. The following are highlights of key factors affecting the county's future housing needs.

Population trends & household size

- Between 1980 and 1995, Central Kitsap experienced the highest growth rate among the county's three subareas.
- Kitsap has a relatively young population, with more than 44% under the age of 30, and only 15% older than 65 years. Residents within this younger age bracket traditionally attempt to purchase their first home or rent apartments and typically are very mobile.
- A trend toward declining family size coupled with fewer people living together and Kitsap County's population increases, is contributing to a greater demand for housing. Since 1980, the number of new households (occupied housing units) has exceeded the number of new housing units (new single family homes, apartments, mobile homes, etc.), indicating significant use of existing housing units and a reduced supply of new housing units.

Housing Types

- The percentage of rental housing is increasing. In 1980, 33% of all single-family housing was renter-occupied. In 1990, that rose to 36% countywide, and more than 50% in some areas, such as Port Orchard (51%), Poulsbo (54%) and Bremerton (61%).

Emergency & transitional housing

- As of March 1993, there were 100 emergency shelter beds in Kitsap County facilities for homeless. Based on figures for the number of households and individuals who have to be turned away from Kitsap shelters, it is estimated that at least 160 adult and family shelter beds are needed. This figure does not include the shelter needs of youth, ages 14-18, which is

currently estimated at 41 additional beds.

- A census in Kitsap schools found 163 “homeless” students in temporary or inappropriate housing.
- Community service agencies have emphasized a need for affordable, one-bedroom and studio units and for assisted housing for special needs populations. Agencies have also noticed an increase in the number of persons they are serving and a decrease in the resources available.
- The largest number of homeless families in shelters are single mothers with children who are fleeing domestic violence.

Household income

- Among the elderly 75 years or older, there are an estimated 2,000 households whose income is 80% or less of the county’s median income of \$39,582. When elderly become frail, outside assistance or supportive housing is needed. Most of the county’s available facilities are not affordable to low-income seniors.
- In 1993, there was a gap of \$7,329 between what the median income family of three could afford for home ownership and the median home price; this situation has not changed significantly.
- Home ownership is now out of reach for at least half of the families who live in Kitsap County.
- Low-income families (defined as making 80% or less of the county’s median income) could neither afford the median rent nor a median-priced home in recent years.
- One-third of the renters countywide pay more than 30% of their income for housing

while 18% of homeowners pay a more burdensome amount for housing costs.

- A much higher percentage of seniors and lower-income families pay a burdensome amount of their income for housing.

Goals and Policies

The goals and policies found in this chapter are based upon an analysis and inventory conducted in 1993 by the Kitsap County Consolidated Housing Authority (KCCHA) and the Phoenix Group. KCCHA includes the Cities of Bainbridge Island, Port Orchard, Poulsbo and unincorporated Kitsap County. The result of this study and analyses, the Housing Needs Assessment and Affordability Plan, provided a comprehensive analysis of housing trends, costs and conditions, current housing affordability, and current and projected housing needs. This analysis provided the needed information to direct housing goals and policies for Kitsap County. (For a more detailed discussion, see the Housing Appendix)

A. Affordability

Home prices and rents in Kitsap County have risen rapidly over the past 10 years, making it increasingly difficult for people to find affordable housing. The dwindling supply and high costs of developable land, as well as the rising costs of materials and labor, have contributed significantly to increases in development costs for new housing. In addition, incomes in most areas have not increased sufficiently to overcome the effects of inflation and escalating home prices.

HOUSING

Data from a variety of sources indicate that only families above 120% of the county median income can buy homes in most parts of the county. Hopeful first-time home buyers earning moderate incomes (between 81% and 95% of median income) are finding it increasingly difficult to purchase a home without some form of assistance. Many people in this group have been forced to remain in rental housing with increasing rent making it even more difficult to save for a down payment on a home.

Similarly, rents are consuming unreasonable proportions of income for at least one third of the renters in the county. Such housing cost burdens mean that families have less income to spend on other needs.

Those whose incomes are 50% below the area median income (very low-income group) are particularly at risk because they are now being displaced by higher income groups who are "buying down" into housing that had previously served this group. Extremely low income families (earning less than 30% of median income) receiving public assistance support are the least able to afford housing. The vast majority of these households rent and typically pay over 40% of their incomes in rental payments. For the poor who are not receiving public assistance this figure is even greater -- amounting to 50% of their annual incomes.

While many of the factors that influence housing prices are largely out of the realm of control of local governments, local governments do affect housing costs through building regulations and zoning requirements. Some barriers to affordable housing include financing, zoning, building codes, property taxes and permit fees and charges. These items can contribute to the increase in costs of housing units.

There are several national and statewide programs aimed at addressing the affordable

housing problem, and Kitsap County actively participates in these programs.

The following goals and policies are intended to assist Kitsap County in meeting its current and future demand for affordable housing. The goals are further discussed in the 1996-2000 HOME Consortium Consolidated Plan, a copy of which is available at the County Department of Community Development.

Goals

1. To promote fair and equal access to housing for all persons regardless of race, religion, gender, sexual orientation, age, national origin, family status, income or disability.
2. To increase the availability and affordability of safe, decent rental housing for households earning 80% or less of the county's median income.
3. To increase the supply of housing units available to homeowners through rehabilitation of substandard units and construction of new units.
4. To use housing rehabilitation programs to assist low-income homeowners currently living in substandard units.
5. To assist first-time home buyers to become owners.
6. To encourage densities that will support existing or planned public facilities in order to make them more cost-effective, such as higher densities in urban-medium and urban-high areas. (For explanation of land use designations, see Land Use chapter)
7. To support proposals for affordable housing that are consistent with the use and density provisions of the

Comprehensive Plan and subsequent development regulations.

Policies

- HS-1 Consider ordinance provisions that would allow or require a percentage of low- or moderate- income housing units in all future housing developments.**
- HS-2 Continue to participate in and coordinate with established housing authorities, such as Kitsap County Consolidated Housing Authority and the Bremerton Housing Authority, to promote low- and moderate-income housing. The county and the housing authorities should cooperate with the private sector to achieve housing needs.**
- HS-3 Encourage and support organizations to develop housing for low- and moderate-income households.**
- HS-4 Allow and identify incentives for affordable housing construction in subsequent development regulations. Such incentives could be bonus density, lower utility hook-up fees and rates, reduced or waived impact fees, smaller lot sizes, zero lot line design, and priority permit review and approval process. Such incentives will be implemented for special needs households, senior citizens, and low- and moderate-income households.**
- HS-5 Encourage low-interest loan programs and “self help” housing through adopted regulatory strategies.**

B. Housing Supply

It is estimated that approximately 28,650 new housing units will be needed by the year 2012. (See Housing Appendix for more detail.) Of this amount, approximately 18,336 units will need to be owner-occupied, and approximately 10,314 units will be renter-occupied. Single-family residences are expected to comprise the bulk of the new units, with a need for 20,055 new homes. Next, 5,157 multi-family units will be needed, followed by 3,438 mobile home units.

Approximately 9,740 units of the 28,650 new units will be needed to accommodate low-income households (i.e. 80% or less of the county median income). Moderate-income households (120% of median income or below) are expected to account for 6,590 new households, and high-income (above 120%) will account for the largest share of new units with 12,320.

Further, the need for new housing within subareas and cities also has been determined:

- North Kitsap: 8,022
- Central Kitsap: 3,725
- South Kitsap: 6,876
- Bainbridge Island: 2,292
- Bremerton: 6,303
- Port Orchard: 573
- Poulsbo: 859

(Note: The preceding numbers were derived assuming the distribution of households in each city and subarea remain the same as they were in the 1990 Census and the population grows at the projected rate. For more detail, see Appendix.)

This section establishes goals and policies in recognition of the need to provide adequate, safe and sanitary housing, consistent with the Land Use Chapter of the Comprehensive Plan.

HOUSING

Goals

8. To ensure that all present and future residents of Kitsap County have the opportunity to obtain adequate, safe and sanitary housing.
9. To ensure that a broad range of housing types is available.
10. To provide housing opportunities and development which is consistent with the Land Use Element, the Comprehensive Plan and subsequent development regulations.
11. To maintain an adequate supply of appropriately zoned, developable residential land.
12. To evaluate proposals for residential development to assure consistency with all elements of the Comprehensive Plan.
13. To ensure sufficient land for housing including, but not limited to, government-assisted housing, housing for low-income families, manufactured housing, multi-family housing, and group homes and foster care facilities through appropriate Comprehensive Plan designations and zoning.
14. To encourage development regulations and design standards which promote and facilitate a sense of neighborhood and community.
15. To encourage land use practices, development standards and building permit requirements that minimize housing costs.
16. To encourage the maintenance and rehabilitation of existing housing stock through the use of codes and support by public investment.

17. To identify and implement programs to preserve neighborhoods and areas that are showing signs of deterioration.

Policies

- HS-6 Support the development and preservation of mobile, modular and manufactured home parks. Double-wide mobile, modular and manufactured homes shall be considered in the definition of a single-family dwelling.**
- HS-7 Encourage and support greater opportunity for the development of innovative housing types that make efficient use of county land supply, such as residential units in mixed-use and zero-lot line developments and infill opportunities.**
- HS-8 Permit and encourage the development of residential accessory units, such as garage apartments and mother-in-law apartments, in areas of existing or planned public facilities.**
- HS-9 Accessory Dwelling Units shall be permitted uses in all zones and be subject to applicable development standards including Health Department requirements for water and sewage disposal.**
- HS-10 Kitsap County shall designate in the Land Use Chapter adequate amounts of land to accommodate the projected growth of single-family, multi-family and mobile home units.**
- HS-11 Infill development in urban growth areas shall be encouraged.**
- HS-12 Greenbelts, open space and play areas, particularly in areas of higher**

population concentration, shall be encouraged.

HS-13 Development regulations shall consider minimum standards for on-site outdoor play areas for children, especially in higher densities, as appropriate.

HS-14 Pedestrian pathways shall be provided which link residential areas and schools, recreational, shopping and employment areas in urban areas.

HS-15 Pedestrian-scale and cluster residential neighborhoods in urban areas shall be encouraged.

HS-16 Encourage the development of a variety of dwelling types and densities in residential neighborhoods.

HS-17 Allow provisions for reduced minimum lot sizes, which shall be permitted subject to all applicable development standards and Health District requirements of water and sewage disposal.

HS-18 Continue to strive to shorten the time for development proposal processing while maintaining housing and development standards.

C. Special Needs Housing

It is a goal of the Growth Management Act and a planning policy in Kitsap County to distribute low income housing units countywide. In the past, the market has directed housing units affordable to low-income households into incorporated cities. While this is appropriate because of the accessibility of public services, it tends to concentrate these housing units into small geographic areas. (For example: In 1990, 49%

of the City of Bremerton's housing units were occupied by households earning less than 80% of the county's median income.)

If future low-income housing units are added in proportion to where low-income families currently live, most would be located in Bremerton, Port Orchard and Poulsbo. However, if these units were shared equally at the current countywide proportion of low income families (34% everywhere), most of the units would go into the unincorporated areas of the county and on Bainbridge Island. These two scenarios have different results because unincorporated Kitsap and Bainbridge Island have lower proportions of low-income households than the county as a whole.

This section establishes goals and policies in recognition of the need to provide affordable housing, particularly for residents who have special needs and/or are low-income.

Goals

18. To cooperate with other jurisdictions to develop low- and moderate-income housing.
19. To ensure that all special needs, low- and moderate-income households, (incomes less than 120% of the countywide median), have the opportunity to obtain affordable housing.
20. To support and assist the efforts of existing programs and agencies which are providing and increasing the supply of low- and moderate-income housing.
21. To support a continuum of housing and related services for homeless people and forestall further homelessness through prevention activities.
22. To promote a continuum of housing and related services for people with special needs, such as frail elderly, mentally and

HOUSING

physically disabled persons, people living with AIDS and recovering substance abusers.

Policies

HS-19 Participate in and support the Kitsap Regional Council in the identification, evaluation and adoption of regional fair share housing goals.

HS-20 Encourage and allow Kitsap County Consolidated Housing Authority to identify and prioritize development to meet the needs of low- and moderate-income households where required. The County and Authority should cooperate with the private sector to achieve the housing needs.

HS-21 Recommend to the Comprehensive Housing Affordability Strategy (CHAS) to develop policies which reflect priorities for proposed projects and programs.

HS-22 Support organizations which provide shelter to the homeless and low- and moderate-income households by providing technical assistance, reduced permit rates, priority permit review and reduced or waived impact fees.

HS-23 Pursue the use of federal housing programs to meet the needs of very low-, low- and moderate-income households, and the special needs population that cannot be served by the private sector.

D. Monitoring

In order to successfully resolve the issue of housing affordability and availability within Kitsap County, a committee shall be formed within one year of the adoption of the

comprehensive plan. This committee, in cooperation with building industry personnel and citizen groups, should review and monitor the impact of the housing policies contained within this chapter.

Goal

23. To ensure the consistent application and evaluation of the policies within this Housing Chapter.

Policy

HS-24 A committee shall be formed within one year of the adoption of the comprehensive plan to review and monitor the policies contained in this Housing Chapter. The committee will include representatives of building industry personnel and citizen groups in order to successfully resolve the problem of housing affordability in our county.

Utilities Chapter

This Utilities Chapter is divided into the following sections:

The Introduction describes the intent of the Utilities Chapter and its relationship to Kitsap County's vision of the future and other Comprehensive Plan chapters.

The Planning Context discusses the requirements of the Growth Management Act, the Countywide Planning Policy and the regulatory framework as they relate to utility policies.

The Inventory of Conditions and Future Needs provides a brief discussion of utility providers, their facilities and projected needs over the next 20-year planning period.

The Utility Goals & Policies are intended to ensure that Kitsap County's utilities needs are adequately met to meet expected growth.

Introduction

This chapter examines the various public utilities that serve Kitsap County but are not managed directly by the Kitsap County government. The utilities discussed in this plan include natural gas, electricity, telecommunications, . Service areas, facility locations, existing capacity, and planned improvements are discussed. The private water purveyors and publicly owned water and sewer districts (e.g., Silverdale Water District) are discussed in the Capital Facilities Chapter of this plan.

The purpose of this section is to facilitate coordination between the utility providers and Kitsap County to ensure that new facilities provided are compatible and in conjunction with land use. In this section, Kitsap County has identified issues and policies related to the provision of utilities. Planning for utilities is the primary responsibility of the utility providers.

Planning Context

The Growth Management Act requires that comprehensive plans include a utilities element that consists of the general location, proposed location and capacity of all existing and proposed utilities, including, but not limited to, electrical lines, telecommunication lines and natural gas lines.

The adopted Kitsap County Countywide Planning Policy calls for all county jurisdictions to coordinate planning efforts, including provision of current and future utilities, to address future growth in a coherent manner that leads to more efficient delivery of services.

In addition, the Washington Utilities and Transportation Commission (WUTC) is responsible for regulating privately owned utility and transportation businesses in the state. The WUTC is a three-member board appointed by the governor and confirmed by the state senate. It is the WUTC's responsibility to see that companies provide safe and reliable service to their customers at reasonable rates. The WUTC regulates private utilities only. Publicly owned utilities (such as municipal utilities and public utility districts) are regulated by their respective legislative bodies.

WUTC mandates that utility facilities and service must be provided on a uniform or nondiscriminatory basis to all customers and that cost of service must be equitable. State law regulates the rates and charges, services, facilities, and practices of utilities. Any change in customer charges or service provision policy requires WUTC approval.

There are other federal and state agencies that impose requirements on utilities. The Washington State Department of Health (WDOH) has jurisdiction over water purveyors, the Federal Energy Regulatory Commission and Department of Energy has jurisdiction over electric power service, and the Federal Communications Commission (FCC) has jurisdiction over the telecommunications industry.

Inventory of Conditions and Future Needs

Inventories and maps of existing conditions and future needs for each of the following utility providers are found in the Utilities Appendix.

Natural Gas

The Pacific Northwest receives its natural gas from the southwest United States and Canada. Natural gas is supplied to the entire region via two interstate pipeline systems. The Pacific Gas Transmission Company and Northwest Pipeline Corporation each own and operate their respective regional pipeline networks, which supply natural gas to Washington, Oregon, and Idaho.

Cascade Natural Gas Corporation (CNG), builds, operates, and maintains natural gas facilities serving Kitsap County. CNG is an investor-owned utility serving customers in 16 counties in the State of Washington.

CNG's service area includes all of the City of Bremerton and adjacent unincorporated areas; the City of Port Orchard; the majority of South Kitsap, Silverdale, and Central Kitsap; and the City of Poulsbo. Services connections to CNG are initiated by customer demand and individual requests.

CNG has more than 17,000 residential, commercial, and industrial users as of January 1994. According to CNG, the current peak demand is approximately 1,950,000 therms per day.

CNG does not plan in advance for individual connections, rather connections are initiated by customer requests for new construction or conversion from electricity or oil. CNG expects to continue developing distribution systems and services to meet growth at lowest possible cost by maximizing capacity of the existing distribution system.

Factors important in implementing expansion of the CNG system include right-of-way permitting, environmental impact assessments, coordination with other projects (e.g., road construction), and locations of other utilities.

Electricity

Puget Sound Energy (formally Puget Sound Power & Light Company and Washington Natural Gas) is an investor-owned private utility responsible for providing electricity and gas service to more than 1,377,388 metered customers within the company's 6,000 square mile service territory, including Kitsap County. It is part of a western regional system, which means electricity is produced elsewhere and transported to Kitsap County through high-voltage transmission lines. As electricity nears its point of distribution, the

voltage is reduced and redistributed through the use of transmission substations, distribution substations and transformers.

An analysis of Puget Sound Energy's existing system has indicated that the 230/115 KV transformers at the Bonneville Power Administration's (BPA) Kitsap switching station are approaching capacity. Since only two 230-115 KV, 280 MVA transformers at the BPA Kitsap Switching Station and a 115 KV interconnection to King County via the Vashon submarine cable serve all of Kitsap County, the capacity of these facilities is a measure of their ability to serve the connected load. Using planning guidelines from PSE, the system is designed so one of these large facilities can be taken out-of-service without causing customer outage.

Long-range plans (through year 2020) developed by PSE call for construction of a number of additional transmission and distribution facilities to meet expected demand.

Telecommunications

Telecommunications is the transmission of information by wire, radio, optical cable, electromagnetic, or other similar means. Telecommunication service is regulated by the WUTC, and is subject to various federal laws and regulations administered by the FCC. Telecommunication providers must also comply with local regulations such as land use and public rights of way.

Telephone

Telephone service for Kitsap County is provided by US West Communications, United Telephone Northwest and PTI. Telephone service is initiated by customer demand and requests. Telephone service providers are required to provide adequate telecommunications service on demand (RCW 80.36.090). Accordingly, telephone service providers will provide facilities to accommodate whatever growth patterns occur. Since telephone service providers do not generally conduct detailed, long-range planning activities, no specific projects have been identified by any of the carriers. General improvements to expand service to meet the projected future demand include constructing additional fiber optic cable, copper cable and switching stations.

Radio Communications

Radio communication forms an integral part of an established communications system within Kitsap County. Public sector communications provides services for law enforcement agencies, municipalities, interagencies, fire departments, search and rescue organizations, the American Red Cross, departments of emergency management, Puget Sound Energy, medical administration, and maritime.

Alternative emergency communications exist which are designed to supplement or replace existing public safety communications systems during times of emergencies or disasters. Emergency communications may include the use of local radio stations and HAM operators who provide a link to federal and state emergency management personnel during emergencies or disasters. Links are established throughout the county. Kitsap County recognizes the value of these facilities as part of an emergency broadcast network which has been in place for many years.

Cellular

Kitsap County is served by several providers. The FCC regulates the cellular industry. The cellular system will expand in response to several factors: customer growth within a designated area, shift in distribution patterns, and/or a decrease in service quality or reliability (measured by the record of dropped calls or complaints of poor sound quality). In general, cellular system growth follows trends in population density along the higher volume transportation corridors.

Cable Television

Kitsap County is served by four cable television providers: TCI, Falcon, Northstar and Northland. Both TCI and Falcon Cable have franchised with Kitsap County to serve the entire county. Northstar Cable serves the Kingston and Hansville area. Northland serves Suquamish, Indianola, Bainbridge Island, and the greater north Poulsbo area.

Cable television companies are regulated under the Cable Television Consumer Protection and Competition Act of 1992 enforced by the FCC. Cable companies must enter franchise agreements with local governments to regulate service rates according to FCC guidelines. Kitsap County's master ordinance specifies that cable coverage shall be available to all residents within county where there are at least 32 dwelling units per street mile. This ordinance also states that the franchisee with the nearest service facility and/or distribution line will be responsible to furnish cable service in areas which are adjacent to an unbuilt area.

Goals and Policies

The goals and policies are intended to maintain a quality of life for Kitsap County residents and businesses where utilities are accessible, affordable and provided with minimal disruption to the environment.

Goals

1. To facilitate the development of all utilities at the appropriate levels of service to accommodate the growth that is anticipated to occur in the Kitsap County.
2. To formulate, interpret and apply the policies within the Kitsap County Utilities Chapter in a manner which is consistent with, and complementary to, the serving utility's public service obligations.
3. To facilitate utilities providers with information necessary to ensure that utilities are provided in an environmentally sensitive and safe manner which is compatible with land use and consistent with prudent utility practice.
4. To designate the general location of existing and proposed facility locations, and capacity of existing and proposed utility facilities.
5. To encourage the designation and development of utility corridors and utility facilities in a manner consistent with the needs and resources of Kitsap County.
6. To coordinate utility services with planned development and provide a basis for the county to process permits and approvals which are consistent with this planning in a fair and timely manner.
7. To minimize the visual impact utilities facilities (e.g. towers, antennas) have on surrounding neighborhoods.

Policies

- UT-1** *Plan for Growth* – Encourage utility providers to make additions to and improvements of facilities that provide adequate capacity for future planned growth. Provide utility providers with annual updates of population, employment and development projections.
- UT-2** *Be consistent with applicable laws and practice* – Recognize that utilities must be provided consistent with applicable rules, regulations, tariffs and prudent utilities practice. Strive to coordinate and cooperate with other jurisdictions in the implementation of multi-jurisdictional utility facility additions and improvements.
- UT-3** *Use Rights-of-Way* – Place utility facilities along public rights-of-way, and encourage undergrounding of distribution lines in accordance with state rules, regulations and tariffs. Encourage siting of antennas and towers near transportation and utility corridors. Encourage planning for utilities installation in conjunction with new road or reconstruction projects.
- UT-4** *Improve the Permit Process* – Formulate, interpret and apply development regulations to allow timely development of utility facility additions and improvements. Allow properties that are within designated future utilities locations or corridors to be considered during the permitting process, subject to applicable development regulations.
- UT-5** *Facilitate communication* – Encourage communication between Kitsap County, WUTC and utilities regulated by the WUTC, regarding planning for adequate utility services.
- UT-6** *Provide planning consistency* – Ensure all chapters of the comprehensive plan (and implementing development regulations) are consistent with, and do not otherwise impair the fulfillment of, public service obligations imposed upon the utility provider by federal and state law.
- UT-7** *Encourage Joint Use* – Encourage the joint use of utility corridors, provided such joint use is consistent with limitations prescribed by applicable law and prudent utility practice. Encourage the joint use of utility corridors for non-motorized trails in conjunction with Kitsap County’s greenways plan, provided such joint use is consistent with applicable law and prudent utility practice. Encourage, where feasible, shared sites and towers to minimize the need for new towers.

- UT-8** *Allow for service enhancements* – Encourage utilities to use new and improved technology to enhance the quality of their product when these changes are cost effective and are consistent with the provider's public service obligations. Encourage utilities to protect the performance, integrity, reliability and stability of the utility system.
- UT-9** *Indicate appropriate siting for utilities* – Designate the general location of utility facilities on a comprehensive plan map to coordinate land use decisions with the provision of supporting utilities. Ensure land will be available for location of utilities to provide for more efficient, cost effective and reliable utility service. Encourage the siting of large, above-ground utilities (antennas, towers) on industrial and commercially designated areas.
- UT-10** *Minimize Environmental Impact* – Minimize environmental impact of utilities by developing guidelines to evaluate the visual impacts antennas and towers have on view corridors, vistas and adjacent properties on a case-by-case basis.

Transportation Chapter

The Transportation Chapter is divided into the following sections:

The Introduction describes the intent of the Transportation Chapter, the process used to develop the Transportation Plan, and its relationship to Kitsap County’s vision of the future and other Comprehensive Plan Chapters.

Public Awareness and Participation policies address citizen and business participation in transportation planning.

C. **Mobility** policies addresses the need to provide a transportation system that emphasizes ease of movement.

D. **Environmental** policies address the relationship between the environment and the transportation system.

E. **Transportation Safety** policies discuss the need for a safe transportation system.

F. Economic and Cost Efficiency

G. Land Use/Transportation Planning

H. Mass Transit Service and Commute Trip Reduction

I. **Marine Transportation Service** policies address the relationship between the ferry system and the county’s transportation network.

J. **Nonmotorized Travel** policies address pedestrian, bicycle and equestrian

The Planning Context discusses how the Transportation Chapter addresses the requirements of the Growth Management Act and other federal, state and regional requirements.

The Transportation Goals and Policies are divided into the following areas:

A. **Intergovernmental Coordination** policies address issues relating to coordination among various agencies which perform transportation planning.

B. facilities.

K. **Transportation System Planning and Implementation** policies address implementation of a comprehensive transportation network.

L. **Level of Service** policies address the need to establish minimum level of service standards for transportation facilities.

M. **Roadway Access** policies discuss how to manage access to the transportation system.

N. **Roadway Aesthetics** policies addresses the financial costs associated with planning and development, the need to make the transportation system aesthetically compatible with neighborhoods.

O. **Funding Strategy** policies address the need to develop a funding strategy and financing plan to meet the needs identified in the transportation plan.

P. **Aviation Transportation** policies address the air t

Introduction

More than 86,600 new residents and 34,000 new jobs are expected in Kitsap County between 1992 and 2012. Major investments in transportation will be required to maintain acceptable conditions on roadway, transit and ferry systems, and to maintain the quality of life enjoyed by the residents of the County.

The intent of the Transportation Chapter is to provide a long-range plan to meet the transportation demands of future growth in ways that support Kitsap County's vision of the future.

Transportation Plan Development Process

Kitsap County's transportation plan has been taking shape since 1990, when the Public Works Department began the process of forecasting future travel demand and developing alternative transportation projects, programs and policies to accommodate or manage that demand.

Public Involvement: The transportation planning process included a strong public involvement program which began in February 1991, and has continued throughout the planning process. In 1991, community representatives were appointed to four citizen advisory committees (CAC's) to help evaluate needs and develop the county's Transportation Plan. CAC's were established for the North, Central and South subareas of the county; and a countywide committee looked at transportation issues from a systemwide perspective. The committees assisted in the development of the County's transportation goals and objectives, identification of

transportation issues and needs, and in the development and evaluation of potential solutions. The committees met on a monthly basis from early 1991 through May 1993. Since that time they have met on an "as needed" basis to review and respond to emerging issues.

The CAC's played a key role in the identification of an initial set of transportation issues they felt should be addressed in the Transportation Chapter of the Comprehensive Plan. The CAC's also sponsored a series of public meetings in each of the three county subareas to discuss transportation issues with the broader community.

The draft of the Transportation Chapter was revised a number of times based on comments from County staff, agency staff represented on the Kitsap Regional Council, County Commissioners, the Transportation CAC's and other citizen input.

Several versions of forecasts of population, employment, traffic and long-range needs have been completed during the planning period based on updates to the county's demographic forecasts.

Travel Demand Forecasts: The Transportation Chapter is based on the Kitsap County Department of Community Development's most recent forecast of population and employment. Travel demand forecasts were prepared using the county's population and employment forecasts relative to a base year of 1994. These forecasts were then used to identify current and future transportation needs and deficiencies. Alternative strategies were developed to address the identified needs and deficiencies, and were evaluated to determine their effectiveness and costs. Based on this evaluation, the final list of transportation improvements was developed.

The travel demand forecasts based on the planned land use (described in the Land Use

Chapter of this Comprehensive Plan) have made one thing very clear: Transportation improvements are needed to meet the travel demand that will result from the projected population and job increases. If the projected growth is redistributed within the county, a few projects may be eliminated, and some new projects may be added. But overall, the transportation needs in the major corridors in the county will remain the same unless these are major changes in the assumptions for countywide growth and land use.

Transportation Plan Objectives: The Transportation Chapter is based on four major objectives:

1. To provide a policy framework to guide short-range and long-range transportation decisions through multimodal goals, objectives and policies;
2. To identify a prioritized list of multimodal transportation improvements to be implemented by the County, its neighboring jurisdictions and the Washington State Department of Transportation;
3. To identify action strategies to implement the transportation policies and improvements; and
4. To comply with state and federal requirements, including the Washington State Growth Management Act (GMA), as amended.

Planning Context

The Washington State Growth Management Act, along with other ~~federal and state~~ federal and state legislation, has changed the context of transportation planning for Kitsap County. The federal Intermodal Surface Transportation Efficiency Act (ISTEA) and Clean Air Act (CAA), for instance, require Kitsap County to change its administrative, technical and coordination processes to implement the new requirements for transportation planning.

In short, this new era of transportation planning means *not* doing business as usual. This Comprehensive Plan fully addresses all the mandates in a fashion which is consistent with the intent of the Growth Management Act and other requirements and, at the same time, is consistent with the vision of Kitsap County.

Growth Management Act

The GMA, under, RCW 36.70A.070, requires the Transportation Chapter to include the following elements:

Land use assumptions used in estimating travel.

Assumptions regarding future land use are discussed in the Transportation Appendix (Section II, Land Use and Transportation). Section II of this Transportation Appendix provides information on future growth in Kitsap County, including the land use alternatives that were considered for this *Comprehensive Plan*, general growth strategies for the County, the population and employment forecasts derived from the land use element of the *Comprehensive Plan*, and the travel demand forecasts resulting from the planned growth.

TRANSPORTATION

The assumptions about future land use also are discussed in the Land Use Chapter.

Population projections for the 2012 target year are discussed in “Population Projections and Allocations” and the “Population Appendix” of the Land Use section of the Comprehensive Plan. The population forecast allocations used in the transportation plan are listed by subarea in Table TR-8.

An inventory of air, water, and land transportation facilities and services, including transit alignments, to define existing capital facilities and travel levels as a basis for future planning.

The Transportation System Inventory is found in the Transportation Appendix, Section I. It describes the existing transportation system in Kitsap County. Information in this chapter describes each element of the system and its utilization, including: highways, streets and roads; public transportation; Washington State ferries; bicycle and pedestrian; and other modes such as rail, air transportation and freight movement.

Level of service (LOS) standards for all arterials and transit routes to serve as a gauge to judge performance of the system.

Kitsap County’s LOS standards were coordinated with other jurisdictions and the two regional planning agencies, the Peninsula Regional Transportation Planning Organization (PRTPO) and the Puget Sound Regional Council (PSRC). They are listed by mode in the following sections:

Arterials and roadways: Table TR-4, Draft Roadway Capacity/Congestion LOS Standards, found in the Capital Facilities Plan, Part II of the Comprehensive Plan.

Transit: Table TR-5, Transit Level of Service

in Kitsap County, found in the Capital Facilities Plan, Part II of the Comprehensive Plan.

Ferries: Table TR-6, KRPC Recommendations for Auto Ferry Level of Service in Kitsap County, found in Capital Facilities Plan, Part II of the Comprehensive Plan.

Specific actions and requirements for bringing into compliance any facilities or services that are below an established level of service standard.

The Transportation Appendix, Section III, Transportation Needs and Deficiencies, describes current and future transportation needs for the County transportation system and the State transportation system. Specific needs documented in this chapter include capacity and congestion needs, inadequate facilities, needs for pedestrians and bicyclists, public transportation needs, and ferry-related needs and deficiencies.

Current deficiencies in the Kitsap County road system can be determined by applying the LOS standards for arterials and roads noted above with the 1994 volume-to-capacity ratios on existing roadways listed in Table TR-1, Roadway Facility Inventory, of the Capital Facilities Plan, Part II of the Comprehensive Plan. Actions to remedy these deficiencies are listed in Table TR-7, CFP Projects and Financing Plan, of that document.

Forecasts of traffic for at least 10 years based on the adopted land use plan.

The traffic forecasts for 2012 based on the Comprehensive Plan Land Use Map are discussed in section II.B. “Travel Demand Forecasts” and summarized in Tables TR-9 through TR-11 of the Transportation Appendix. Detailed plots of future traffic volumes on Kitsap County roadways are

available in the Kitsap County Public Works' offices.

Identification of system expansion needs and transportation system management needs to meet current and future demands.

The Transportation Appendix, Section IV, Transportation System Improvements, describes the specific transportation system improvements planned for Kitsap County. This chapter includes the following plans: Roadways, Public Transit, Park and Ride, Nonmotorized, Ferry System, and, Commute Trip Reduction. In addition, needs on state roadways are described.

Proposed county roadway solutions are listed in Table TR-28, Kitsap County 2012 Proposed Roadway Solutions. This table lists the actions and identifies the lead agency responsible for implementing each proposed transportation improvement. Costs for these actions are listed in Table TR-31, Kitsap County 20-Year Project Costs, which also summarized costs by urban and rural portions in each major subarea (North, Central, South) of the county. Regional transportation improvements affecting Kitsap County are shown in Table TR-30 PSRC Metropolitan Transportation Plan (1995). Deficiencies on state highways are listed in Table TR-30, 2012 Transportation Needs on State Facilities in Kitsap County.

Analysis of funding capability to judge needs against probable funding resources.

This is addressed in the Capital Facilities Plan, Part II of the Comprehensive Plan, and in the Transportation Appendix, Section V, Financing and Implementation. This section of the Transportation Appendix includes a summary of the financial analysis and revenue forecasts, and strategies and guidelines to implement the identified transportation system improvements. Table TR-31 is included to identify the urban and rural cost components

for individual transportation projects included in this Chapter.

A multi-year financing plan based on the needs identified in the comprehensive plan.

This requirement is addressed in the Capital Facilities Plan, Part II of the Comprehensive Plan, and in Section V.D., "Transportation Revenue Forecasts."

A discussion of how additional funding will be raised (if necessary).

The forecasts of transportation revenues and costs indicate that the county will be able to fully fund the required transportation system improvements by the year 2012. However, if additional revenues are needed, potential sources are listed in section V.E., "Additional Funding Sources," of the Transportation Appendix.

Intergovernmental coordination efforts.

Intergovernmental coordination of the Kitsap County Transportation Chapter with the transportation plans of other jurisdictions was accomplished through the Kitsap Regional Planning Council (KRPC).

Demand management strategies.

Demand management strategies for Kitsap County are discussed in sections IV.D., "Public Transportation," and IV.F., "Commute Trip Reduction Plan," of the Transportation Appendix.

Kitsap County Comprehensive Plan

The GMA requires direct links among the land use, transportation and capital facilities elements of the Comprehensive Plan. Existing and planned future land uses generate the travel demand that must be accommodated or managed by the transportation system. Transportation deficiencies are identified where today's transportation facilities and services are not adequate to meet future demand within the adopted level of service standards (LOS). Deficiencies can be addressed through one or more of the following strategies:

1. Expand the capacity of the transportation system through provision of new facilities or services, or expand existing facilities or services;
2. Manage transportation demand to reduce total demand, shift demand from private automobiles to transit or other travel modes, shift travel from peak travel times to less congested times, or shift travel from congested corridors to less congested corridors;
3. Limit future growth to reduce the demand for travel; or
4. Revise the transportation level of service standards.

After the adoption of the County's Comprehensive Plan, the County will take appropriate legal measures to ensure that future development does not cause transportation service levels to dip below the adopted standards of the Plan. For transportation system improvements included in the Comprehensive Plan to meet LOS standards, the financing for their implementation must be reasonably guaranteed and the improvements themselves must be in place or financially committed to within six years.

As required by the GMA, proposed land use actions will be evaluated in the context of systemwide transportation service levels. Service levels for individual transportation facilities will be dealt with in the context of State Environmental Policy Act (SEPA) reviews for individual development proposals.

Regional and State Planning Requirements

Through this plan, Kitsap County will continue to play an active role in the regional planning that affects transportation. Not only is this required by state law, but it is needed to address the inter-relationships and opportunities that affect the future character and quality of life in the County.

Ongoing regional planning actions include: PSRC's Vision 2020 process, Washington's Transportation Plan, the PSRC Transportation Plan Certification Process, the Washington State Commute Trip Reduction Law, and the Kitsap Transit Long-Range Plan. Each is described below.

Vision 2020

The Puget Sound Regional Council and its member jurisdictions created *Vision 2020* as a long-range strategy for growth and development in the central Puget Sound Region. *Vision 2020* updated the 1982 *Regional Transportation Plan*. The *Vision 2020* strategy created a hierarchy of "centers" based on different levels of development and activity. The largest, most-dense level is a "regional center," followed by "metropolitan centers," "sub-regional centers," "activity clusters," "small towns," and "pedestrian pockets."

Seattle is the only city named as a regional center in *Vision 2020*. Several Kitsap County cities and unincorporated areas are identified in *Vision 2020* as “metropolitan” or lower level centers. Bremerton is classified as a metropolitan area; Silverdale, a sub-regional center; and Port Orchard, an urban center. Other areas of Kitsap County, such as Kingston, Poulsbo, and Suquamish, are identified as either pedestrian pockets or small towns.

Vision 2020 recognizes the dynamic relationship between transportation and land use, and coordinates transportation and land use strategies in its long range vision. *Vision 2020* emphasizes transit and ridesharing investments, including enhanced passenger-only ferry services for Kitsap County. Enhanced passenger-only ferry service to downtown Seattle is envisioned at Kingston, Winslow, Bremerton, Port Orchard, central Kitsap and Southworth. This service is an integral link in the regional transit system.¹ *Vision 2020* also indicates the need for auto-ferry capacity improvements. These involve improvements to existing terminals and routes, since new auto-ferry routes or cross-Sound bridges are not identified in *Vision 2020*.

Metropolitan Transportation Plan Update

The 1995 Metropolitan Transportation Plan² (MTP) expands the scope of the long-range transportation plan in *Vision 2020* and provides more detail on the region’s long-term transportation strategies and investments. It responds directly to the mandates of the Intermodal Surface Transportation Efficiency Act (ISTEA), the federal 1990 Clean Air Act Amendments, and the State Growth Management Act. Some of the key new

¹*Vision 2020*, Growth and Transportation Strategy for the Central Puget Sound Region, October 1990, pages 30-32.

² Regional View, Puget Sound Regional Council, January 1994

features of the MTP include:

- ! Elements on goods movement, non-motorized transportation and marine/ports facilities;
- ! Project-specific air quality conformity analysis;
- ! A financially realistic program of projects, marked for priority, plus a second program of unfunded projects to be considered as funding becomes available; and
- ! Transportation management systems required by ISTEA, particularly to address the congestion management system.

The Kitsap County Public Works department took part in the development of the MTP, helping to:

- ! Define regionally important parts of the transportation system for each mode;
- ! Determine performance expectations for each mode;
- ! Identify possible short-range and long-range investment programs; and
- ! Assess the interrelation between forecasted land use and the transportation system.

Washington’s Transportation Plan

Washington's Transportation Plan (WTP) identifies state-owned facilities and services, defines service objectives and identifies strategies for maintaining, preserving and improving the state's transportation system. The *WTP* includes a component for "State-Owned" elements (state highways, the Washington State Ferry System and state-owned airports), and a component for "State-Interest" elements (public transportation, intercity passenger rail, freight rail, marine ports and navigation, non-motorized transportation, and aviation.)

Each of the *WTP* elements includes background information, service objectives, and action strategies. Transportation needs in each jurisdiction are also identified. Addressing these needs will cost more than the state's projected revenues over the next 20 years. Achieving the service objectives in the *WTP* will require substantial efforts by state, regional and local governments as well as the private sector. WSDOT has analyzed three different funding options: (1) fully fund the service objectives over 20 years; (2) fund the service objectives at the historical rate of tax increases; and (3) fund the service objectives with no increased taxes.

WSDOT refined its preliminary list of projects to develop a fiscally constrained project list for the *WTP*.

Regional Review and Certification

The PSRC is charged with reviewing and certifying transportation chapters of local comprehensive plans for consistency with the region's growth and transportation plans.³ The PSRC will check Kitsap County's Comprehensive Plan for consistency with other local plans and policies, and for

³ The text and consistency factors to be evaluated by PSRC have been extracted from a PSRC memorandum dated December 8, 1993 from Jerry Dinndorf, Director, Growth Management Planning Department.

compliance with the State's GMA.

In addition, WSDOT's Office of Urban Mobility will review the Transportation Element for consistency with state plans. Inconsistencies will be resolved through discussions and negotiations among Kitsap County, PSRC, WSDOT, and local jurisdictions and agencies.⁴

Specific areas to be examined for consistency with the Metropolitan Transportation Plan includes the following (with accompanying MTP policy numbers):

- ! Transportation connections to centers (RF-1);
- ! Standards, guidelines, and incentives for center development related to transportation (RT-1, RT-2),
- ! Level-of-service standards for transportation facilities (RC-2),
- ! Efficient movement of people, goods and freight (RF-4, RT-3),
- ! The coordinated phasing of development with the provision of transportation facilities and services (RF-3),
- ! Mitigated impacts associated with regional transportation facilities (RF-2, RT-3),
- ! Federal and state air quality regulations and regional air quality objectives (RT-4),
- ! Energy conservation (RT-4),
- ! Alternative travel options to the

⁴ The terms Regional Transportation Plan and Metropolitan Transportation Plan are interchangeable. Metropolitan Transportation Plan is used in the federal *Intermodal Surface Transportation Efficiency Act*. Regional Transportation Plan is used in the *Washington State Growth Management Act*.

- ! automobile (RF-4, RT-3),
- ! Mobility needs of business and industry (RT-11), and
- ! Mode-split goals for non-single occupancy travel. (RT-12)

Any changes to local transportation elements also will require PSRC certification.

Washington Administrative Code

The Washington Administrative Code (WAC 365-195-530, Procedural Criteria for Adopting Comprehensive Plans and Development Regulations) requires “that jurisdictions assess the impacts of their transportation and land use decisions on adjacent jurisdictions. Impacts should be identified and discussion of strategies to address inconsistencies should be included. Local jurisdictions should define their community’s role in regional transportation and land use strategy, and produce transportation and land use plans and development regulations which promote that role. All transportation projects which have an impact on the regional transportation system must be consistent with the Regional Transportation Plan as defined by RCW 47.80.30.”

The Code (WAC 365-195-325 [2][k][i], Procedural Criteria for Adopting Comprehensive Plans and Development Regulations) also indicates that “the designation of levels of service in the transportation area will be influenced by regional considerations. For transportation facilities subject to regional transportation plans under RCW 47.80.030, local levels of service should conform to regional plans. Other transportation facilities, however, may reflect local priorities.”

Washington State Clean Air Conformity Act

The Washington State Clean Air Conformity Act (WAC 173-420-050[1]) states that

“Conformity review will include transportation plans, improvement programs and projects on the regional transportation system. The review utilizes requirements from the federal Clean Air Act, the Washington Clean Air Act, the Growth Management Act, the State Environmental Policy Act, and the Federal ISTEA.”

Federal Clean Air Act

(Federal Clean Air Act Public Law 101-549; 42 U.S.C. 7401, Air Quality Conformity Assessment) “Any transportation plan or program...shall implement the transportation provision of any applicable implementation plan approved under this Act applicable to all or part of the area covered by such transportation plan or program. No transportation plan or transportation improvement program may be adopted by a metropolitan planning organization...or found to be in conformity by an MPO until a final determination has been made that emissions expected from implementation of such plans and programs are consistent with estimates of emissions from motor vehicles and necessary emissions reductions contained in the applicable implementation plan...no MPO or other recipient of federal funds...shall adopt a transportation improvement program of projects until it determines that such program provides for timely implementation of transportation control measures...”

Washington State Commute Trip Reduction Law

In 1991, Washington’s Commute Trip Reduction Law was passed as part of a bill that also called for mandating Transportation Demand Management (TDM) programs. The law focuses on work-related commuting where traffic congestion is typically heaviest. Kitsap County and the cities within the county have a number of specific responsibilities under the law. Kitsap County and the cities have entered into an inter-local agreement with Kitsap Transit to provide services as

required by the legislation, designed to:

- ! Reduce solo commuting and vehicle miles traveled,
- ! Designate “Commuter Trip Reduction Zones,”
- ! Identify employers affected by the legislation,
- ! Develop a TDM program for County employees,
- ! Review and revise parking policies and ordinances in accordance with the TDM program,
- ! Review and approve commuter trip reduction programs of affected employers,
- ! Review the performance and results of the TDM programs on an annual basis,
- ! Coordinate the TDM programs of all adjacent jurisdictions to ensure regional consistency, and
- ! Enforce the plans, including the adoption of civil penalties for those employers who fail to implement a program or modify a program that is not working.

Affected employers began implementing their TDM programs in October 1993. Employer program review and assessment will be conducted by Kitsap Transit annually.

Kitsap Transit Long-Range Plan

Elements of the *Kitsap Transit Long-Range Plan* have been included in various sections of this Transportation Chapter to ensure that the Transportation Chapter is consistent with Kitsap Transit’s philosophy for transit services and facilities throughout the County. As Kitsap Transit updates various sections of its long-range plan, the County will respond with

updates to its Transportation Chapter.

Key Planning Themes

In order to meet the federal, state and regional requirements, three key themes are woven throughout the Transportation Plan:

Kitsap County's Transportation Element is multimodal, not just a highway plan.

Just building more roads is not the answer. To be effective, the Transportation Chapter must consider the entire transportation system, and the role of individual transportation modes within that system, including public transit, public and private ferry systems, bicycling and walking. Projects that provide for several travel modes will be more effective than ones that simply add capacity for general auto travel.

While there may be conflicts among projects, and competition among travel modes for use of public rights-of-way, these conflicts can be resolved among the agencies and jurisdictions responsible for different modes. The Kitsap Regional Council (KRC) and its technical advisory committee will play a critical role in resolving such conflicts, coordinating actions among agencies, and setting priorities for expenditures for transportation system improvements.

This is an intermodal plan directed toward “seamless” movement among travel modes. The location of Kitsap County requires a careful look at how connections among different modes are made, within and beyond the county. One of the major goals of the Comprehensive Plan’s Transportation Chapter is to provide travelers with “seamless” movement among the various modes. This means providing easier access for people and goods transferring from one travel mode to another.

Intermodal transportation projects will look at how connections among travel modes occur, e.g., how personal, commercial and public transit vehicles are handled at ferry terminals, how pedestrians and bicycles use transit, how transit and ferries work together, and how transit serves residential areas.

Kitsap County’s Transportation Chapter will be consistent with regional transportation strategies.

A regional transportation strategy is important for all of the jurisdictions that comprise the Kitsap Regional Council. Washington’s Transportation Plan (WSDOT), and the Metropolitan Transportation Plan (PSRC) provide a regional framework for transportation planning and coordination in Kitsap County. A countywide transportation strategy is not in place yet. Some of the cities in Kitsap County have different goals and priorities than the County or other regional transportation system stakeholders. Kitsap County is working to build consensus among these parties, and determine common ground. Finding areas of regional agreement will be a large step in establishing regional transportation system needs and priorities. Regional cooperation will further the interests of all jurisdictions and agencies, and place Kitsap County and local jurisdictions in a better position to secure funding for regionally desirable transportation improvements.

The Transportation Chapter includes standards for transportation system level of service (LOS) and roadway cross-sections.

The Transportation Chapter sets specific LOS and roadway standards for systemwide planning and to help the system keep pace with future development. These tools can be applied locally or systemwide.

Kitsap County's Transportation

Element calls for increased local resources.

Trained staff, dedicated to transportation, as well as up-to-date computer software and hardware are needed to keep the County's planning program current. Tasks that will may require more resources are: travel forecasting for specific projects and areas, ongoing review and coordination with developers and other jurisdictions and agencies, and monitoring of progress and updating of the Transportation Chapter.

Goals and Policies

The goals and policies contained in this chapter provide a framework for short-range and long-range transportation planning and implementation decisions required of the County.

The North, Central, and South Kitsap County Transportation Plan Citizens Advisory Committees (CAC’s) were directly involved in developing the goals and policies. The committees have played a key role in creating a framework and vision for transportation planning in Kitsap County.

The framework focuses on coordination between land use and transportation planning and programming. Two ideas were shared by the committees and the County. One was that land use plans should drive the transportation system. The other was that the use of single-occupant vehicles should be de-emphasized by implementing multimodal transportation services and transportation demand management programs.

The committees and the County support the Growth Management Act, the Commute Trip Reduction Act, and Vision 2020; these goals

and policies of the Kitsap County Transportation Plan are in accordance with these acts. The committees also stress the importance of intergovernmental coordination, public participation, environmental preservation, and coordinating transportation with land use.

A. Intergovernmental Coordination

The following goal and policies are intended to help Kitsap County to coordinate transportation planning activities among local, tribal, regional, and state agencies, as well as coordinate transportation planning with the land use element of Kitsap County's comprehensive plan.

In addition, it is the intent of this section to encourage all jurisdictions in Kitsap County to develop a common roadway functional classification system.

Goal

1. Encourage efficient multimodal transportation systems based on regional priorities, and in coordination with county, tribe, and city comprehensive plans.

Policies

T-1 Implement Vision 2020 as adopted by the Puget Sound Regional Council.

T-2 Actively participate in the Puget Sound Regional Council (PSRC) and the Peninsula Regional Transportation Planning Organization (PRTPO).

T-3 Coordinate appropriate transportation issues with the Kitsap Regional Coordinating Council (KRCC).

T-4 The Transportation Improvement Program (TIP) for Kitsap County

shall continue to be a part of the regional TIP adopted by the PSRC. Local review, comment, and recommendations shall be coordinated through the BOCC.

T-5 Work with the PSRC and the PRTPO to identify all regionally significant transportation issues.

T-6 Work with all jurisdictions to mitigate inter-jurisdictional traffic impacts.

B. Public Awareness And Participation Goals

The intent of the goals and policies of this section is to encourage citizen and business participation in the planning and implementation of transportation facilities and services, and to encourage municipalities to develop citizen advisory transportation committees.

Goals

2. Ensure that the public is involved in transportation planning.
3. Ensure that the public has both the opportunity to participate in and understand the implications of transportation planning decisions.

Policies

T-7 Develop enhanced public involvement programs through the Citizens Advisory Committee and neighborhood group interaction.

T-8 Develop and enhance public communications programs when changes to the Transportation Plan are being considered.

T-9 Establish a procedure similar to the Department of Community Development variance notification system of regularly and effectively notifying affected residents when a transportation project is being designed.

C. Mobility

The intent of the goals and policies of this section are to improve transportation mobility by minimizing congestion and travel time on the arterial street system for transit and high occupancy vehicles.

The goals and policies also are intended to provide convenient and affordable means of travel for all citizens.

Additionally, this section addresses the need for a transportation system which supports and encourages HOV and transit use; and a transportation system that allows people to get to and from their destination in an acceptable time period.

Goals

- 4. Provide the public with the opportunity to make choices among modes of travel.
- 5. Emphasize moving people rather than vehicles.

Policies

- T-10** Establish and monitor signal timing, phasing, and progression to give transit and HOV travel an advantage in designated locations.
- T-11** Develop a hierarchy that allows for a prioritized system of signalization.

D. Environmental

T

The goal and policies in this section are intended to minimize energy consumption; minimize air, light, water, and noise pollution, and minimize destruction of ecosystems and impacts on wildlife habitat when developing new transportation facilities.

Goal

- 6. Minimize negative environmental impacts by the transportation system.

Policies

- T-12** Maintain the same environmental standards and mitigation requirements that are placed upon the private sector.
- T-13** Consider adjacent land use, scenic values, neighborhood impacts, and natural features in the review of road improvement projects.
- T-14** Promote pedestrian paths, greenbelt links, and compatible street orientation to link activity centers.
- T-15** Develop a traffic management strategy that minimizes through traffic in residential neighborhoods.
- T-16** Work with commerce companies to minimize through-truck traffic on the local road network.

E. Transportation Safety

T

TRANSPORTATION

he intent of the goals and policies of this section is to provide for a safe transportation system. Objectives include developing safety and lighting standards that protect transportation facility users and maintain rural, neighborhood, and community identities; reducing accidents and the potential for accidents; providing adequate lighting for pedestrians and cyclists, where appropriate, and providing safe access for disabled individuals in accordance with the requirements set forth in the Americans with Disabilities Act.

Goals

7. Maximize transportation system safety for people of all abilities.
8. Provide a safe, comfortable, and reliable transportation system.

Policies

- T-17 Analyze accident data to determine where safety-related improvements are necessary. Prioritize and implement safety-related improvements.**
- T-18 Provide adequate lighting for roadway and intersection visibility in accordance with adopted standards in hierarchical order.**
- T-19 Coordinate with Kitsap Transit to provide adequate lighting and telephones at major transit stops and park-and-ride facilities.**
- T-20 Design pedestrian, bicycle, and equestrian facilities with the following safety considerations:**
- # Minimize adjacent opaque areas, such as vegetation and overhangs; and

Pathway surfacing should be compatible with use.

T-21 Establish and implement sight distance and visibility standards for pedestrian facilities.

T-22 Locate traffic signs in the most visible location. Sign illumination will be considered where there are visibility concerns in hierarchical order.

T-23 Adopt and implement roadway/intersection site distance standards. Eliminate site obstructions such as utility poles, signs, parked vehicles and vegetation where site distance standards are not met.

T-24 Develop safety standards for interior parking and circulation at commercial developments.

F. Economic And Cost Efficiency

The intent of this section is to provide efficient, feasible, and equitable mobility for people and goods, while considering both the long- and short-term total financial costs when planning and developing the transportation system.

Goal

9. Encourage travel patterns and mode choices that efficiently use available physical, financial, environmental, and energy resources.

Policies

T-25 Locate new facilities to minimize right-of-way acquisitions and construction costs.

T-26 Develop and maintain an equitable system of transportation impact fees.

G. Land Use and Transportation Planning

T

The intent of the goals and policies of this section are to recognize the relationship between land use and transportation planning. Objectives include to encourage compatibility between transportation facilities and surrounding development, and to recognize that transportation is a function of land use.

In addition, the policies and goals are intended to increase the percentage of Kitsap County residents located within reasonable walking distance of designated transit stops; increase the percentage of residents who can reach neighborhood retail centers using transit, and who can reach major retail shopping centers without excessive transit/transfer delay; increase the time advantage and convenience of transit as compared to SOV travel; and to encourage the location of development to minimize vehicle miles of travel.

Goal

10. Coordinate land use and transportation planning to help manage growth.

Policies

T-27 Work with DCD to establish the transportation element of a development proposal during the early phase of project development.

T-28 Work with property owners to encourage land use and transportation links such as shared parking.

T-29 Encourage multi-modal connections between major buildings/activity areas both within and outside a development.

T-30 Implement and acquire needed right-of-way based on the County's roadway design standards.

T-31 Develop and implement transit-supportive design standards and facilities for all residential, commercial and institutional developments.

T-32 Encourage pedestrian linkages between parking lots and adjacent land uses.

H. Mass Transit Service And Commute Trip Reduction

The goals and policies of this section are intended to improve the county's mass transit system and experience for riders. The objectives include trying to minimize walking distances to arterials in order to serve bus transit users; provide continuous and direct bus routes to serve the maximum number of riders; develop smooth connections between the mass transit and ferry transit modes and optimize transit links to pedestrian and bicycle paths. In addition, the goals and policy address ways to encourage increased automobile occupancy and reduce vehicle trips by encouraging reduced SOV travel.

Goals

11. Support mass transit.

12. Use mass transit to the greatest extent

feasible as an alternative to the single-occupant vehicle.

Policies

T-33 Design roadways classified as minor arterial or higher to accommodate transit vehicles.

T-34 Work with Kitsap Transit to develop a transit supportive transportation system, including the following:

- # Designating regional travel corridors for bus, rail, and/or HOV use;
- # Identifying and acquiring future park-and-ride lots which support transit corridors;
- # Providing direct transit service, shuttle service, or other paratransit services in larger developments to connect areas in the development with the bus and ferry transit systems;
- # Locating transfer centers in higher density activity centers, including shopping centers;
- # Planning for and providing exclusive transit access to high density centers and ferry terminals; and
- # Developing transit advantage systems, queue bypass lanes, opticom systems, and unrestricted bus pullouts.

T-35 Work with Kitsap Transit to design transfer centers that:

- # Minimize traffic and parking conflicts;
- # Provide safe, convenient access for pedestrians and cyclists; and
- # Minimize negative environmental impacts on surrounding area.

T-36 Support the development of a regional park-and-ride lot system.

T-37 Consider the following criteria when planning and constructing regional park-and-ride lots:

- # Convenient access to the roadway system and to pedestrian and bicycle trails;
- # Bicycle storage;
- # Retail services which can function to provide conveniences, reduce trip making and serve as a crime deterrent. *Any retail services provided should be consistent with existing zoning;*
- # Provide incentives to retailers to provide park-and-ride spaces; and
- # Smooth intermodal connections to all modes of travel including transit, auto, rail, and non-motorized travel.

T-38 Encourage Kitsap Transit to develop ongoing marketing for its transit and inter-modal connections.

T-39 Kitsap Transit will implement the County's CTR program.

T-40 Provide and help fund increased security measures at park-and-ride lots. Security measure may include, but are not limited to, the provision of: surveillance cameras, lighting and private security personnel.

I. Marine Transportation Service

The intent of this section is to address the intermodal relationship between the state ferry system and Kitsap County's transportation plan.

Objectives of the goals and policies include: to encourage and facilitate intermodal coordination and connections with all inter- and intra-county auto and passenger-only ferry service; support development of intra-county marine transit service; develop an objective way to evaluate and provide for ferry system needs throughout Kitsap county and the Puget Sound Region, and minimize traffic and parking impacts of ferry service in the vicinity of terminals.

Another objective is to facilitate the improvement of customer relations between Kitsap County residents and the Washington State Ferry System.

Goal

13. Ensure that the marine transportation system meets commuter, commercial and recreational demands in the most efficient and reliable manner.

Policies

T-41 Provide Kitsap County with more direct and more frequent auto and passenger-only ferry service.

T-42 Encourage Washington State Ferries to provide more frequent and more reliable auto and passenger-only ferry service between Seattle and Bremerton.

T-43 Coordinate with the necessary agencies to develop feasibility studies and a potential implementation plan for intra-county ferry service.

T-44 Support increased passenger-only ferry service between downtown Seattle and Southworth, Kingston and Bremerton.

T-45 Work with Kitsap Transit and

Washington State Department of Transportation, including the Marine Division, to achieve the following:

- # To coordinate increased passenger-only ferry service with express transit service;
- # To strategically locate satellite park-and-ride facilities in lieu of new parking facilities at ferry terminals;
- # To provide priority access systems at ferry terminals for all registered carpools, vanpools and other mass transportation vehicles;
- # To provide the necessary facilities for bicycles to access ferries and transit (i.e., racks on buses and ferries and bike lock areas); and
- # To develop appropriate level of service standards for those ferry routes serving Kitsap County.

T-46 Continue to work with Kitsap Transit to improve transit connections to ferry terminals.

T-47 Establish regular contact with Washington State Ferries to improve customer service and public relations with ferry users.

J. Nonmotorized Travel

The goals and policies in this section support improvements and development of opportunities for nonmotorized travel. The objectives include to enhance pedestrian connections to commercial areas, employment areas, community centers, and public facilities, and to encourage and support development of off-road pedestrian, bicycle, and equestrian facilities.

Additionally, the intent is to coordinate linkages between off-road and on-road pedestrian and bicycle facilities; consider impacts on pedestrian and bicycles when designing and engineering roadways; and

emphasize continuous pedestrian and bicycle linkages to transit facilities.

Goals

- 14.** Maximize the opportunity for nonmotorized travel, including development of greenways.
- 15.** Encourage development of rights-of-way to safely accommodate motorized and nonmotorized travel.
- 16.** Create a continuous nonmotorized transportation system which integrates on- and off-road facilities.

Policies

- T-48** Incorporate pedestrian, bicyclist, and equestrian needs throughout the planning and design of transportation projects and development proposals.
- T-49** Incorporate greenway projects into the overall transportation plan.
- T-50** Link greenway systems to bus, water transit, pedestrian, bicycle, and equestrian facilities.
- T-51** Develop and implement pedestrian and bicycle access standards for new developments in conjunction with County pedestrian, bicycle, and greenway plans.
- T-52** Provide adequate and secure bicycle parking at all ferry terminals, park-and-ride lots, and public facilities.
- T-53** Preserve public access to public shoreline areas that are under jurisdiction of government entities.
- T-54** Incorporate bicycle parking requirements for employment, institutional and retail uses, in

Kitsap County's zoning regulations. Zoning regulations will include the requirements for developments to provide secure bicycle facilities, which may include bicycle racks and secure rooms within buildings.

K. Transportation System Planning and Implementation

The intent of this section is to implement a complete transportation network, including elements from land, water, and air transportation systems.

Goal

- 17.** Develop a comprehensive and coordinated multimodal transportation system.

Policies

- T-55** Use the transportation planning process to identify current and future transportation system needs throughout the County.
- T-56** Use the transportation planning process to support network connectivity.
- T-57** Identify specific transportation corridors and alignments for public roads, transit and rail service, pedestrian and bicycle facilities, and water routes.
- T-58** Improve the existing road network before considering new corridors.
- T-59** Adopt an alignment plan for the new transportation corridors and facilities identified in the transportation plan.
- T-60** Secure necessary rights-of-way for

transportation improvements.

- T-61** Make it a priority to protect public rights-of-way.
- T-62** Locate transportation projects away from habitat, recharge areas, stream corridors, and sensitive areas wherever possible.
- T-63** Encourage the creation and preservation of right-of-way for future rail or other transportation purposes, such as greenways or bicycle facilities.
- T-64** Develop innovative roadway design standards which enhance neighborhood identities but do not infringe on the safety of motorized and non-motorized traffic.
- T-65** Implement the roadway design functions shown on the County's transportation plan during development review and transportation project development.

L. Level of Service

The intent of this section is to ensure that new transportation facilities are planned in conjunction with the development process and implemented when required.

In addition, goals and policies address the objective of providing adequate transportation capacity to link major transportation corridors with residents and jobs.

Goals and policies also address the objective of minimizing roadway expansions by the use of multimodal improvements and Transportation Demand Management.

Goal

18. Establish minimum level of service standards for transportation facilities in

accordance with the requirements of the Growth Management Act.

Policies

- T-66** Take into account the tolerance of communities to accept certain levels of congestion on non-regional roadways.
- T-67** Develop a transportation concurrency management system.
- T-68** Develop requirements for traffic impact studies that:
 - # Set threshold requirements;
 - # Carry out a multi-modal level of service analysis (i.e. assessing a development's impacts on the transit, ferry and non-motorized systems);
 - # Identify ways to mitigate development-related transportation impacts in accordance with the State Environmental Policy Act [SEPA], and
 - # Allow evaluation of the cumulative effects of numerous small developments.
- T-69** Develop level of service standards in coordination with the Puget Sound Regional Council (PSRC), the Kitsap Regional Council (KRC), and the Peninsula Regional Transportation Planning Organization (PRTPO).
- T-70** Participate in the PSRC and the PRTPO to seek consistent level of service standards between the County, cities, and the State of Washington for identified regional system components.
- T-71** Develop a consistent way to define baseline capacities on regional facilities.

- T-72** Use urban growth management agreements to designate levels of service on regional transportation facilities.
- T-73** Transportation improvements shall be available to support planned growth at adopted levels of service concurrent with development. “Concurrent” shall mean that improvements or strategies are in place at the time of development, or that a financial commitment is in place to complete the improvements or strategies within six years. Proposed development shall not be approved if a development causes the adopted level of service to decline below the standards adopted in the Comprehensive Plan.

M. Roadway Access

T

his section addresses the transportation objective that access should be based on land use type and roadway functional classification.

Goal

- 19.** Manage access to the transportation system.

Policies

- T-74** Promote the consolidation of access along State Highways and the County arterial system.
- T-75** Develop design criteria for comprehensive access plans that emphasize efficient internal circulation.

- T-76** Adopt driveway spacing standards based upon roadway functional classification.
- T-77** Provide incentives to adjacent property owners to establish mutually shared driveways. *Incentives should not include density bonuses.*
- T-78** Implement access standards for all roadway types.

N. Roadway Aesthetics

The goal and policies of this section address the need to provide landscape enhancement of existing and new roads to support the local character.

Goal

- 20.** Design an intermodal transportation system which supports and enhances neighborhood identities.

Policies

- T-79** Provide streetscape designs in urbanized areas.
- T-80** Develop rural design standards which enhance strong rural characteristics while providing adequate safety.
- T-81** Retain native vegetation as a priority.
- T-82** Support greenway planning.
- T-83** Encourage placing utilities underground rather than above ground.
- T-84** Designate scenic or waterfront roadways and develop appropriate design standards.

O. Funding Strategy

This section addresses the issues of financing the transportation plan. The goal and policies are based upon the following objectives: to allocate resources equitably to all areas of the County; to ensure that transportation expenditures are consistent with the Transportation Plan goals, and to develop a transportation plan which takes advantage of opportunities for state and federal funding. At this time, the goals cannot be fully realized without legislation that balances the requirements of the GMA and the funds allocated to the WSDOT.

Goal

- 21. Develop a funding strategy and financing plan to meet the multimodal project and programmatic needs identified in the transportation plan.

Policies

- T-85 **Distribute transportation funds using an equitable priority process.**
- T-86 **Secure adequate long-term funding sources for transportation system improvements.**
- T-87 **Identify multimodal, multi-jurisdictional projects that support economic development.**
- T-88 **Coordinate efforts by Kitsap County and other jurisdictions, the Washington State Department of Transportation, the State legislature and the private sector to increase state and federal funding for transportation.**
- T-89 **Provide sufficient flexibility in the funding process to maximize the use of County and other funding sources.**

- T-90 **The Transportation Improvement Program (TIP) will represent the priorities for transportation expenditures in Kitsap County.**

- T-91 **Conduct a regular comprehensive evaluation and assessment of Kitsap County's transportation priorities. Annual updates will be incorporated into the Capital Improvement Program, the Transportation Improvement Program, and the County Budget.**

- T-92 **If the funding and/or revenue assumptions used in this plan as the basis for identified or programmed capital improvements prove to be erroneous, because of changed conditions or otherwise, Kitsap County will (a) identify alternative sources of funding for needed improvements; (b) revise its level of service standards to match available revenues; and/or © reassess the land use plan and revise it as appropriate to achieve a balance between land use, revenues and levels of service.**

P. Aviation Transportation

The following goals and policies recognize airports as essential public facilities under the state's growth management act and are intended to ensure the establishment of an appropriate air transportation system in Kitsap County and to preserve the County's aviation facilities such that they can change with the community to meet the needs of the County, its residents, businesses and the military community. Objectives include the protection of airport environs from incompatible uses, the safety of aviation facility users and continued air transport services for Kitsap County.

Goals

- 22. Cooperate with entities within the County to establish an air transportation system

TRANSPORTATION

appropriate to serve the residents, businesses and military activity within the community.

- 23.** Preserve the County's existing aviation facilities such that they are able to retain and augment their role in the regional, national and international transportation system, recognizing the importance of this system to the viability of Kitsap County in the global community.
- 24.** Ensure that the safety of the community and the users of the County's air transportation system is maintained as its aviation facilities evolve.

Policies

- T-93** Acknowledge the value of aviation facilities to the maintenance and evolution of the economic well being of the Kitsap community.
- T-94** Actively assert the role of County's air transport system and its needs in local and regional aviation planning activities.
- T-95** Incorporate aviation transportation planning considerations in all land use decisions reviewed within airport environs. Ordinances and procedure will be established within the County's development review system to ensure that projects are reviewed for their appropriateness in airport environs and to determine if Federal Aviation Administration established airport vicinity height limits are exceeded.
- T-96** Consider the compatibility of new uses with the aircraft activity when new development is being considered for location near aviation facilities.
- T-97** Notify the Port of Bremerton of projects planned and proposed construction within a two mile radius of Bremerton National Airport. *(This is a concept that has been in place since the 1982 SK subarea plan.)*

Shorelines Chapter

This Shorelines Chapter is divided into the following sections:

The Introduction describes the intent of the Shorelines Chapter and its relationship to Kitsap County's vision of the future and other Comprehensive Plan chapters.

The Planning Context discusses the requirements of the Growth Management Act regarding shorelines.

The Shoreline Environments provides a brief discussion of the designations applied to those areas which fall under the jurisdiction of the Shoreline Master Program.

The Master Goals and Policies are divided into the following areas:

- A. Conservation and Resource Protection
- B. Shoreline Use
- C. Water Quality
- D. Economic Development
- E. Public Access
- F. Recreation
- G. History and Culture

Planning Context

ment Master Program are considered an element of the county's Comprehensive Plan. The framework for this Shorelines Chapter is based on the goals and policies outlined in the Master Program.

H. Aesthetics

I. Natural Systems

J. Circulation

Introduction

The shorelines of Kitsap County are among the most valuable and fragile of this state's natural resources. With 228 miles of saltwater shorelines and 33 miles of freshwater lake frontage,

Kitsap County's shorelines provide habitat for fish and wildlife, economic diversity and recreational opportunities which are utilized by residents of all ages. Shorelines play a large part in enhancing the quality of life for many of our county's citizens. In order to protect, preserve, enhance and restore the natural systems and resources of our shorelines while still allowing economic and recreational use of them, development practices must be conducted with sensitivity and minimal environmental impact.

This Shorelines Chapter works with other chapters in the Comprehensive Plan to protect and preserve saltwater and freshwater shorelines throughout the county by directing development suitable for this environment.

Pursuant to the Growth Management Act, the goals and policies of the Shoreline Manage

While it is the intent of the Master Program to provide a management scheme which will govern the utilization, protection, restoration and preservation of

Kitsap County's shorelines, this chapter serves to provide a link between land use planning and the regulatory process outlined in the Shoreline Management Master Program.

Shoreline Environments

Natural Environment: The goal of the natural environment is to preserve and restore natural systems which are currently relatively free of human influence. To maintain the integrity of this environment, severe restrictions on the intensities and types of uses permitted in such areas are required.

Conservancy Environment: The objective of the conservancy environment is to protect, conserve and manage existing natural resources and valuable historic and cultural areas. This designation ensures a continuous flow of recreational benefits to the public and achieves sustained resource utilization. It will also protect fish and wildlife habitat and environmentally sensitive areas. A sub-environment has been designated for Conservancy areas which are publicly-owned and dedicated for use and enjoyment as a park, recreational site or open space.

Rural Environment: The purpose of the rural environment is to: a) protect agricultural land from urban expansion, b) restrict intensive development along undeveloped shorelines, c) function as a buffer between urban areas and d) maintain open spaces and opportunities for recreational uses compatible with agricultural and forestry uses.

Semi-Rural Environment: The intent of the semi-rural environment is to promote a multiple-use shoreline area in which the scale of uses fall between that of the rural and urban environments. Certain aspects of the natural environment will be retained in conjunction

The Master Program establishes five shoreline environment designations: Natural, Conservancy, Rural, Semi-Rural and Urban. The shoreline environment designations are not a substitute for existing land use regulations, but rather must be considered in addition to those regulations. Specific designation criteria and management policies for each environment are described in the Shoreline Master Program; these criteria are not outlined in this chapter. with permitted uses.

Urban Environment: The goal of the urban environment is to ensure optimum utilization of shorelines within urbanized areas. Such areas require management for intensive use and development to enhance and maintain a multiplicity of urban uses on the shorelines.

Goals and Policies

Kitsap County's shorelines must be developed in a manner that is consistent with its shoreline designation. This chapter provides a series of goals and policies which protect sensitive shorelines from the negative impacts of development, including risks to ecology, property and human health. The goals and policies of this chapter are based on the Master Goals outlined in the Shoreline Management Master Program.

A. Conservation and Resource Protection

Goals

1. Preserve natural shoreline resources wherever possible.
2. Promote shoreline conservation and resource protection.

Policy

SH-1 Shoreline characteristics such as scenic vistas, estuarine areas, biological wetlands, beaches, and other unique biological functions, valuable natural systems and aesthetic features should be preserved and restored.

B. Shoreline Use**Goal**

3. Encourage shoreline diversity by recognizing the distribution and location requirements of housing, commerce, industry, transportation, public buildings, education, recreation and natural resources.

Policy

SH-2 Encourage and support shoreline diversity through planned and coordinated development which gives preference to water-dependent uses, traditional and historic use patterns, resource values, and environmental protection.

C. Water Quality**Goal**

4. Protect and enhance water quality in Puget Sound, Hood Canal and inland lakes while allowing for compatible growth and development.

Policies

SH-3 Uses and activities along shorelines and in the waters of Kitsap County should not have a significant adverse affect on water quality.

SH-4 Kitsap County shall safeguard

shoreline resources by only allowing development that is compatible with sensitive shoreline areas.

SH-5 Kitsap County shall encourage the use of Best Management Practices in the use of herbicides and pesticides near surface waters and drainage conveyances.

SH-6 Minimize sedimentation and turbidity in fresh and marine waters of the state through measures which control stormwater runoff and reduce stream and shoreline erosion.

D. Economic Development**Goal**

5. Commercial uses and other economic developments which require or depend on shoreline locations for their success should be encouraged when the shoreline can accommodate such development.

Policies

SH-7 Encourage and support water related and water dependent commercial uses which are environmentally compatible.

SH-8 Land use activities shall be sited and designed to minimize conflicts with and impacts on the shoreline environment.

E. Public Access**Goal**

6. Provide the public access to shorelines.

Policies

SH-9 Promote and encourage safe, convenient

and diversified access to public shorelines while respecting private property rights.

SH-10 Publicly owned, undeveloped road ends, tax title lands and rights-of-way which abut shorelines should be evaluated for their use as public access points.

F. Recreation

Goal

7. Provide a variety of water and shoreline related recreational opportunities for the public.

Policies

SH-11 The County, in conjunction with other organizations, should work to maintain and enhance existing recreational opportunities for the public.

SH-12 The County, in conjunction with other jurisdictions, should work to develop new and diverse water and shoreline related recreational opportunities for the public.

G. History and Culture

Goal

8. Increase public awareness of the historical, cultural and environmental influences of Kitsap County's shorelines.

Policies

SH-13 Historical, cultural, educational or scientific areas should be identified, preserved and/or restored and shoreline development within them should be minimized.

SH-14 Waterfront historical districts (those identified now and in the future), cultural resource areas and specific historic sites and structures should be integrated into zoning and planning maps.

SH-15 Public awareness of the historical, cultural and environmental influences of Kitsap County's shorelines should be increased through educational and interpretive projects.

H. Aesthetics

Goal

9. Retain the high aesthetic value of shorelines in Kitsap County.

Policies

SH-16 Shoreline development shall be encouraged to be designed in a manner which will maintain or enhance predominant scenic view corridors for the traveling public.

SH-17 Shoreline development shall not significantly block the view of upland residents.

I. Natural Systems

Goals

10. Minimize human interference of natural systems occurring along shorelines.
11. Preserve the biological diversity of Kitsap County and Puget Sound.
12. Develop a critical areas ordinance and development regulations which protect habitat conservation areas and

important habitat elements.

13. Protect, enhance and restore aquatic habitat areas, such as streams, wetlands, lakes, shell fish beds, herring and smelt spawning areas and kelp and eelgrass beds.
14. Encourage voluntary protection of species and habitat.

Policies

SH-18 Kitsap County shall work with appropriate state agencies and community organizations to conduct a thorough, countywide inventory of habitat types and areas along Kitsap County shorelines. Based upon this inventory, a habitat protection plan should be developed that recommends areas most in need of protection or restoration,

SH-19 Kitsap County shall maintain and update a countywide inventory of existing plant, fish and wildlife habitat and shall make appropriate information available to the public.

SH-20 The County shall work with other government jurisdictions to protect habitat areas which cross jurisdictional boundaries.

SH-21 The County should work to minimize habitat fragmentation and protect open space and connective corridors.

SH-22 The County shall consider the impacts to shoreline habitat, conservation areas, and fish and wildlife populations in designating land use and zoning classifications.

SH-23 The County's Open Space Plan should be amended to include the

findings of a future habitat inventory and habitat protection plan for shorelines.

SH-24 Trail systems through habitat conservation areas should be carefully sited to minimize impact to fish and wildlife species.

SH-25 To protect fish and wildlife habitat, the County should require vegetative buffers along lakes and marine shorelines. Larger or enhanced buffer areas may be required to adequately protect priority fish and wildlife species.

SH-26 Buffer enhancement or restoration shall be required where buffers have been degraded or removed during new development.

SH-27 The County shall review building permit applications located within identified shoreline habitat conservation areas. Applications should be forward to the Department of Fish and Wildlife or the Department of Natural Resources to determine those which may pose a potential adverse impact.

SH-28 The County shall encourage developers to protect continuous corridors of native vegetation wherever possible, to disturb as little natural vegetation as feasible, and to enhance or restore wildlife habitat by transplanting or planting native vegetation in the disturbed landscape.

SH-29 Encourage cluster development to protect fish and wildlife habitat and where possible plan cooperatively with adjacent property owners to provide maximum habitat potential.

SH-30 During the review of conversion option harvest plans, the county shall consider long-term impacts to habitat conservation areas and important habitat elements.

SH-31 The County shall work with other jurisdictions, agencies and private landowners to reduce non-point source pollution and implement the recommendations of approved watershed management plans.

SH-32 The County should work with the Department of Fish and Wildlife and local tribes to inventory blockages of fish passageways and prioritize blockage removal and stream corridor restoration.

SH-33 Minimize sedimentation and turbidity in fresh and marine waters of the state through measures which control stormwater runoff and reduce stream and shoreline erosion.

SH-34 The County should provide information about existing government and private programs pertaining to voluntary habitat protection, enhancement and restoration.

SH-35 The County should encourage private-public partnerships to restore and enhance fish and wildlife habitat along shorelines.

Policy

SH-36 Transportation systems along shorelines should be designed to be safe, economical, adequate and have the least possible adverse effects on unique or fragile shoreline features and existing ecological systems, while adding to the functional and aesthetic enhancement of the shoreline.

J. Circulation

Goal

15. Create transportation systems which protect and enhance shoreline features and habitat.

FRAMEWORK PRINCIPLES APPENDIX

I. PRINCIPLES

The following principles were being used by Kitsap County to provide guidance for revision of the Comprehensive Plan and implementing regulations. A draft of the principles grew out of a mediated process involving parties to various appeals to the County's plan. The Board of County Commissioners affirmed the draft principles (with some minor changes and additions) in January, 1996.

1. The Comprehensive Plan will result in a more meaningful difference between rural and urban designated areas. The plan will provide for better phasing of growth and scaled back urban growth areas, using OFM population forecast ranges.
2. **A.** The financing of public facilities and utilities will use realistic assumptions about how growth will be paid for and, if not achievable, how the County will reassess land uses to meet available finances. Services to provide public sewer and water in problem spots in rural areas will be provided without allowing additional urban growth.
B. A more detailed and regionalized capital cost and build out analysis will be prepared which evaluates the costs and benefits of land use patterns that meet the agrees upon principles. CTED will be willing to help pay for a fiscal impact analysis that would include opportunities for public participation and will include the school districts, public and private utilities and the cities.
3. **A.** The protection of critical areas will be more fully integrated into the Comprehensive Plan and development regulations (including updates on aquifer protection and water availability) so that land use policies and densities are consistent with limitations imposed by critical areas, and the public is given fuller disclosure and greater certainty.
B. Instream flows will be protected and the interconnectedness of land use and natural resource management will be recognized. To protect salmon, the stormwater management plan will address appropriate limits on impervious surfaces in the drainage basin of salmon-bearing streams.
C. Because water is a necessary and limited resource in Kitsap County, (although near-term supplies are believed to be adequate), the comprehensive plan and implementing regulations will create a framework for identifying and conserving sufficient volumes of clean surface and ground water for human use, fish and wildlife survival, and shellfish certification, to sustain a healthy economy and environment within the constraints of these natural resources.
4. The process of amending comprehensive land use plan designations will strive to meet the requirements of regulatory reform and greater certainty through the adoption of mapped land use designations and through clear, prescriptive regulations and incentives which reflect the plan's goals and policies. This will use the SEPA process to accurately and thoroughly analyze and disclose the environmental and economic costs of alternatives considered in the planning process. Procedures will also be developed which provide criteria and thresholds for exemptions and variances. Public input will be sought on the criteria and thresholds. Public input will also be sought on identified categories of variances and exemptions from critical area regulations in appropriate circumstances.

II. SUBSTANTIVE CHANGES TO ACHIEVE PRINCIPLES

A. Critical Areas Protection

1. Update aquifer recharge maps in Comprehensive Plan and critical areas regulations. Reclassify compatible land uses in the Comprehensive Plan based upon locations of recharge areas.
2. Combine critical area overlays on GIS to determine lands not suitable for development or lands that will require special mitigation measures.
3. Identify critical areas that may require an elimination or restriction for well drilling based upon water quality or water quantity concerns.
4. Limit the quantity of impervious surfaces within the drainage basins of salmon-bearing streams.

B. Rural/Urban Allocations and Population

1. Provide for a range of rural densities and sufficient urban densities to support urban services. The specific range of rural densities will be identified as part of the plan revision.
2. Define rural level-of-service standards for water and sewer for the purpose of protecting public health, natural resource protection and water conservation, with the understanding that these services will not encourage higher densities.
3. Use the GIS from County and PUD to overlay existing infrastructure data and existing land use map to accurately determine growth areas served by urban services.
4. Re-evaluate the size of UGAs.
5. Amend the Comprehensive Plan to direct appropriate commercial and industrial activities into rural centers or villages, while preserving the majority of rural lands at a lower density.
6. Develop a program which includes incentives to help conserve agricultural, forest and open space lands in rural areas, while promoting increased densities in urban areas. Investigate right-to-farm and right-to-practice forestry ordinances.
7. Integrate the shoreline master program into the Comprehensive Plan to help manage and preserve sensitive areas along the marine shorelines.
8. Work with the Cities to develop and encourage programs that ensure and enhance the livability of urban areas.

C. Financing Public Facilities

1. Include costs and probable (local, state and federal) funding sources in the Capital Facilities Element, especially the 6-year plan. If probable funding falls short of meeting identified needs,

discuss how additional funding will be raised or how land use assumptions will be reassessed to maintain levels of service standards.

2. Update functional plans (water, sewer, stormwater, etc.) to accurately reflect locations of existing and proposed urban services and integrate information into the Comprehensive Plan.
3. Incorporate other technical plan data (watershed, groundwater management, etc.) into the Comprehensive Plan amendment.
4. Designate existing and potential mineral lands of long-term commercial significance adequate to meet the growth needs for at least 20 years, and thereby account for the costs of sand and gravel needed for development.

D. Plan Amendments and Fully Contained Communities

1. Develop a comprehensive implementation strategy. Establish a review and amendment process for the Commissioners to monitor and review the progress of the plan and determine if changes in land uses are needed to stay within budget.
2. Include a process for designating Fully Contained Communities according to GMA requirements and the plan amendment process.

E. Build-Out Analysis

1. Analyze actual land use capacity and constraints at various densities for the UGAs and rural lands, using the County and PUD GIS data. Include actual acres available and not available for development. Modify reduction factors subtracting undevelopable lands (critical areas, ROW, etc.) from available lands and use a market factor not greater than 25%. Analyses should include availability and available infrastructure.
2. Analyze options for phasing UGAs based upon financial and natural resource (i.e. water and critical areas) constraints.

F. Affordable Housing

1. Use appropriate incentives and investigate financial and other programs that will support and promote the provision of affordable housing.

G. Essential Public Facilities

1. Identify a process, consistent with GMA direction, to site essential public facilities.

PUBLIC PARTICIPATION APPENDIX

I. INTRODUCTION

Kitsap County's Comprehensive Plan is founded on the goals, visions and input of the community and the many residents that were involved in its four year development. Involvement ranged from residents attending an open house, signing up to receive mailings, hundreds of letters, comment sheets and phone calls the planning department received, to attending the meetings of the Planning Commission and ultimately the Board of County Commissioners' public hearings.

II. PHASE ONE

Growth Symposium, Community Plans and Citizen Advisory Committees

Kitsap County conducted a Growth Management Symposium at the Kitsap Pavilion on October 13 and 14, 1990. The purpose of the Symposium was to:

- 1) Educate the community about growth and related planning issues in Kitsap County;
- 2) Develop a vision and guidelines for a growth management strategy in each of 10 identified key areas; and
- 3) Set forth a plan for post-Symposium action.

The visions and issues identified at the Symposium have guided the comprehensive plan development. As an aftermath of the Growth Management Symposium's energy and optimism for the future of Kitsap County and its communities, community and political leaders began focusing on the unique communities of unincorporated Kitsap, and consequently, began community planning efforts.

Silverdale. Silverdale was identified as the first of these communities where its residents became involved in planning efforts. On May 22, 1991, a Silverdale Summit, sponsored by local businesses, chamber of commerce and Kitsap County Department of Community Development (DCD), was held to "vision" the future of Silverdale. A citizen advisory committee was established from this Summit and the Silverdale Urban Design Study was developed and recommended for consideration in the countywide Comprehensive Plan by the Board of County Commissioners on March 22, 1993.

Kingston. Recognizing the dichotomy of an expanding urban center paired with idyllic rural characteristics, the Board of Commissioners decided that Kingston needed a community plan to guide and direct its anticipated growth. In September 1991, a 15-member citizen advisory committee was established to develop the Kingston Community Design Plan. The plan that was developed has guided the development of the Kingston Urban Growth Area, as well as the commercial and residential designations within.

PUBLIC PARTICIPATION APPENDIX

Suquamish. The community of Suquamish, already actively involved with land use, requested from the Board of Commissioners a community plan to define and improve its sense of community. January 1992 marked the starting point of development of the Suquamish Community Plan. This plan was recommended for consideration in the countywide comprehensive plan by the Board of County Commissioners of May 17, 1993.

Hansville. A similar occurrence in Hansville led to the beginning of the Hansville Community Plan in March 1992. That plan was recommended for consideration in the countywide comprehensive plan by the Board of County Commissioners on October 4, 1993.

South Kitsap. South Kitsap, with its characteristic and valued rural environment, posed an interesting challenge. A citizen advisory committee was formed to develop the South Kitsap Rural Design Study, which was recommended for consideration in the countywide Comprehensive Plan by the Board of County Commissioners on January 10, 1994.

Special citizen advisory committees. In addition to the citizen advisory committees which developed the above mentioned community plans, other citizen advisory committees were appointed to focus on various issues which would contribute to, if not become a part of, the countywide Comprehensive Plan. These citizen advisory committees are:

- # **Subarea Transportation Citizens Advisory Committee**, which worked with Public Works' transportation staff and consultants in developing a 20-year plan by identifying and prioritizing transportation improvements for 6, 12 and 20 years. This plan laid the basis for the Transportation Chapter.
- # **The Ground Water Advisory Committee**, which serves as a technical/citizen advisory committee through the Public Utility District #1 of Kitsap County, developed a 20-year Groundwater Management Plan to address water quantity and quality in Kitsap County. This committee was instrumental in providing data and guidance for the water resources sections in the comprehensive plans.
- # **The Parks Citizen Advisory Committee** worked with the Parks Department staff and consultants to develop a 20-year comprehensive plan which identifies park improvements, acquisitions and funding sources. This plan was used as the Parks and Recreation section of the Capital Facilities Chapter.
- # **The Open Space Council** supported DCD planning staff by writing the Open Space Goals and Policies and identifying areas to be included on the Open Space Overlay.
- # **The Solid Waste Citizen Advisory Committee** assisted Public Works' staff in writing the Solid Waste Management Plan, which was used as the Solid Waste Facilities plan in the Capital Facilities Chapter.
- # **The Rural Roundtable**, a citizen advisory committee appointed by the Board of County Commissioners, worked with staff to develop policies for the Interim Development Regulations for Resource Lands.

- # **The Kitsap County Planning Commission**, the most influential citizen advisory committee, served as the central citizen advisory committee which considered and made recommendations on the entire comprehensive plan.

III. PHASE TWO

Visioning

“Visioning” -- or deciding on a common vision for the future -- was an important and essential component of the public involvement program and in the development of the comprehensive plan. Visioning provided opportunities for Kitsap County residents, Planning Commissioners and planning staff to interact and discuss the issues facing planning for Kitsap’s future. These discussions essentially began at the Growth Symposium, and continued for the next four years. The momentum generated from the Growth Symposium continued as requests for community plans came to the Board of Commissioners from all areas of the county. Each community which participated in developing a plan also developed a vision for its future, and its ideals and goals were reflected in each community’s design plan.

Beginning with the solid foundation of the articulated desires of the residents involved with the community plans, DCD begin a separate visioning process for the countywide comprehensive plan. This process began in August 1992, when three Comprehensive Plan Public Input Forums were held to discuss participants’ concerns and issues regarding future land use development. These meetings were followed by six more public input forums held October 20, 21, 22, 28, 29 and November 4, 1992. These meetings began by using the 13 goals outlined in the Growth Management Act as the “jumping off” point to discuss the future of Kitsap County and the hard issues which the comprehensive plan would have to address.

The public input gathered at these meetings as well as questionnaires distributed at these meetings and in subsequent outreach meetings, were used by planning staff to develop the framework of the comprehensive plan and, specifically, the goals and policies for the plan.

IV. PHASE THREE

Outreach

The primary premise guiding the Kitsap County planning department’s outreach efforts was to make involvement in the comprehensive planning process as easy and accessible to those who want to participate. This was done, for example by having open houses at convenient locations, such as the local mall, and by attending established community/civic groups scheduled meetings.

Immediately after the visioning sessions, a letter was mailed to approximately 75 community and civic organizations requesting an invitation to attend a meeting to make a presentation on growth management, comprehensive planning and to answer questions, address concerns and, most importantly, to listen. The following organizations responded and presentations were made:

- January 5, 1993 – Seabeck Community Club
- January 7, 1993 – Save Long Lake Community Club
- January 8, 1993 – Holly Community Club
- January 21, 1993 – League of Women Voters of Kitsap

PUBLIC PARTICIPATION APPENDIX

January 28, 1993 – Silverdale Rotary

February 3, 1993 – Insurance Women of Kitsap

February 16, 1993 – Kingston Improvement Committee

February 16, 1993 – Bremerton Federated Women’s Club

February 18, 1993 – Kitsap Peninsula Women’s Club

February 22, 1993 – Kitsap Association of Realtors

February 22, 1993 – Save Poulsbo Area Action Committee for the Environment

February 23, 1993 – Suquamish Area Citizens Council

March 3, 1993 – League of Women Voters of Kitsap

March 3, 1993 – Poulsbo Chamber of Commerce

March 16, 1993 – Lone Rock Community Club

April 1, 1993 – Keyport Improvement Committee

In July 1993, the draft land use chapter was released for public review and requests for invitations to address community groups were made again. This time, the presentations focused on the land use chapter and map, the comprehensive plan development process, and answering questions and listening to citizen’s concerns and comments on the draft chapter. Open houses were also held to facilitate one-on-one conversations and to allow more flexible hours for citizens to become informed and offer input. Public Input sheets were developed at this time to easily submit questions, concerns, suggestions and request changes. Presentations made by planning staff were:

August 18, 1993 – South Kitsap Kiwanis

September 14, 1993 – Sunnyslope Neighborhood

September 21, 1993 – City of Bremerton Planning Commission

September 22, 1993 – League of Women Voters of Kitsap

September 22, 1993 – Silverdale Water District

September 30, 1993 – Olalla Community Council

October 1, 1993 – Holly Community Club

October 5, 1993 – Open House at Givens Community Center

October 6, 1993 – Poulsbo Chamber of Commerce

October 7, 1993 – Open House at Silverdale Community Center

October 12, 1993 – Open House at Poulsbo Fire Hall

October 18, 1993 – Wildcat Lake Community Club

October 19, 1993 – Hansville Community Club

October 21, 1994 – Public Input Forum - Givens Community Center

October 26, 1993 – Kitsap Land Owners Coalition

October 29, 1993 – Friends of Open Space

November 1, 1993 – City of Port Orchard City Council

November 3, 1993 – Public Input Forum - Silverdale Community Center

November 4, 1993 – Public Input Forum - North Kitsap High School

November 4, 1993 – City of Bainbridge Island City Council

November 4, 1993 – South Kitsap Chamber of Commerce

November 5, 1993 – Olympic View Community Club

November 10, 1993 – Audubon Society of Kitsap
November 11, 1993 – Commercial Investment Brokers
November 15, 1993 – Sunnyslope Community Club
November 16, 1993 – Kingston Improvement Committee
November 16, 1993 – Lone Rock Community Club
November 18, 1993 – Indianola Beach Improvement Club/Land Trust
November 20, 1993 – Open House at Kitsap Mall

December 1, 1993 – City of Bremerton City Council
December 2, 1993 – Open House at Silverdale Community Center
December 7, 1993 – Open House at Kingston Community Center
December 15, 1993 – City of Poulsbo City Council

January 18, 1994 – Miller Bay/Suquamish Citizen Councils

February 7, 1994 – Chums of Barker Creek
February 10, 1994 – West Bremerton Garden Club
February 12, 1994 – Open House at Indianola
February 22, 1994 – Port Orchard Rotary

March 18-20, 1994 – Open House at Kitsap Home Show
March 22 and 24, 1994 – Open House on EIS Alternatives at Kitsap County Courthouse.

In addition to regular press releases, a growth management mailing list established in August 1992 was used to notify citizens of the opportunities for public comment and encourage their involvement. This mailing list topped at approximately 2,000 addresses which received meeting notices, newsletters and updates on the comprehensive planning process.

V. PHASE FOUR

Planning Commission as GMA Citizen Advisory Committee

In September 1992, the Board of County Commissioners established that the Kitsap County Planning Commission would serve as the central citizen advisory committee to direct and assist planning staff in developing the countywide Comprehensive Plan. (In addition to this new directive, the Planning Commission had been considering the community design plans, interim development regulations of critical areas/resources lands, and regular hearing issues such as open space taxation.)

Beginning January 1993, the Planning Commission began “educational sessions” which featured experts making presentations in each of the areas to be addressed in the comprehensive plan. These sessions were vital for the both the planing staff and commission to grasp and understand the complexity and interconnectedness of developing a comprehensive plan under growth management. As the planning staff was able to move forward in the development of the comprehensive plan, the educational sessions shifted from presentations by experts, to review and revisions of the elements of the comprehensive plan.

On June 8, 1994, the draft comprehensive plan was presented to the Planning Commission and the

PUBLIC PARTICIPATION APPENDIX

public. The following schedule outlines this 16-month process:

January 14, 1993 – Topics: forest soils, hydrology, geologic hazards

February 11, 1993 – Topics: aquifer recharge areas, soils (suitability for septic, agricultural and limitations)

March 11, 1993 – Topics: stormwater, floodplains, wetlands

April 8, 1993 – Topics: mineral resource lands, wildlife and habitat, fish and shellfish resources
(This meeting also was videotaped by local cable public access channel and broadcast on cable television)

April 22, 1993 – Topics: sewer, water, storm water and solid waste facilities

May 13, 1993 – Topics: traffic circulation, transit

May 27, 1993 – Topics: transportation: marine, trails and bikeways, aviation; schools (This meeting was videotaped for broadcast on local cable television)

June 10, 1993 – Topics: utilities, fire facilities, hospitals, sheriff, libraries (This meeting was videotaped for broadcast on local cable television).

June 24, 1993 – Topics: park facilities, affordable housing, housing needs analysis

July 8, 1993 – Topics: existing land use development patterns

July 22, 1993 – Presentation of draft Land Use Chapter by planning staff

August 12, 1993 – Presentation of draft Land Use Chapter by planning staff

September 23, 1993 – Roundtable discussion on draft Land Use Chapter

October 14, 1993 – Review of draft Land Use Chapter designations: rural residential

October 28, 1993 – Review of draft Land Use Chapter designations: urban residential

November 18, 1993 – Review of draft Land Use Chapter designations: urban residential, commercial

November 30, 1993 – Discussion of Kingston Community Plan

January 13, 1994 – Review of draft Land Use Chapter designations: commercial

January 19, 1994 – Review of draft Land Use Chapter designations: industrial, business park designations, open space, special consideration areas, and fully contained communities

January 25, 1994 – Discussion of Kingston Community Plan

February 2, 1994 – Review of draft Land Use Chapter designations: forest lands, agricultural lands, mineral resource lands, rural resource and rural residential

February 22, 1994 – Discussion of Kingston Community Plan

February 16, 1994 – Review of draft Land Use Chapter designations: suburban residential, waterfront residential, village residential, urban low, medium and high residential

March 2, 1994 – Review of draft Land Use Chapter designations: commercial and business parks

March 9, 1994 – Review of draft Land Use Chapter designations: open space, special considerations symbol, fully contained communities; review of draft Rural Chapter

March 23, 1994 – Review of draft Housing Chapter; review of draft Economic Development Chapter

March 29, 1994 – Discussion of industrial and business park designations

April 6, 1994 – Review of draft Transportation Chapter; review of draft Utilities Chapter

April 13, 1994 – Continued review of draft Utilities Chapter and draft Transportation Chapter

April 26, 1994 – Second review of draft Utilities Chapter and draft Transportation Chapter

April 20, 1994 – Second review of draft Housing Chapter, draft Rural Chapter and draft Economic Development Chapter

May 4, 1994 – Discussion of draft Economic Development Chapter, review of Natural Systems Chapter

May 11, 1994 – Review of Capital Facilities Chapter

May 18, 1994 – Third review of draft Transportation Chapter; review of revised draft Land Use Chapter

May 31, 1994 – Review draft Park and Recreation plan; second review of Housing Chapter, Capital Facilities Chapter and Natural Systems Chapter; review of revised draft Land Use Chapter

VI. PHASE FIVE

Public Hearings

As the final phase of the public participation program, the required public hearings set forth the procedures for “official” public comment opportunities. To facilitate verbal opportunities, an ambitious hearing scheduled was set:

June 8, 1994 – Central Kitsap

June 15, 1994 – South Kitsap

June 22, 1994 – Central Kitsap

June 28, 1994 – South Kitsap

July 6, 1994 – North Kitsap

July 18, 1994 – Central Kitsap

July 20, 1994 – North Kitsap

Study Sessions for the Planning Commission were held July 26 and 27. On August 3, 1994, the Planning Commission recommended the Comprehensive Plan to the Board of County Commissioners. A written comment procedure was established to respond to the influx of requests for consideration and changes to the Comprehensive Plan. Two types of written comments were submitted to the Planning Commission: requests for consideration of a general nature, and site-specific requests for designation changes. The requests of a general nature were compiled and submitted to the Planning Commission as public input. For the site-specific requests, a file was established and a staff report and recommendation was prepared for each request received prior to the beginning of the public hearing process. The Planning Commission received approximately 150 requests for consideration. The Board of County Commissioners held three public hearings on the Planning Commission recommended Draft Comprehensive Plan:

PUBLIC PARTICIPATION APPENDIX

September 12, 1994 – North Kitsap
September 19, 1994 – Central Kitsap
September 21, 1994 – South Kitsap

On September 26, 1994 the Board of Commissioners remanded portions of the draft Comprehensive Plan with proposed revisions back to the Planning Commission for its consideration and recommendations. The Planning Commission then held public hearings on these remanded portions and the proposed revisions the Board made.

October 5, 1994 – South Kitsap
October 6, 1994 – South Kitsap
October 11, 1994 – North Kitsap
October 13, 1994 – Central Kitsap

On October 17, 1994 the Planning Commission sent forward their recommendations on the remanded portions of the draft Comprehensive Plan. The Board of County Commissioners took action on October 19, 1994 to approve the Kitsap County Draft Comprehensive Plan. The plan was sent to Washington State Department of Community Trade and Economic Development for the 60-day review period mandated by the Growth Management Act. The County Commissioners subsequently adopted the plan on December 29, 1994.

VII. PHASE SIX

Redevelopment of Comprehensive Plan and Implementing Development Regulations

On October 6, 1995, the Central Puget Sound Growth Management Hearings Board declared the Kitsap County Comprehensive Plan and implementing development regulations invalid. Following that decision, DCD began to rewrite the Comprehensive Plan in order to gain approval of the Growth Management Hearings Board. This phase also included extensive public involvement in the form of public hearings, educational workshops and public outreach meetings. The following is a partial listing of public steps taken in the redevelopment of the comprehensive plan:

October 1995

- # October 23, 1995 – Board of County Commissioners adopted Emergency Interim Zoning Ordinance, Emergency Interim Zoning Map, Emergency Interim Urban Growth Boundaries and an Emergency Interim Critical Areas Ordinance.

November 1995

- # November 6, 1995 – Joint Board of County Commissioners/Planning Commission public hearing on Interim Urban Growth Areas.
- # November 13, 1995 – Board of County Commissioners public hearing on Interim Urban Growth Areas.
- # November 28, 1995 – Planning Commission public hearing on the Interim Zoning Ordinance, Interim Zoning Map and Interim Critical Areas Ordinance.
- # November 30, 1995 – Planning Commission decision only meeting on the Interim Zoning Ordinance, Interim Zoning Map and Interim Critical Areas Ordinance.

December 1995

- # December 4, 1995 – Board of County Commissioners public hearing on Interim Urban Growth Areas.
- # December 4, 1995 – Staff attends a GMA forum at Silverdale sponsored by the Realtors Association.
- # December 8, 1995 – Study session with the Board of Commissioners regarding requested changes to the Interim Urban Growth Areas.
- # December 18, 1995 – Board of County Commissioners public hearing on Planning Commission recommended Interim Zoning Ordinance, Interim Zoning Map and Interim Critical Areas Ordinance.
- # December 19, 1995 – Board of County Commissioners public hearing on potential changes to the Interim Urban Growth Areas.

January 1996

- # January 6, 1996 – Staff attended the Voices of Kitsap opening meeting at Keyport.
- # January 8, 1996 – Board of County Commissioners adopted Interim Zoning Ordinance, Interim Zoning Map and Interim Critical Areas Ordinance. Interim Urban Growth Areas became effective.
- # January 11, 1996 – Staff attended the Public Workshop on Capital Facilities and Land Use at Silverdale.
- # January 13, 1996 – Staff attended the North Kitsap Voices of Kitsap meeting.
- # January 24, 1996 – Staff attended the Central Kitsap Kiwanis meeting.
- # January 25, 1996 – Staff attended the Silverdale Chamber of Commerce meeting.
- # January 25, 1996 – Staff attended the Public Workshop on Capital Facilities and Land Use at Silverdale.
- # January 27, 1996 – Staff attended both the Central Kitsap and South Kitsap Voices of Kitsap meeting.

February 1996

- # February 1, 1996 – Staff attended the Public Workshop on Capital Facilities and Land Use at Silverdale.
- # February 3, 1996 – Staff attended the Voices of Kitsap wrap up session at Keyport.
- # February 8, 1996 – Staff attended the Public Workshop on Capital Facilities and Land Use at Silverdale.
- # February 13, 1996 – Staff attended the Society of Engineers meeting.
- # February 13, 1996 – Staff attended the Manufactured Park Association meeting.
- # February 14, 1996 – A January 25, 1996 open letter to property owners from the Board of County Commissioners was mailed to all property owners in the County (approximately 95,000).
- # February 15, 1996 – Staff attended the Public Workshop on Capital Facilities and Land Use at Silverdale.
- # February 16, 1996 – Staff attended a public presentation by the League of Women Voters on the Voices of Kitsap process.
- # February 21, 1996 – Planning Commission study session, discussed status of revision and received Voice's of Kitsap report from the League of Women Voters.
- # February 22, 1996 – Staff attended the Public Workshop on Capital Facilities and Land Use at Silverdale.
- # February 22, 1996 – Revised Draft Capital Facilities Plan released to the public.

PUBLIC PARTICIPATION APPENDIX

- # February 23, 1996 – Revised Working Draft of Comprehensive Plan Text mailed to Cities, Tribe, CTED, Press, Planning Commission Members and Board of Commissioners & Key Staff.
- # February 26, 1996 – Revised Working Draft of Comprehensive Plan Text made available to the public.
- # February 26, 1996 – Staff attends the Port Orchard City Council meeting.
- # February 27, 1996 – Presentation to the County Employees Association regarding GMA and the Comprehensive Plan.
- # February 27, 1996 – Joint public hearing with the Board of County Commissioners and Planning Commission at Keyport.
- # February 28, 1996 – Joint public hearing with the Board of County Commissioners and Planning Commission at the Presidents Hall.
- # February 29, 1996 – Joint public hearing with the Board of County Commissioners and Planning Commission at Givens Community Center.

March 1996

- # March 4, 1996 – Joint public hearing with the Board of County Commissioners and Planning Commission at the Presidents Hall.
- # March 5, 1996 – Planning Commission Study Session at Parks Department Conference Room.
- # March 7, 1996 – Staff attended the Public Workshop on Capital Facilities and Land Use at Silverdale.
- # March 12, 1996 – Staff presentation to Kitsap County Assessors Department at Givens Community Center.
- # March 12, 1996 – Planning Commission Study Session at Givens Community Center.
- # March 13, 1996 – Staff made a presentation to the Commercial Real Estate Brokers Association.
- # March 13, 1996 – Staff attends a meeting on the Werner Road area in Bremerton regarding Comprehensive Planning and annexation.
- # March 14, 1996 – Planning Commission Study Session at Parks Department Conference Room.
- # March 15-17, 1996 – Staffed a booth at the Kitsap County Homeshow held at the Pavilion.
- # March 18, 1996 – Planning Commission Study Session at Parks Department Conference Room.
- # March 19, 1996 – Planning Commission Study Session at Parks Department Conference Room.

April 1996

- # April 2, 1996 – Planning Commission Study Session at Parks Department Conference Room.
- # April 3, 1996 – Planning Commission Study Session at Parks Department Conference Room.
- # April 9, 1996 – Staff made a GMA presentation to the Rural Development Committee at the WSU Cooperative Extension.
- # April 9, 1996 – Staff attended the Economic Development Council Annual Meeting at Keyport, maps were displayed.
- # April 10, 1996 – Staff made a presentation on GMA to a class at Gordon Elementary in Kingston.
- # April 12, 1996 – Planning Commission Study Session at Parks Department Conference Room.
- # April 15, 1996 – Staff mailed a card to all on the GMA mailing list noting the revised Planning Commission schedule including hearing dates.
- # April 16, 1996 – Staff mailed notice to all the property owners in the vicinity of Lider Lake notifying them of the proposed Light Industrial designation and upcoming hearing on April 27, 1996.
- # April 19, 1996 – Planning Commission revisions to the January 8, 1996 alternative plan and map

made available to the public.

- # April 19, 1996 – Summary of the Planning Commission Revised Working Draft of Comprehensive Plan Text mailed to Cities, Tribe, CTED, Press, Planning Commission Members and Board of Commissioners & Key Staff.
- # April 22, 1996 – Summary of the Planning Commission Revised Working Draft of Comprehensive Plan Text and Map hand delivered to the libraries for reference.
- # April 23, 1996 – The Planning Commission Revised Working Draft of Comprehensive Plan Map mailed to Cities, Tribes and CTED.
- # April 27, 1996 – Planning Commission public hearing on the proposed revisions to the January 8, 1996 alternative plan and map.
- # April 30, 1996 – Presentation to the County Employees Association regarding GMA and the Comprehensive Plan.
- # April 30, 1996 – Deadline for submitting written testimony to the Planning Commission.

May 1996

- # May 2, 1996 – Planning Commission Study Session at County Courthouse.
- # May 3, 1996 – Planning Commission decision only hearing at County Courthouse regarding recommended plan.
- # May 13, 1996 – Planning Commission recommended comprehensive plan presented by the Chairperson to the Board of County Commissioners at County Courthouse.
- # May 15, 1996 – The Planning Commission Recommended Comprehensive Plan and Map dated May 3, 1996 mailed to Cities, Tribes, KRC and CTED; also placed in the libraries and DCD annexes for public review.
- # May 22, 1996 – Notification of upcoming Board of County Commissioner public hearings on the recommended Planning Commission Plan mailed to GMA mailing list, agency mailing list & site specific mailing list (total approximately 1,900).
- # May 28, 1996 – Hearings Board issues a finding of noncompliance and makes a contingent recommendation of sanctions if plan and development regulations not completed by September 3, 1996 (Case No. 95-3-0039).
- # May 29, 1996 – Staff made a GMA presentation to the Port Orchard Kiwanis.

June 1996

- # June 3, 1996 – Board of County Commissioners Hearing on the PC recommended Comprehensive Plan at Givens Community Center.
- # June 4, 1996 – Board of County Commissioners Hearing on the PC recommended Comprehensive Plan at Silverdale Community Center.
- # June 5, 1996 – Board of County Commissioners Hearing on the PC recommended Comprehensive Plan at Keyport.
- # June 17, 1996 – Staff made a presentation on GMA issues to ‘Leadership Kitsap’ group at Givens.
- # June 19, 1996 – Written comment deadline for the Board of County Commissioners review of the Planning Commission Recommendation.
- # June 19, 1996 - Maggie Brown, a media relations/communications consultant, begin reviewing the May 3, 1996 Planning Commission recommended comprehensive plan with the intent of preparing recommendations for content organization, page design/layout and overall editing. Such recommendations are not to be of a substantive nature.
- # June 21, 1996 - the Kitsap County Comprehensive Plan Environmental Impact Statement

PUBLIC PARTICIPATION APPENDIX

Addendum was released for public review.

- # June 24, 1996 - Board of County Commissioners hearing to identify significant remand items for further Planning Commission review.
- # June 25, 1996 - Planning Commission regular monthly meeting. Presentation by Chuck Shank and KJSA Staff on progress of the Transportation Element.

July 1996

- # July 1, 1996 - Continuation of Board of County Commissioners June 24, 1996 hearing to identify significant remand items for further Planning Commission review.
- # July 3, 1996 - Informational post cards were mailed to the GMA mailing list including the Cities, Tribes, KRC, CTED, and interested others (approximately 2,000 cards) containing the Kitsap County Planning Commission schedule through August 6, 1996.
- # July 7, 1996 - Interim Urban Growth Areas, Zoning Map, Zoning Ordinance and Critical Areas Ordinance as adopted on January 8, 1996 expire.
- # July 8, 1996 - The Board of County Commissioners approved contract number KC 250-96 for Maggie Brown for preparing recommendations for content organization, page design/layout and overall editing of the comprehensive plan. Said contract covers the period from June 19, 1996 to no later than August 15, 1996 with July 15, 1996, or there about, being the anticipated date of completion.
- # July 8, 1996 - The Board of County Commissioners held a public hearing and renewed for a six month period, without alteration (except for the Port Gamble Area), the Interim Ordinances adopted on January 8, 1996 relating to Interim Urban Growth Areas, Critical Areas, Zoning and Zoning Map. The Interim Urban Growth Area for the Port Gamble area was not renewed and was zoned Rural Medium (RM) by this action. On July 16, 1996 the public notice of these actions will be published initiating the 60-day appeal period.
- # July 9, 1996 - The Staff Working Draft of the Zoning Ordinance was made available.
- # July 10, 1996 - The Chair of the Planning Commission and County Staff met with representatives of the Port Orchard City Council, the City Engineer and the City Planner to discuss remand issues as they related to the City of Port Orchard Urban Growth Boundary.
- # July 12, 1996 - The appeal period for the Addendum to the EIS expires (One appeal was filed by Zane Thomas & KCRP).
- # July 15, 1996 - Compliance Status Report due to the Hearings Board (Case No. 95-3-0039).
- # July 16, 1996 - Planning Commission public hearing on the Board of County Commissioners remand items.
- # July 17, 1996 - Notice of the availability of the Staff Draft of the Zoning Ordinance was mailed to the Cities, Tribes, KRC, CTED and interested others.
- # July 18, 1996 - Planning Commission study session on the Transportation Element with Public Works Staff and KJSA, interactive with the public allowed to participate.
- # July 23, 1996 - The three South Kitsap Planning Commissioners, the Port Orchard City Engineer, the City Planner, and DCD staff went on a site inspection of the Sidney/Sedgewick area.
- # July 23, 1996 - Planning Commission study session on the Staff Draft Zoning Ordinance and remand issues including a discussion with representatives of the City of Port Orchard City Council; the public was allowed to participate in Zoning Ordinance discussion.
- # July 25, 1996 - Rough Draft of the Transportation Element available to the public.
- # July 29, 1996 - Edited and reformatted version of the Planning Commission recommended comprehensive plan available.

- # July 29, 1996 - Approximately 2,000 informational post cards were mailed to the GMA mailing list including the Cities, Tribes, KRC, CTED, and others notifying them of the Planning Commission and the Board of County Commissioners hearings schedule (July 23rd through August 19, 1996).
- # July 30, 1996 - Planning Commission public hearing on the Draft Zoning Ordinance and Binding Site Plan Ordinance, continued study session on remand items and draft zoning ordinance.

August 1996

- # August 1, 1996 - Written comment deadline for remand items and Draft Zoning Ordinance; final draft of the Transportation Element made available.
- # August 12, 1996 - The Kitsap County Board of Commissioners adopt Resolution No. 266-1996 revising the Comprehensive Plan schedule.
- # August 13, 1996 - The (Revised) Draft Section of the Transportation Element produced by KJS Associates, Inc. (dated August 11, 1996) is available at the Department of Community Development.
- # August 15, 1996 - Kitsap County notifies the Hearings Board of the revised schedule for adopting a Comprehensive Plan.
- # August 15, 1996 - Approximately 2,000 informational post cards were mailed to the GMA mailing list including the Cities, Tribes, KRC, CTED, and others notifying them of the Planning Commission and the Board of County Commissioners revised hearings schedule (August 13 through December 2, 1996).
- # August 24, 1996 - Staff makes a GMA presentation to the Library Board.
- # August 27, 1996 - The Kitsap County Planning Commission holds a morning and evening meeting to take public testimony on the August 11th version of the Transportation Element. Also, deadline for submitting written comments regarding transportation. Presentations by Craig Stone (DOT) regarding transportation issues and Randy Young regarding the Fiscal Impact analysis for the three alternatives.

September 1996

- # September 3, 1996 - Hearings Board deadline for adopting a fully complete comprehensive plan and implementing development regulations (Case No. 95-3-0039).
- # September 4, 1996 - Planning Commission decision only hearing on the Transportation Element.
- # September 13, 1996 - The Central Puget Sound Growth Management Hearings Board issues a Notice of Second Compliance Hearing and Briefing Schedule for Case No. 95-3-0039C.
- # September 16, 1996 - Board of County Commissioners public hearing on Planning Commission recommendation on remand items, transportation element, zoning ordinance and EIS Addendum appeal.
- # September 19, 1996 - Staff makes a GMA presentation to the Lockheed/Martin Management Association from Subase Bangor.
- # September 23, 1996 - Written comment deadline for the Board of County Commissioners regarding the Planning Commission recommendation on remand items, transportation element, zoning ordinance and EIS Addendum appeal.
- # September 30, 1996 - Anticipated Date of Approval Pending State Review - Board of County Commissioners decision on Planning Commission recommendation on remand items, transportation element, zoning ordinance and EIS Addendum appeal including tentative adoption of a complete Kitsap County Comprehensive Plan pending the 60 day review by State agencies.
NOTE THIS DECISION ONLY HEARING WAS POSTPONED UNTIL OCTOBER 7, 1996.

PUBLIC PARTICIPATION APPENDIX

October 1996

- # October 7, 1996 - Board of County Commissioners decision on Planning Commission recommendation on remand items, transportation element, zoning ordinance and EIS Addendum appeal including tentative approval of a complete Kitsap County Comprehensive Plan pending the 60 day review by State agencies.
- # October 9, 1996 - The Comprehensive Plan is delivered to CTED to initiate the mandatory, 60-day review period.
- # October 16, 1996 - CTED acknowledges receipt of the Comprehensive Plan and suggests that State Agencies comments may be forwarded to the County around November 14, 1996.
- # October 29, 1996. - Regular monthly Planning Commission meeting at the Courthouse, study session with DCD staff regarding the draft Critical Areas Ordinance, Planning Commission members given a copy of the draft Critical Areas Ordinance. Copies of the draft Critical Areas Ordinance available at the Department of Community Development Office in Port Orchard.
- # October 31, 1996 - Copies of the draft Zoning Ordinance and draft Zoning Map available at the Department of Community Development Office in Port Orchard. Copies mailed to Planning Commissioners, Cities, Tribes, CTED, KRC, County Commissioners & Interested Others.

November 1996

- # November 1, 1996 - CTED acknowledges receipt of the draft Critical Areas Ordinance, draft Zoning Ordinance and draft Zoning Map to implement the Comprehensive Plan. "CTED has no comments at this time."
- # November 7, 1996 - Staff attends a neighborhood meeting regarding the DNR Illahee property.
- # November, 14, 1996 - Anticipated date for receiving State Agency comment regarding the Comprehensive Plan (per October 16, 1996 CTED correspondence).
- # November 15, 1996 - End of the 30 day written comment period for the Supplemental EIS prepared for the Comprehensive Plan.
- # November 18, 1996 - Planning Commission study session with DCD staff regarding the draft Zoning Ordinance and draft Zoning Map. Continued study session with DCD staff regarding the draft Critical Areas Ordinance.
- # November 19, 1996 - Planning Commission public hearing on the draft Critical Areas Ordinance.
- # November 25, 1996 - Planning Commission public hearing on the draft Zoning Ordinance and draft Zoning Map.
- # November 26, 1996 - Deadline for the submission of written comments regarding the draft Critical Areas Ordinance, draft Zoning Ordinance and draft Zoning Map to the Planning Commission.

December 1996

- # December 2, 1996 - Final to the Supplemental EIS prepared for the Comprehensive Plan issued, beginning of 7 day waiting period before final action can be taken.
- # December 3, 1996 - Planning Commission decision only hearing on the Critical Areas Ordinance, Zoning Ordinance and Zoning Map to implement the Comprehensive Plan.
- # December 4, 1996 - Summary of state agency comments received from CTED.
- # December 9, 1996 - Planning Commission Chair presents the recommendations on the Critical Areas Ordinance, Zoning Ordinance and Zoning Map to implement the Comprehensive Plan to the Board of Commissioners - hearing continued to December 23, 1996.
- # December 9, 1996 - Board of County Commissioners set date of December 23, 1996 to consider extending the interim ordinances (Zoning, Critical Areas & Interim UGA's).

- # December 9, 1996 - Board of Commissioners reviewed the state agency comments in a public hearing - hearing continued to December 23, 1996.
- # December 11, 1996 - Planning Commission work study session of the Draft Critical Areas Ordinance - continued to January 2, 1997.
- # December 12, 1996 - Planning Commission work study session of the Draft Zoning Ordinance - continued to January 2, 1997.
- # December 17, 1996 - Deadline for submitting written comment to the Board of Commissioners regarding the state agency comments.
- # December 23, 1996, the Kitsap County Commissioners held a public hearing to consider renewing for a period of six months the interim ordinances relating to zoning, critical areas and interim urban growth areas; held a public hearing to consider the state agency comments on the revised Comprehensive Plan and to adopt the Plan.

January 1997

- # January 2, 1997 - Planning Commission work study session on the Zoning and Critical Areas Ordinances - continued to January 8, 1997.
- # January 8, 1997 - Planning Commission work study session on the Zoning and Critical Areas Ordinances.
- # January 10, 1997 - Planning Commission anticipated decision only hearing on the Zoning and Critical Areas Ordinances.
- # January 17, 1997 - Planning Commission deadline for recommending a revised Critical Areas Ordinance and Zoning Ordinance to implement the Comprehensive Plan.
- # January 28, 1997 - Planning Commission public hearing on the Wireless Communication Facilities Ordinance.

February 1997

- # February 11, 1997 - Planning Commission study session and decision only hearing on the Wireless Communication Facilities Ordinance.
- # February 19, 1997 - Joint work study session with the Board of County Commissioners and the Planning Commission regarding the January 10, 1997 recommended Zoning and Critical Areas Ordinances.
- # February 20, 1997 - At the pre-hearing conference before the Central Puget Sound Growth Management Hearings Board, an offer to entertain potential settlement proposals was extended to all parties by the County.
- # February 24, 1997 - Public Hearing, Planning Commission recommended January 10, 1997 Zoning and Critical Areas Ordinances presented to the Board of County Commissioners.

March 1997

- # March 4, 1997 - Written comments due to the Board of County Commissioners regarding the Planning Commission recommended January 10, 1997 Zoning and Critical Areas Ordinances.
- # March 5, 1997 - Staff work study session regarding the Planning Commission recommended January 10, 1997 Zoning and Critical Areas Ordinances.
- # March 6, 1997 - Board of County Commissioners work study session regarding the Planning Commission recommended January 10, 1997 zoning and Critical Areas Ordinances.
- # March 10, 1997 - Board of County Commissioners public hearing regarding the Planning Commission recommended January 10, 1997 Zoning and Critical Areas Ordinances.
- # March 20, 1997 - Hearings Board consolidation hearing. End document room.

PUBLIC PARTICIPATION APPENDIX

April 1997

- # April 14, 1997 - The Board of County Commissioners hold a decision only hearing regarding the Wireless Communication Facilities Ordinance.
- # April 22, 1997 - The Board of County Commissioners issue a press release outlining the process for identifying potential modifications to the December 23, 1996 Comprehensive Plan.
- # April 29, 1997 - The County issued an invitation to all parties to discuss issues.
- # April 30 - May 5, 1997 - The County meets with the following parties/representatives to discuss possible settlement issues: David Bricklin, Kitsap Land Owners Coalition, Jim Tracy, McCormick Land Company, 1000 Friends of Washington, Economic Development Council, Association to Protect Anderson Creek, Union River Basin Protection Association, State of Washington (CTED and DOE), Jim Lindsey, City of Bremerton, and The Suquamish Tribe.

May 1997

- # May 6, 1997 - The Board of County Commissioners issued a press release regarding the process and the meetings held to date.
- # May 7, 1997 - The Kitsap County Board of Commissioners identified eleven (11) issues as potential changes to the Comprehensive Plan to be considered.
- # May 9, 1997 - Approximately 2,000 flyers were mailed to interested persons (GMA mailing list). As part of the information dissemination process on the issues, advertisements were taken out in both the weekly and daily newspapers, the legal notice was published, a pre-recorded information telephone number was put in place, and advertisements were placed on the local information television channels.
- # May 12, 1997 - Board of County Commissioners work study session regarding the Planning Commission recommended January 10, 1997 Zoning and Critical Areas Ordinances.
- # May 19, 1997 - A joint Board of County Commissioners/Planning Commission public hearing was held in Central Kitsap to take testimony on the issues. Approximately 100 people attended this hearing with 22 speaking. As part of the process of gathering public input, at each hearing, members of the public were given four 'dots' and allowed to prioritize their opinions on the issues.
- # May 21, 1997 - A joint Board of County Commissioners/Planning Commission public hearing was held in South Kitsap to take testimony on the issues. Approximately 100 people attended this hearing, with 32 people speaking.
- # May 22, 1997 - A joint Board of County Commissioners/Planning Commission public hearing was held in North Kitsap to take testimony on the issues. Approximately 80 people attended this hearing, with 40 people speaking. Written comment was due at the conclusion of this hearing.
- # May 23, 1997 - Copies of the written input (approximately 90 letters were received) were delivered to the members of the Planning Commission.
- # May 27, 1997 - The Planning Commission met at the Courthouse to discuss the issues and forward a recommendation to the Board of Commissioners. The Planning Commission opted to table the matter indefinitely.

June 1997

- # June 2, 1997 - Following a report from the Chair of the Planning Commission regarding the issues, the Board of Commissioners approved a motion to make no changes to the December 23, 1996 Comprehensive Plan.
- # June 16, 1997 - Board of County Commissioners set public hearings date of June 30, 1997 to consider extending the interim zoning, critical areas and zoning ordinances for an additional six months.

- # June 30, 1997 - Board of County Commissioners public hearing to consider extending the interim zoning, critical areas and zoning ordinances for an additional six months.

July 1997

- # July 8, 1997 - Interim Zoning, Critical Areas Ordinances and Maps renewed for a period of six months.
- # July 15, 1997 - Board of County Commissioners Study Session on the Zoning and Critical Areas Ordinances.
- # July 16, 1997 - Second Compliance Hearing before the Central Puget Sound Growth Management Hearings Board.
- # July 21, 1997 - Board of County Commissioners review Critical Areas Ordinance, pgs. 1-46.
- July 28, 1997 - Board of County Commissioners Study Session regarding Critical Areas Ordinance
- # July 29, 1997 - Planning Commission Study Session at County Courthouse.

August 1997

- # August 6, 1997 - Board of County Commissioners Study Session regarding Critical Areas Ordinance
- # August 13, 1997 - Board of County Commissioners Study Session regarding Zoning Ordinance
- # August 21, 1997 - Planning Commission Study Session
- # August 26, 1997 - Planning Commission meeting regarding mapping errors on Interim Zoning map.

September 1997

- # September 8, 1997 - Central Puget Sound Growth Management Hearings Board Decision issued.
- # September 9, 1997 - Kitsap County receives the Growth Hearings Board Decision. Finding of Noncompliance and Determination of Invalidity in the Bremerton and Order Dismissing Port Gamble.
- # September 10, 1997 and September 12, 1997 - Board of County Commissioners review of the Growth Management Hearings Board decision.
- # September 15, 1997 - Board of County Commissioners Study Session regarding the Comprehensive Plan.
- # September 24, 1997 - Board of County Commissioners Study Session on Zoning Ordinances.
- # September 29, 1997 - Staff meets with Comprehensive Plan consultant, Richard Weinman of Huckell/Weinman and Associates.

October 1997

- # October 6, 1997 - Board of County Commissioners Comprehensive Plan discussion.
- # October 9, 1997 - City of Port Orchard meeting regarding Urban Growth Area.
- # October 13, 1997 - Board of County Commissioners Study Session regarding the Critical Areas Ordinance. Staff meeting with Richard Weinman.
- # October 27, 1997 - Planning Commission meets with Richard Weinman. Public Informational Meeting, 7:00 p.m. regarding Comprehensive Plan and Urban Growth Areas.

November 1997

- # November 5, 1997 - Richard Weinman makes a presentation to the Kitsap Regional Coordinating Council regarding Urban Growth Areas.

PUBLIC PARTICIPATION APPENDIX

- # November 8, 1997 - Staff attends Port Orchard City Council Retreat.
- # November 10, 1997 - Board of County Commissioners hearing on Interim Critical Areas Ordinance revisions.

December 1997

- # December 1, 1997 - Cities meet with County consultant Richard Weinman to discuss location and size of possible Urban Growth Areas.
- # December 4, 1997 - Richard Weinman makes a presentation to the Port Orchard Chamber of Commerce.
- # December 11, 1997 - County Releases the Draft Urban Residential Land Capacity Analysis Issue Paper.
- # December 18, 1997 - Board of County Commissioners and Planning Commission joint Work Study Session regarding Holding Capacity Issue Paper.
- # December 30, 1997 - Staff mails postcard to public regarding upcoming events for Comprehensive Plan.

January 1998

- # January 5, 1998 - Interim ordinances renewed for six months by the Board of County Commissioners. Meeting of the Silverdale Growth Management Advisory Committee (SGMAC). McCormick Land Co. meeting to discuss the potential annexation/incorporation of McCormick Woods.
- # January 7, 1998 - Slide show presentation by William Kreager and public meeting regarding Urban Residential Land Capacity Analysis Issue Paper.
- # January 8, 1998 - Meeting of SGMAC.
- # January 9, 1998 - Progress report to the Growth Management Hearings Board on the status of the Comprehensive Plan due.
- # January 13, 1998 - Meeting of SGMAC.
- # January 15, 1998 - Presentation regarding changes to the State's Growth Management Act (ESB 6094) by Keith Dearborn and Loren Dunn. Meeting of Silverdale Growth Management Advisory Committee. Staff meeting with City of Poulsbo staff re: Urban Growth Areas.
- # January 20, 1998 - Planning Commission Public Hearing regarding the Urban Residential Land Capacity Analysis Issue Paper. Meeting of SGMAC.
- # January 21, 1998 - Meeting of SGMAC.
- # January 22, 1998 - Planning Commission Public Hearing regarding the Urban Residential Land Capacity Analysis Issue Paper.
- # January 27, 1998 - Planning Commission Study Session/Decision-Only Public Hearing re: Urban Issue Paper.
- # January 29, 1998 - Staff meeting with City of Bremerton to discuss UGA's.
- # January 30, 1998 - 60 day notice of intent to adopt sent to CTED. Rural Element Issue Paper available.

February 1998

- # February 2, 1998 - Commercial/Industrial Land Capacity Issue Paper available.
- # February 3, 1998 - Commissioner and staff attend Port Orchard City Council meeting to discuss UGA's. February 4, 1998 - Board of Commissioners/Planning Commission Joint Work Study Session on the Rural Element Issue Paper.
- # February 5, 1998 - Staff meet with Port Orchard city staff to discuss UGA's - urban character.

- # February 9, 1998 - Board of Commissioners decision only hearing re: amendments to CAO. Two Rural Workshops with Tom Phillips.
- # February 11, 1998 - Innovative Development presentation by Randall Arendt re: rural preservation. February 12, 1998 - Staff meeting with City of Port Orchard staff re: Urban Growth Areas.
- # February 13, 1998 - Richard Weinman and staff meet with City of Bremerton to discuss UGA's. Richard and staff meet with Silverdale group to discuss UGA's.
- # February 17, 1998 - Planning Commission Public Hearing followed by a Decision Only Hearing re: Rural Issue Paper.
- # February 18, 1998 - Staff presentation to League of Women Voters re: Commercial and Industrial Lands Issue Paper. Silverdale Growth Management Advisory Committee meeting re: Commercial and Industrial land.
- # February 20, 1998 - Release draft development regulations: Zoning, Critical Areas Ordinance, Concurrency Ordinance, Shoreline Master Program, and Procedural Code.
- # February 24, 1998 - Board of Commissioners/Planning Commission Joint Public Input Meeting re: Commercial/Industrial Issue Paper.
- # February 25, 1998 - Board of Commissioners/Planning Commission Joint Work Study Session re: Development Regulations. Staff presentation re: Commercial and Industrial Land Issue Paper - Chamber of Commerce.

March 1998

- # March 3, 1998 - Board of Commissioners/Planning Commission Joint Work Study Session re: Transportation & Capital Facilities Plan. Staff attends a City of Bremerton Sheridan Heights neighborhood meeting re: UGA annexation.
- # March 4, 1998 - Kitsap County Information Kiosk re: Comprehensive Plan at the Silverdale Mall opens.
- # March 5, 1998 - Board of County Commissioners attend Port Orchard Chamber of Commerce luncheon meeting.
- # March 6, 1998 - Board of County Commissioners and staff meeting with City of Bremerton to discuss Urban Growth Areas.
- # March 7, 1998 - Commissioner Charlotte Garrido spends the day meeting the public at the Kitsap County Information Kiosk at the Silverdale Mall.
- # March 13-15, 1998 - Kitsap County DCD staff a booth at the annual Home Show.
- # March 14, 1998 - Commissioners spend the day meeting the public at the Kitsap County Information Kiosk at the Silverdale Mall.
- # March 15, 1998 - Kitsap County Administrator Malcolm Fleming attends a meeting of the Association to Protect Anderson Creek.
- # March 17, 1998 - Board of Commissioners and DCD staff attend a joint meeting with the cities to discuss Urban Growth Area issues.
- # March 18, 1998 - Notice of EIS Addendum published. Planning Commission Decision Only hearing re: Commercial/Industrial Issues.
- # March 20, 1998 - Staff draft of the Comprehensive Plan released, including CFP & Transportation. Revised Development Regulations released.
- # March 21, 1998 - Commissioners spend the day meeting the public at the Kitsap County Information Kiosk at the Silverdale Mall.
- # March 23, 1998 - Joint BOCC/PC Work Study Session re: Comprehensive Plan & Development Regulations.

PUBLIC PARTICIPATION APPENDIX

- # March 25, 1998 - Commissioner Garrido and Administrator Fleming meet with the City of Port Orchard to discuss UGAs. Commissioner Garrido and staff attend meeting of McCormick Woods Homeowners Association re: UGA issues.
- # March 26, 1998 - Written testimony re: Comprehensive Plan & Development Regulations due by 4:30 at the Department of Community Development.
- # March 28, 1998 - Open Houses with Planning Commission, Staff, and Commissioners in North Kitsap at the Poulsbo City Council Chambers, Central Kitsap at the Silverdale Mall County Information Kiosk, and South Kitsap at Givens Community Center in the Cascade Room.
- # March 30, 1998 - Commissioner Garrido and staff attend a meeting to discuss Banner Forest Issues.
- # March 31, 1998 - Planning Commission Public Hearing re: Comprehensive Plan and Development Regulations.

April 1998

- # April 1, 1998 - Planning Decision Public Hearing re: Comprehensive Plan and Development Regulations.
- # April 3, 1998 - Hearings Board Deadline for adoption of a Comprehensive Plan, Planning Commission Decision Only Hearing re: Development Regulations.
- # April 7, 1998 - Motion for extension submitted to Hearings Board.
- # April 8, 1998 - Motion for extension granted by Hearings Board.
- # April 11, 1998 - 2nd EIS Addendum released.
- # April 20, 1998 - Planning Commission, Public Hearing & Decision re: Transportation Concurrency Ordinance.
- # April 22, 1998 - Staff presentation at the East Bremerton Rotary Meeting re: the Comprehensive Plan.
- # April 24, 1998 - End of Appeal Period for EIS 2nd Addendum.
- # April 27, 1998 - Board of Commissioners Public Hearing and Decision re: SEPA appeals.
- # April 28, 1998 - Planning Commission Public Hearing re: an ordinance designating new Interim Urban Growth Areas (IUGAs), and Board of Commissioners Public Hearing re: Planning Commission recommended Comprehensive Plan and Development Regulations. Written testimony due by the end of the hearing.
- # April 30, 1998 - Board of Commissioners Decision Only Hearing re: Planning Commission recommended Comprehensive Plan and Development Regulations.

May 1998

- # May 4, 1998 - Board of County Commissioners, Public Hearing re: adoption of the Comprehensive Plan and Development Regulations (continued to May 7, 1998).
- # May 7, 1998 - Board of County Commissioners, Continuation of Public Hearing re: adoption of the Comprehensive Plan and Development Regulations.

October 1998

- # October 9, 1998 - Release of Environment International's report "Kitsap County and the GMA: Defining Forest Resource Choices".

November 1998

- # November 5, 1998 - Board of County Commissioners/ Planning Commission, Joint Study Session re: Presentation of Environment International's report "Kitsap County and the GMA: Defining Forest Resource Choices" and discussion of criteria for designation of forest resource lands.
- # November 10, 1998 - Planning Commission, Public Hearing and Decision re: criteria for designation of forest resource lands (continued to November 17, 1998).
- # November 17, 1998 - Planning Commission, Public Hearing and Decision re: criteria for designation of forest resource lands.
- # November 30, 1998 - Board of County Commissioners, Public Hearing and Decision re: Planning Commission Recommendation on criteria for designation of forest resource lands (continued to December 3, 1998).

December 1998

- # December 3, 1998 - Board of County Commissioners, Public Hearing and Decision re: adoption

PUBLIC PARTICIPATION APPENDIX

of Ordinance No. 228-1998 establishing the criteria for designation of forest resource lands.

POPULATION APPENDIX

I. INTRODUCTION

This appendix is an examination of existing trends and forecasts of growth for the next 20 years. The information in this appendix was used as a planning tool for development of the Comprehensive Plan and used to allocate population within the county to better provide adequate public facilities. The information was used to conduct an urban residential land capacity analysis intended to identify the amount of land available for residential development with the urban growth areas. That analysis is included in this appendix.

It is important to note that these forecasts are intended to provide a sense of scale as to possible future growth in Kitsap County. These population forecasts should be considered as “working projections,” subject to review to verify the continued validity of the assumptions upon which they are based.

This report contains a wide range of data from a number of sources including, but not limited to, the U.S. Census of Population and Housing, the Washington State Office of Financial Management (OFM), the Kitsap County Economic Development Council (EDC), Puget Sound Regional Council (PSRC), Kitsap Regional Council (KRC), local tribes and planning departments of all municipalities in Kitsap County.

II. EXISTING CONDITIONS AND POPULATION TRENDS

Historical Population Trends

Growth has been very rapid in Kitsap County in the last 20 years. Kitsap County’s resident population grew from 101,732 in 1970 to 189,731 by 1990, an increase of 87%, representing 88,000 people. By comparison, the state population grew 42.6% over the same period.

Kitsap County population increased by 29% between 1980 and 1990 or by 42,579 persons. **Table A-PE-1** illustrates the population trend and growth rate from 1980-1990, and population for 1997 and the growth rate from 1990- 1997.

The average annual growth rate for Kitsap County was 2.9% between 1980 and 1990. During the 1980s, the unincorporated areas of the county had an average annual growth rate of 3.8% compared to the incorporated rate of 0.9%, representing the majority of the population growth. Of the increase of 42,579 persons, less than 17% occurred in incorporated areas. Bainbridge Island, due to its incorporation, increased the most with 3,532 persons. Bremerton grew by almost 2,000, Poulsbo by 1,400, and Port Orchard by 200. Bremerton remains the county’s largest incorporated area with 39,610 residents in 1995, this being 57% of the incorporated population for Kitsap County.

Kitsap County population totals for each decade since 1900. The county’s population increased in every decade with the exception of the 1920s, when the population decreased by more than 2,000. The largest numerical increases in growth occurred in the decades of the 1940s, 1970s and 1980s respectively. World War II brought residents to the county in the 1940s with work at the Puget Sound Naval Shipyard

(PSNS). Almost 50% of Kitsap County’s growth occurred between 1970 and 1990 with the development of Naval Submarine Base Bangor.

TABLE A-PE-1 Kitsap County Population					
	1980	1990	1980 -1990 Average Annual Growth Rate	1997	1990- 1997 Average Annual Growth Rate
Kitsap County	147,152	189,731	2.9%	229,400	2.7%
Unincorporated	100,508	138,676	3.8%	158,740	3.4%
Incorporated	46,644	51,055	0.9%	70,660	* 1.5%
Bainbridge Island	**12,314	**15,846	2.9%	18,920	2.6%
Bremerton	36,208	38,142	0.5%	38,600	0.3%
Port Orchard	4,787	4,984	0.4%	6,965	4.9%
Poulsbo	3,453	4,848	4.0%	6,175	2.6%

*** Reflects 1991 incorporation of Bainbridge Island ** Total includes City of Winslow's population**

Source: U.S. Census of Population and Housing;

Washington State Office of Financial Management, 1995.

TABLE A-PE-2 Kitsap County Population 1900-1990		
	Total Population	% Growth
1900	6,767	
1910	17,647	161
1920	33,162	88
1930	30,776	-7
1940	44,387	44
1950	75,724	71
1960	84,176	11
1970	101,732	21
1980	147,152	45
1990	189,731	29

Table A-PE-3 presents Kitsap County population growth in five-year increments between 1990 and 1997. Since the mid-1980s, the county has experienced strong growth -- between 2.1% and 5.2% per year.

TABLE A-PE-3 Population Growth 1990 - 1997		
	Total Population	% Annual Change
1990	189,731	
1991	196,500	3.6
1992	205,600	4.6
1993	210,000	2.1
1994	213,200	1.5
1995	220,600	3.4
1996	224,700	1.9
1997	229,400	2.1
1990-1997 Average		2.74

*Source: Washington State Office of Financial Management;
U.S. Census of Population and Housing, 1980, 1990.*

Population Forecast and Allocations

Table A-PE-6 illustrates the 20-year population forecast by subarea, including the Kitsap Regional Council’s updated population allocations by subarea for the year 2012.

TABLE A-PE-6 Kitsap County Population and Urban Growth Area Forecast			
1992 OFM Population			205,600
1997 OFM Population ^a			229,400
KRC’s Adopted 2012 Population Projection			292,224
1997-2012 Increase			62,824
Incorporated Cities Allocation of 1997-2012 Increase			29,258
	1992-2012 Forecasted Increase	1992-1997 Growth ^e KRC’s	1997-2012 Remaining Increase
Bainbridge Island	7,430 ^b	2,070	5,360
Bremerton	19,152 ^b	-330	19,152
Port Orchard	2,300 ^c	1,690	610
Poulsbo	d	895	4,136 ^d
Unincorporated Sub-Total 1997-2012 Increase (1997-2012 Increase minus Cities Allocation)			33,566
<u>Unincorporated UGA Total</u> 70% of Unincorporated Sub-Total 1997-2012 Increase			23,495
Rural Total 30% of 1997-2012 Increase			10,070

- a) 1997 OFM population is for April 1, 1997.
- b) From KRCC adopted 2012 population forecast.
- c) From City of Port Orchard’s adopted Comprehensive Plan.
- d) The City of Poulsbo produced a population capacity analysis for the city in a memo dated 11/14/97.
- e) 1992 to 1997 OFM figures.

Population Allocations and Methodology

To adequately plan and prepare for the needs of new residents, it is necessary to allocate population into smaller geographic service areas. An important tool used in determining the projected future growth were the population forecasts adopted by the Kitsap Regional Council. These projections were used as the source for allocating population to the UGAs and for planning for capital facilities.

The KRC numbers include the 1992 and 2012 population estimates for each subarea and each

incorporated city. Utilizing the two-thirds urban and one-third rural formula, and subtracting the city population from the urban population within each subarea, it was possible to derive the urban, rural and incorporated population for each subarea. (For definitions of land use terms, please see Section II, Assessor's Land Use Classifications in the Land Use Appendix.)

In order to allocate these forecasts to various service areas, it was necessary to distribute the population to the lowest common denominator: the ownership parcel. (The size, current use, number, and type and age of buildings for each ownership parcel is contained in the Assessor's Real Property database). By excluding buildings constructed after 1992, it was possible to distribute the 1992 subarea and city population to the parcel level, based on the number of existing dwelling units on each parcel. To incorporate actual growth into the equation, the 1992-95 population was estimated for each parcel by multiplying the number of dwelling units built during 1993-95 by 2.5 persons per dwelling unit.

By overlaying the Comprehensive Plan Land Use Map onto ownership parcels, it was possible to assign each parcel a plan designation and assign it to either an urban growth area, incorporated city or unincorporated rural area. The planned or zoned capacity for each parcel can then be obtained by multiplying the parcel size by the plan density for the given designation. (For example: A three-acre parcel designated "Urban Residential 6" or "UR6" has a planned capacity of 18 dwelling units.) The net capacity for the post-1995 growth was obtained by subtracting existing dwelling units from the planned capacity. Those properties that were "built-out" (or had a current land use other than "vacant," "open land," "wooded," "estate" or "rural") were assigned a net capacity of zero.

The total capacity for each subarea, urban growth area and rural area was then tabulated from the ownership parcels and population growth allocated accordingly. Each parcel is assigned a growth factor, of which, its net capacity is divided by the total net capacity of the region. (For example: A parcel with a net capacity of 18 dwelling units in an UGA with total net capacity of 100 dwelling units will be assigned 18% of the total population increase for that particular UGA.) The 2000 and the 2012 population increases are distributed to the ownership parcel using this method. Finally, the population for each ownership parcel is tabulated by service areas to give the total population forecasts for each UGA.

It should be noted that the above method cannot be applied to distribute population within the incorporated cities, as the plan and zoning information for each jurisdiction is not available in the Counties Geographic Information System. Therefore, the County utilized adopted Comprehensive Plan population forecasts for each of the cities to achieve these results.

III. URBAN RESIDENTIAL LAND CAPACITY ANALYSIS

A. INTRODUCTION

On September 8, 1997 the Central Puget Sound Growth Management Hearings Board (CPSGMHB) remanded Kitsap County's Dec. 23, 1996 Comprehensive Plan. Problems identified by the CPSGMHB

included errors in its land capacity analysis used to size its Urban Growth Areas (UGA). The Comprehensive Plan is being revised consistent with the Hearings Board's directions.

This section describes the County's methodology for calculating land capacity. This approach is modeled after those used by other jurisdictions and the guidance provided by the Hearings Board.

Overview

The Growth Management Act (GMA) requires that counties designate sufficient land in their UGAs to accommodate a 20-year population projection. Residential land capacity analysis is used to determine if UGAs contain adequate land for the forecast population growth. UGAs also include land for employment growth and public facilities.

This analytic process used to define UGAs examines both supply and demand. The land capacity analysis is the supply side of the equation, identifying how much developable land is contained in a proposed UGA. The growth target is the demand side of the equation, showing how much population is forecast for the 20 year planning period, and how much land is needed to accommodate the forecast. **Figure 1** shows a flow chart of the supply and demand analysis.

County-wide Planning Policies

The Kitsap County-wide Planning Policies (CPPs, 1992) were reviewed for direction on land capacity. Element A.1 of the CPPs contains general criteria for designating Urban Growth Areas (UGAs) and for guiding growth to them. The CPPs state that at least 2/3 of new growth should be directed to UGAs (incorporated and unincorporated) and 1/3 to rural areas (Element A.1.B). The UGAs should be determined by existing development patterns, residential densities and the presence and capacity of urban services (A.1.D). UGAs must contain cities and may contain unincorporated areas (A.1.E). The UGAs must contain enough land to accommodate a minimum 20-year population forecast (A.1.J). The county and cities are expected to work cooperatively to determine the amount of developable land within UGAs (A.1.L).

Element 2 of the CPPs references a process for allocating forecast population. Appendix A contains allocations for cities and sub-areas of the county. The Allocations are identified as "working population forecasts and allocations."

The Land Capacity Methodology in CPPS

The Land Capacity methodology identified in the CPPs is used as the starting point for the methodology followed in this analysis. New population growth allocated to UGAs is at least 70 percent, which is consistent with CPP A.1.B. The revised UGA is being sized to accommodate the 2012 population forecast; based on Central Puget Sound Growth Management Hearings Board decisions subsequent to adoption of the CPPs, the population is considered both a minimum and maximum (Element A.1.J). The County and the cities are currently working cooperatively through the Kitsap Regional Coordinating Council (KRCC) to develop a common, agreed upon methodology for determining capacity and designating UGAs (Element A.1.L).

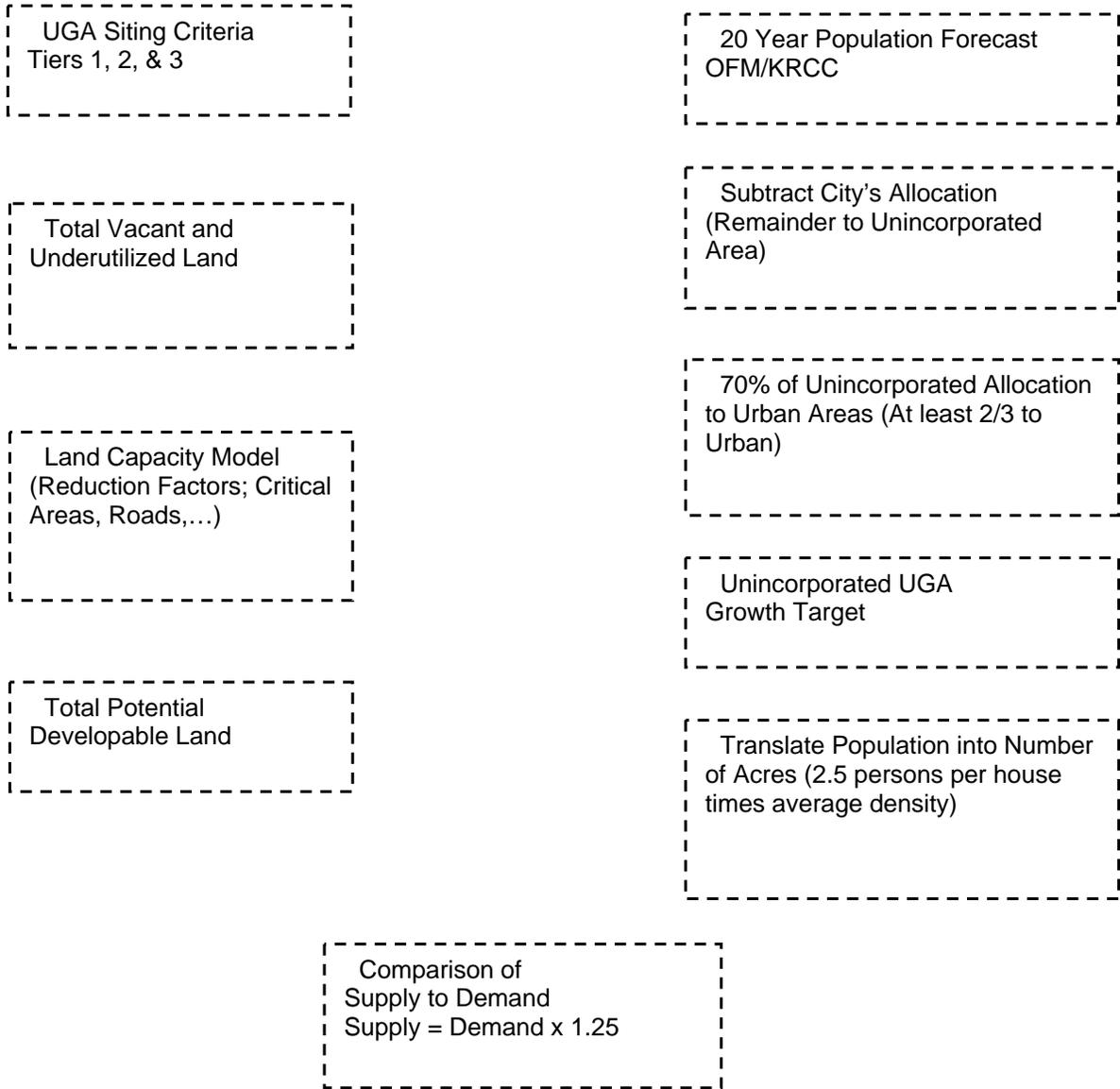


Figure 1
Process for Determining Size of Urban Growth Areas

B. LAND DEMAND – POPULATION GROWTH

Growth Targets

Background

A growth target is a number used for planning; it helps to determine the necessary size of urban growth areas. The growth target, which is initially expressed as an amount of population growth, is converted to the number of acres of land needed to accommodate that growth. Household size, type of housing and average density are factors used to translate population into land demand.

Population Forecasts

The GMA requires Counties to plan for 20 years growth. Planning targets must be within a range of projections produced by the Washington State Office of Financial Management (OFM). **Table 1** shows the most current OFM projections for Kitsap County for 2012. [Note: Consistent with the Hearings Board’s directives, the 1992-2012 period is used as the basis for planning.] **Tables 2** reflect the KRCC adopted Country-wide population forecast of 292,224 for the year 2012, which is between the OFM low and medium forecasts. KRCC adopted this population forecast as part of the County-wide Planning Policies (CPP) adopted on June 7, 1995.

This capacity analysis assumes continued reliance on the CPP target of 292,224. Change in the target would require amendment of the CPPs, could result in change in the size of the UGA, and would require amendment of the comprehensive plan.

Similarly, the capacity analysis assumes continued reliance on the CPPs allocation of growth as between the Cities and the County. Greater or smaller allocations to the Cities could occur in the future from updated analyses of capital facilities plans, recent growth trends and other factors. Any such changes, if agreed to by the region’s governments, could result in changes in City and County Comprehensive Plans and/or in the UGA.

Based on OFM figures, the April 1, 1997 County population is 229,400. The population increase from 1992 to 1997 has already been absorbed and was excluded from the growth target used to define UGAs.

TABLE 1 Official OFM GMA Population Projections for Kitsap County Dec. 29, 1995	
Series	2012 Population
Low	271,982
Medium	297,462
High	317,654

Table 2 shows the 1997-2012 population allocations to each jurisdiction based on a county-wide distribution; these are updated to reflect recent growth. The allocations reflect the County-wide Planning Policy decision that at least 2/3 of the 20-year forecast should be located in the urban area, and 1/3 in the rural area; this issue paper assumes 70% of future growth will locate in the UGA. After allocating growth to the cities first, 70% of the unincorporated sub-total is allocated to the unincorporated UGAs. It should be noted that the CPPs did not include specific allocations to Port Orchard and Poulsbo. The unincorporated UGAs will need to accommodate an estimated 23,450 people between now and 2012. Growth would be allocated to geographic sub-areas based on the criteria for allocating growth within UGAs discussed in Section IV of this population appendix.

1992 OFM Population				205,600
1997 OFM Population ^a				229,400
KRCC's Adopted 2012 Population Projection				292,224
1997-2012 Increase				62,824
Incorporated Cities Allocation of 1997-2012 Increase				29,258
	1992-2012 Forecasted Increase	1992-1997 Growth ^e	1997-2012 Remaining Increase	
Bainbridge Island	7,430 ^b	2,070	5,360	
Bremerton	19,152 ^b	-330	19,152	
Port Orchard	2,300 ^c	1,690	610	
Poulsbo	^d	895	4,136 ^d	
Unincorporated Sub-Total 1997-2012 Increase (1997-2012 Increase minus Cities Allocation)				33,566
<u>Unincorporated UGA Total</u> 70% of Unincorporated Sub-Total 1997-2012 Increase				23,495
Rural Total 30% of 1997-2012 Increase				10,070

a) 1997 OFM population is for April 1, 1997.

b) From KRCC adopted 2012 population forecast.

c) From City of Port Orchard's adopted Comprehensive Plan.

d) The City of Poulsbo produced a population capacity analysis for the city in a memo dated 11/14/97.

e) 1992 to 1997 OFM figures.

Number of Dwelling Units Needed

The population projection has been translated into dwelling units and acres in order to identify the

POPULATION APPENDIX

amount of developable land needed within the UGAs. The first step is to divide the population projection by the average number of persons per dwelling unit projected over the planning period. This will identify how many dwelling units are needed within the UGA. The assumed average number of persons per dwelling unit (ppdu) in Kitsap County for the year 2010 is 2.5 ppdu, based upon the Puget Sound Regional Council Population and Employment Forecast for the Puget Sound Region, August 1995.

Tables 3 show the population increase for the unincorporated UGAs converted into dwelling units. Converting the number of dwelling units to number of acres needed within the unincorporated UGAs is discussed in the Housing Density Section of this population appendix..

TABLE 3 Number of Dwelling Units needed in Unincorporated UGAs	
1997-2012 Projected Population Increase to Unincorporated UGAs	23,496
Persons per dwelling unit	2.5
Dwelling Units Needed (Population Increase / persons per dwelling unit)	9,398 d.u.

Housing Density - Background

Housing density is a major factor in determining the size, as well as the character of the UGAs. The choice of density allows the community to determine what it wants the urban areas to look like in 20 years, including:

- X How much land area will the urban areas contain;
- X What mixture of housing densities is desired (the ratio of single family to multi-family houses); and
- X What commitment of resources is necessary to ensure a desired quality of life.

Currently, Kitsap County's housing mixture in the urban areas is approximately 85% single family and 15% multi-family (based on a October 1997 GIS survey of Assessor's data of developed lots of one acre and smaller). Typical single family residential designations in Kitsap County have ranged from 1 du/ac to 9 du/ac. Average residential density is calculated by dividing the total number of developed acres in the residential zone by the total number of dwelling units on those acres.

The current average residential densities for developed land in the incorporated cities in Kitsap County are:

- X City of Bremerton is 5.16 du/ac;
- X City of Bainbridge Island is .92 du/ac;
- X City of Port Orchard is 3.11 du/ac;
- X City of Poulsbo is 3.79 du/ac; and
- X Unincorporated urban area (based on East Bremerton study area) is 3.16 du/ac.

Planned residential densities in the incorporated cities range from .4 du/ac to 20 du/ac, based on data

in their comprehensive plans.

Housing Density Variables & Issues

The choice of an average housing density for new development in the UGA will have a major influence on how much land is needed for future development. The relative mix of single-family and multi-family housing will also influence the type and form of development within the UGA. Higher average densities and greater percent of MF housing will generally result in smaller UGAs and more compact urban patterns.

TABLE 4 Number of Acres needed in Unincorporated UGAs	
Dwelling Units Needed (From Table 3)	9,398 d.u.
Average Density	5 du/ac
*Net Developable Acres Needed for Unincorporated UGAs	1,880 acres

* Net Acres = After discounting for critical areas, public facilities, unavailable land, and ROW; and before adding market factor.

Merely zoning land for a certain density will not ensure that development occurs at the zoned density. Significant underbuilding, if it occurred, could use land less efficiently than planned. Use of a minimum density requirement is one approach that could help ensure that development occurs as assumed. Monitoring development trends can also help identify whether population and density targets are being met. Historical patterns of “underbuilding” (i.e. developed densities consistently lower than zoned densities) can also indicate the presence of regulatory requirements or processes that effectively prevent achievement of zoned densities. These could include minimum lot size requirements, drainage requirements or neighborhood opposition to proposals.

C. LAND SUPPLY – CAPACITY FOR GROWTH

Overview

A Land Capacity Analysis (LCA) is used to estimate how much land is needed within an UGA to meet a jurisdiction’s growth target. Different factors are used to account for physical, social, and economic influences in the land supply market.

Although there are many different models for conducting a land capacity analysis, they all follow the same basic outline.

1. Vacant and underutilized residential land within each urban growth area is tabulated. Other non-residential lands, such as commercial land, industrial land, publicly owned lands, schools, and county parks, are not included. Vacant land does not contain any structures. Underutilized land is land that is zoned at a higher density than its current use (e.g., a house on 5 acres that is zoned at 5 dwelling units per acre) and that would permit further development. Future growth is

generally assumed to occur on vacant and underutilized lands.

2. Reduction factors are applied to account for non-residential development (public facilities), unavailable land, critical areas and street rights-of-way.
3. The remaining net acreage is compared to the growth target to determine the supply needed to accommodate the 20-year growth target.

The examples or models relied on in Kitsap County's revised land capacity analysis include King County, Snohomish County and Pierce County. The Washington State Department of Community, Trade, and Economic Development's (CTED) publication on land capacity entitled, "Issues in Designating Urban Growth Areas (Part I): Providing Adequate Urban Area Land Supply" (March 1992), was also consulted. In addition, direction in Hearings Board decisions was applied to derive a methodology. A methodology recently adopted by a Task Force in King County, which is being used by all jurisdictions in the region, was also reviewed.

Reduction Factors - Background

Urban residential development takes place in a complex and dynamic market environment whose functions are not fully understood. Factors that influence urban development include local and regional land supply and demand, as well as economic and regulatory forces. In an attempt to account for realities affecting land supply, reduction or "discount" factors are applied to different categories of the county's urban land base to more accurately estimate developable land. Discounts are typically made for critical areas, roads, public facilities, and land estimated to be unavailable during the planning period. It is almost impossible to accurately predict how the development market will act over a 20-year period; discount and market factors are intended to help ensure that an adequate supply of developable land is available to achieve the County's land use objectives.

Following are descriptions of each reduction factor and Kitsap County's approach to their use.

East Bremerton Urban Study Area

The East Bremerton peninsula (south of Bucklin Hill Road, Waaga Way and the Brownsville Highway) was selected as a study area for developing and testing options for Land Capacity Analysis, using the Geographic Information System. This area was chosen as representative of unincorporated lands which may be included in Urban Growth Areas.

The study area is a 10,000 acre peninsula consisting of all contiguous lands lying east of the Clear Creek Estuary, south of N.W. Bucklin Hill Road, SR303 (aka Waaga Way), N.E. Gluds Pond Street, Brownsville Highway N.E. and the Illahee Road N.E. bridge over Burke Bay. This area includes East Bremerton, Tracyton, Illahee and Brownsville. It is an area largely characterized by urban growth, both residential and commercial. It has been included in Urban Growth Areas on both the 1994 and the 1996 Comprehensive Plans. It is largely served by public facilities and is impacted by environmentally critical areas typical of Kitsap County, including streams, wetlands, frequently flooded areas and both steep and unstable slopes.

For the purpose of the study, ownership parcels (with their land use attributes) were overlaid with a

combination of various critical areas (including wetland and stream buffers) to evaluate the intersection of vacant and underutilized lands with critical areas. Also, built densities, proportions of uses such as public facilities, street rights-of-way, etc. were evaluated. This information was used as background to test the assumptions used in the Land Capacity Analysis formula.

General Characteristics of East Bremerton Urban Study Area:	
Total Area:	10,134 acres
Vacant Lands:	2,977 acres
Underutilized Lands:	1,401 acres
Developed Portion of Underutilized Lands: 406 acres	
Residential Development:	14,858 dwelling units 3,479 acres
Non-Residential Development:	1,221 acres
Street Rights-of-Way:	1,056 acres
Areas Covered by Critical Areas:	26%
Vacant Lands Covered by Critical Areas:	32%
Underutilized Lands Covered by Critical Areas:	32%
Mapping Sources:	National Wetland Inventory, WADNR Hydrography (with streams buffered 50-100'), SCS Soil Survey (hydric soils and steep/erodable soils), Flood Insurance Rate Maps (USFEMA), Slope Stability Atlas of Kitsap County.

Method of Calculating Reduction Factors: There are two basic methods of calculating a reduction formula: a percentage method, where each reduction is based on a percentage estimate of gross acreage subject to a particular factor; or estimates of actual acres subject to particular constraints or discount factors based on GIS information or land surveys.

The factors may be applied as a cumulative total or sequentially. This analysis deducts for the redevelopment and unavailable lands discount factors cumulatively (discount calculated from the previous sub-total), and for roads, public facilities, and critical areas constraints sequentially (discount taken from the same gross total). This is intended to avoid potential double counting.

Redevelopment Constraints: Land that contains an existing structure, but which could be developed further based on zoning, is considered to be redevelopable. However, all land within this category is not considered likely to be available for redevelopment during the planning period. Given its historical development pattern, there has been little redevelopment for residential use in Kitsap County. Existing land use patterns in the near term will constrain the ability to redevelop. This may change over time, as vacant land is consumed and market pressure for redevelopment is created. The redevelopment factor is an estimate of this situation. This factor is also used to account for the

difficulty of developing smaller parcels with an existing house. The smaller the parcel with an existing home, the more difficult it is to locate additional homes or other land uses. Based on an examination of development patterns in Kitsap County, and the factors used by other jurisdictions, the County uses a reduction of 20% for redevelopable lands.

Unavailable Land (Discount Factor): “Unavailable land” is a portion of supply estimated to not be available for sale or development within the 20-year planning period. This discount accounts for property owners who have no interest in selling or developing their land. The CTED report entitled, “Issues in Designating Urban Growth Areas (Part I): Providing Adequate Urban Area Land Supply” (March 1992) recommends using 15% for vacant land and 30% for partially used land. These figures are used in this analysis.

Streets and Roads: A reduction factor is applied to the residential capacity to account for land used for streets and roads. The amount of land needed for roads depends upon the type and density of development in the urban areas. Estimates range from 5% to 50 % of land needed for roads in communities around the country. According to CTED’s report entitled, “Issues in Designating Urban Growth Areas (Part I): Providing Adequate Urban Area Land Supply” (March 1992), 17% to 22% is a typical range for road right-of-way in communities such as Lynnwood, Kent and Wenatchee. The CTED report also states that a 17% to 30% reduction for road right-of-way can be assumed for vacant land when major roads are not in place. Snohomish County used 15.4% for street right-of-way, based upon 64 approved plats from January 1990 to October 1992. A study of road rights of way in developed portions of the East Bremerton Study area showed that roads consumed 17% of the land area. The County uses a percentage reduction of 17% based upon existing community development patterns. Information is based on plat studies and on GIS analysis of the East Bremerton study area.

Critical Areas: Designated critical areas (and any required buffers) are assumed to be constrained for development pursuant to the Critical Areas Ordinance. This includes wetlands, streams, and geologic hazards. A reduction factor is applied to account for development density lost due to critical areas.

Critical area constraints can be estimated by using a flat percentage reduction or using mapped information to calculate the amount of critical areas present in the UGAs. Using a flat percentage does not look at each individual property in a UGA, but instead assumes an overall average impact on land development. Using mapped information assumes that most of the critical areas are mapped to a relatively high degree of accuracy. Although the county does have excellent mapped critical area information, the relative scale that the information is mapped (1:2000 or greater) does not lend itself to small area or parcel specific analysis. In addition, the data are based on broad scale surveys. Using a flat percentage reduction for critical areas is the preferred method for Kitsap County at this time.

Snohomish County used mapped information from their GIS to determine the percentage reduction for each individual UGA. Overall reduction factors for critical areas used by Snohomish County ranged from 4.7% to 52.5%, depending on the UGA being analyzed. 13% was added to the mapped critical areas to account for unmapped wetlands. Snohomish county concluded that 60 % of the development density on the encumbered land would be lost. This means that if $\frac{1}{2}$ of a piece of property is covered by critical areas, then 30% of the potential development is lost ($.6 \times .5 = .3$).

A study conducted in October of 1997 of the east Bremerton area showed that 32% of vacant and partially developed residential land was encumbered by critical areas, including wetland and stream buffers. This study was conducted using the County’s Geographic Information System (GIS); mapped critical areas information was combined with assessor’s parcel data. This study area encompasses a large portion of the urbanizing area of central Kitsap County and is believed to be generally representative of unincorporated UGAs throughout the County.

Operation of the Critical Areas Ordinance can affect selection of an appropriate reduction factor for critical areas. If the development capacity attributable to designated critical areas can be transferred and used on an unconstrained portion of a site, this should reduce the estimated amount of land subject to the reduction factor. Currently, the CAO contains a provision specifically allowing wetland and wetland buffers to be used in the calculation of the minimum lot area for proposed lots (CAO, Section 260.E.1). Through use of a PUD, the development capacity attributable to wetlands can be utilized on a constrained site, this analysis assumes that roughly half of the development potential of designated critical area is recaptured pursuant to this provision, therefore, this analysis uses a 15% reduction for critical areas.

Public Facilities: This reduction factor accounts for future public facilities that will be located within the UGA. These public purpose lands include, but are not limited to, parks, schools, institutions, utility corridors, sewage treatment facilities, and open space. The Snohomish County General Policy Plan states that “research on public purpose land (excluding streets) as a percentage of total developed land in Snohomish County and in other U.S. metropolitan areas suggests that this percentage should be in the vicinity of 15%.”

The October, 1997 analysis of the East Bremerton study area showed that approximately 11% of the study area was consumed by public facilities. Since this area is not yet fully developed, it is reasonable to assume that the percentage of public facilities will reach 15% a full build-out.

Table 6 shows a summary of the reduction, discount and market factors used in this issue paper. The model for land capacity in the CPPs (Appendix B, Task 2.04) is reflected in the reduction factors used in this analysis. The model in the CPPs results in a maximum potential population, or build out population. The CPP model is; density multiplied by (vacant and underutilized land - critical - roads) multiplied by average household size + existing population = total population. This basic approach is used in this analysis and expanded upon using the CTED report and other jurisdictions’ capacity analysis models.

TABLE 6 Summary of Kitsap County Land Capacity Analysis Model Factors	
	<u>For Redevelopment and Unavailable Lands:</u> Cumulative Method (Each reduction taken from previous subtotal)
Method of Calculating Reduction Factors	<u>For all other factors:</u> Percentage method (each reduction taken from the same gross subtotal)
Redevelopment factor for Underutilized land (-)	20%

POPULATION APPENDIX

Unavailable lands (-)	15% for vacant land; 30% for underutilized land
Roads (-)	17%
Public Facilities (-)	15%
Critical Areas (-)	15%
* Market Factor (+)	25%

* Added to net acreage after discounts/reductions taken; market factor is discussed in Section V.

D. UGA SITING CRITERIA

Definitions:

RCW 36.70A.110 and the Growth Hearings Board Order of September 8, 1997 use certain terms and phrases in the description of lands that must or may be included in Urban Growth Areas. For purposes of the Kitsap County Comprehensive Plan, these terms and phrases are defined as follows:

City means the incorporated boundaries of Bainbridge Island, Bremerton, Poulsbo and Port Orchard.

Gross land area means the total land area including street rights-of-way.

Net available land area means the result of the Residential Land Capacity Analysis formula as applied to the *gross land area*.

Areas already characterized by urban growth means areas where the *net available land area* is less than 30% of the *gross land area* AND the predominant density of existing residential development is at least three (3) dwelling units per acre (net).

Adequate existing public facility and service capacities means areas with existing water and sanitary sewer capacity to serve planned urban densities.

Areas that will be served adequately by a combination of both existing public facilities and services and any additional needed public facilities and services that are provided means areas where water and sanitary sewer capacity to serve planned urban densities is planned (contained within a capital facilities plan).

The remaining portions of the Urban Growth Areas means those areas not *already characterized by urban growth*, but which have or are planned to have adequate water and sanitary sewer capacity to serve urban densities and are adjacent to cities and/or incorporated *areas already characterized by urban growth*.

Siting Criteria

The method of allocating growth within UGAs is defined in RCW 36.70A.110 and uses land use and the presence of adequate services as the primary criteria for deciding where to locate planned growth. This sequence is described below and is shown on the accompanying maps.

1. Cities

The cities of Bainbridge Island, Bremerton, Poulsbo and Port Orchard must be included in Urban Growth Areas: “Each city that is located in such a county shall be included within an urban growth area”.

2. Unincorporated Areas

a. First Priority

“Urban growth should be located first in areas already characterized by urban growth that have adequate existing public facility and service capacities to serve such development...”. These areas are adjacent to incorporated cities, or are adjacent to or contain major employment or commercial areas. Kingston and Silverdale are typical of First Priority areas.

b. Second Priority

“Urban growth should be located...second, in areas already characterized by urban growth that will be served adequately by a combination of both existing public facilities and services and any additional needed public facilities and services that are provided...” In Kitsap County, these areas are adjacent to incorporated cities, or First Priority areas, or are adjacent to or contain major employment or commercial areas. Gorst is typical of Second Priority areas.

c. Third Priority

“Urban growth should be located...third in the remaining portions of the Urban Growth Areas”. These areas are adjacent to incorporated cities, or First Priority areas, or Second Priority areas.

Using the criteria listed above, the following areas were designated as UGAs.

Cities - Based on the first siting criteria, all incorporated Cities are included in a UGA. Therefore, the cities of Bainbridge Island, Bremerton, Poulsbo and Port Orchard are included in Urban Growth Areas.

Kingston UGA – This UGA meets the criteria for tier one area, being a location with both existing urban character and existing urban services (i.e., presence of both public water and sewer). This area also has a major transportation link with the ferry terminal to Edmonds. Due to continued population growth, the Kingston UGA boundary is expected to be increased when the KRCC adopts new population projections for the year 2017. New population projections could be ready for incorporation into the Comprehensive Plan as early as the first annual review of this plan.

The Kingston Design Study will be used for guidance for commercial development within the Kingston UGA until such time as it is formally adopted. The Kingston Urban Design Study will be used for guidance as long as it does not conflict with other portions of this Comprehensive Plan, zoning ordinance, and other implementing regulations.

Silverdale UGA – This UGA includes the Silverdale and Island Lake areas. Much of this UGA has

an existing development pattern that is characterized by urban growth, including a major retail mall and surrounding commercial properties. Large portions of this UGA have existing or planned urban services including both public water and sewer. Most of this area corresponds to tier one areas.

Central Kitsap UGA – This UGA includes the Tracyton, and Illahee areas. Much of this UGA has an existing development pattern that is characterized by urban growth. Large portions of this UGA have existing or planned urban services including both public water and sewer. Most of this area corresponds to tier one areas, with smaller portions meeting tier two criteria.

Bremerton UGA – This UGA consists of two unincorporated areas adjacent to the east and west of the City of Bremerton. The UGA to the west of the City of Bremerton includes Navy Yard City and Warner Road; areas that are essentially unincorporated islands within the City of Bremerton. The UGA to the east of the City of Bremerton generally includes the area south of Ridell Road and north of the city limits. This UGA meets the criteria for tier one and two areas, with existing urban character and is or will be served adequately by a combination of both existing and planned public facilities and services.

Port Orchard UGA – This UGA includes areas immediately adjacent to the incorporated city of Port Orchard that are characterized by urban growth and have existing urban services. This UGA meets the criteria for a tier one area.

Port Gamble UGA – From its initial settlement in 1853, Port Gamble has been a relatively urban place. The townsite has served as support for the adjoining mill and shipping enterprises for over 140 years. Throughout its history, Port Gamble has been one of Puget Sound's unique, small centers of industrial, residential and commercial activity. It was designated a National Historic District in 1966. It is the intent of the current owner to continue to maintain the historical character of the remaining townsite. This UGA meets the criteria for a tier one area with existing urban character and urban services.

The Port Gamble area has major historic significance for Kitsap County. The County places great importance on preserving the historic nature and integrity of Port Gamble and will work to ensure that any new development respects and enhances the character of this area. Port Gamble Bay is also an important natural resource for the Port Gamble S'Klallam Tribe, and the County will work with the Tribe and property owners of Port Gamble to protect this resource.

McCormick Woods UGA - This UGA consists of the McCormick Woods development (a partly developed, vested golf course/residential PUD), and Campus Station (a vested mixed-use area north of McCormick Woods). Both McCormick Woods and Campus Station are partly developed for urban uses and densities and served by adequate services. This UGA is also included in the South Kitsap Urban Joint Planning Area.

Gorst UGA - This UGA is comprised of the commercial/industrial area in Gorst and is also included in the City of Bremerton Urban Joint Planning Area.

E. SUPPLY/DEMAND ANALYSIS

The supply/demand analysis section compares land demand with the land supply to determine the adequacy of the proposed UGAs.

Market Safety Factors: Land capacity studies typically include a market or safety factor. This is an additional amount of land (usually expressed as a %) that is added to account for operation of land markets. It can also be seen as providing a margin of safety so that land supply is not constrained. The market factor is also an acknowledgment that urban land markets are complex and imperfectly understood. Growth management systems intentionally limit the supply of land to encourage compact, higher density development. We do not know, however, precisely what balance between supply and demand is required to keep these factors in equilibrium. A constrained supply of land within a jurisdiction can have adverse effects on land and housing costs; this can create pressure for growth to locate in other jurisdictions and generally impede accomplishment of growth management objectives.

The literature on market factors is limited. Various studies identify factors ranging from 25% to 300%. A 25% factor was identified in the CTED report, has been used by numerous jurisdictions, and has been approved in CPSGMHB decisions. A 25% market factor is used in this analysis.

Kitsap County also proposes to establish a monitoring system to help track factors that could indicate an imbalance between land supply and demand. The Comprehensive Plan will contain processes for review and revision of the UGA in response to specified indicators.

Demand: Based on the discussion in Section II of this issue paper, the population demand for the unincorporated portion of the UGAs is 23,496. Table 7 shows the number of net developable acres needed in the unincorporated UGAs, including a 25% market factor.

POPULATION APPENDIX

TABLE 7 Number of Acres needed in Unincorporated UGAs	
Dwelling Units Needed (From Table 3a)	9,398 d.u.
Average Density	5 du/ac
*Net Developable Acres Needed for Unincorporated UGAs	1,880 acres
Net Developable Acres Needed for Unincorporated UGAs with a 25% Market Factor	2,350 acres

* *Net Acres = After discounting for critical areas, public facilities, unavailable land, and ROW; and before adding market factor.*

Supply: Using the siting criteria developed in Section IV, vacant and underutilized residential land in first, second, and third priority areas were tabulated separately. The reduction factors, discussed in Section III of the Population Appendix, were then applied to produce a net developable acreage total for each tier area. Using a 25% market factor, the land supply as identified can be 25% larger than the forecasted demand. As noted above, these calculations do not include industrial lands or open space.

Comparison of Supply to Demand: Starting with tier 1 areas and then moving to tier 2 areas, UGA were created calculated at an average of 5 du/ac with a 25% market factor, which equals a growth target of 2,350 acres. The total supply of net developable acres is comprised of the the net developable acres in the unincorporated UGAs, plus the equivalent acres allocated to the Poulsbo JPA, plus the equivalent acres in the McCormick Woods UGA. Population equal to 386 net developable residential acres have been allocated to the Poulsbo JPAs. This population has been reserved for the Poulsbo JPA until the Joint Planning process has been completed. For further discussion of JPAs see Chapter 2, Land Use. The McCormick Woods UGA has been calculated based on the number of vested unbuilt lots in the master plan projects of McCormick Woods and Campus Station. The number of vested unbuilt lots was converted into an equivalent number of net developable acres by dividing the number of vested lots by five to create an equivalent acreage total to match the average density target for UGAs of five dwelling units per acre.

The UGAs (including the McCormick Woods UGA and the Poulsbo JPA) as depicted on the Comprehensive Plan map contain 2,397 net developable residential acres, which is within 47 acres of the 2,350 acres growth target. This is calculated with McCormick Woods achieving the five dwelling units per acre allowable under the Urban Low residential designation. Calculating McCormick Woods at its current vested net density of 3.25 du/ac, the UGAs would contain 2,523 net developable acres.

The average planned density of the UGAs (excluding the Urban Restricted designation) as depicted on the land use map is 5.1 du/ac. Several assumptions were made in developing the average density figure, these assumptions are listed below;

- # Urban residential designations are calculated using the minimum density required for each designation. Actual achieved density may be higher and is intended to be monitored through the County’s buildable lands monitoring program.
- # McCormick Woods is currently calculated at 3.25 du/ac for net developable acreage. Average planned density for all UGAs would be 5.5 if McCormick Woods calculated at 5 du/ac.
- # Acreage allocated to the Poulsbo JPA is not included. Final land use designations have not been determined for the JPA and therefore can not be included in this calculation.
- # Urban Restricted designation is not included. This designation is a special situation which is intended to protect

critical areas. It is unlike the other urban designations that have a minimum density requirement. The Urban Restricted designation has a base density of one du/ac, with a maximum of five du/ac. Each applicant is required to demonstrate an ability to accommodate higher density through site specific environmental review. Including the Urban Restricted designation calculated at one du/ac, the average density of the UGAs is 4.3 du/ac (with McCormick Woods calculated at 3.25 du/ac) or 4.6 du/ac (with McCormick Woods calculated at 5 du/ac).

Table - 9 shows the land capacity analysis calculations for the unincorporated portions of the UGAs. Numbers in the table were rounded to the nearest hold number and may not total to 100%.

- # The first column contains an alphabetic row indicator used for reference in the calculation (fourth) column.
- # The second column shows the type of reduction factor and the order of it's application. Two of the reduction factors apply different percentage reductions for vacant and underutilized land and are shown in the percentage reduction and calculation columns.
- # The third column contains the percentage reduction for each reduction factor. The calculation column shows how the percentage reduction factor is applied for each row.
- # The far right column shows the acreage subtotal for each row, and is not indented to be added as a column.
- # Row 'H' shows the net developable acreage after all reduction factors have been applied.
- # Row 'J' shows the number of dwelling units for each column and is calculated by multiplying the net developable acreage by the low end of the density range for each land use designation.
- # The low end of the density range is shown in Row 'A'.

For more detailed discussion of the reduction factors and their application, please refer to the reduction factor section of this population appendix.

Tables 10-14 show the land capacity analysis calculations for unincorporated portions of each UGA.

POPULATION APPENDIX

Table-8 Urban Residential Land Capacity Analysis County-wide Unincorporated UGA Total												
				Vacant Land				Underutilized Land				
A	Reduction Factor	Percentage Reduction	Calculation	Urban Restricted (1 du/ac)	Urban Low (5 du/ac)	Urban Medium (10 du/ac)	Urban High (19 du/ac)	Urban Restricted (1 du/ac)	Urban Low (5 du/ac)	Urban Medium (10 du/ac)	Urban High (19 du/ac)	Acreage Subtotal for each row
B		Gross Acreage		616	2,017	73	88	420	1,287	38	9	4,548
C	Redevelopment	Vacant 0% Underutilized 20%	Vac. = B - (B x 0) Und. = B - (B x .2)	616	2,017	73	88	336	1,030	30	7	4,197
D	Unavailable Land	Vacant 15% Underutilized 30%	Vac. = C - (C x .15) Und. = C - (C x.3)	524	1,714	62	75	235	721	21	5	3,357
E	Roads	17%	D - (D x .17)	435	1,423	52	62	195	598	18	4	2,786
F	Public Facilities	15%	E - (D x .15)	356	1,166	42	51	160	490	14	3	2,283
G	Critical Areas	15%	F - (D x .15)	278	909	33	40	125	382	11	3	1,779
H	Net Developable Acres		G	278	909	33	40	125	382	11	3	1,779
J	Dwelling Units (du)		G x A	278	4,543	329	753	125	1,910	113	51	8,101

POPULATION APPENDIX

**Table-8
Urban Residential Land Capacity Analysis
County-wide Unincorporated UGA Total**

L	Subtotal - Net Developable UGA Acreage	G	1,779		
M	Equivalent Net Developable Acreage for Poulsbo JPA*	3,864/(2.5ppdu x 5 du/ac) x 1.25 = 386 acres	386		
N	Equivalent Net Developable Acreage for McCormick Woods UGA**	1,162 lots / 5 du/ac = 232 acres	232	1,162 lots / 3.25 du/ac = 343 acres	358
N	Total Net Developable Acres	L + M + N	2,397	2,523	

* Equivalent acreage total is calculated using unincorporated Poulsbo JPA population increase of 3,864 divided by 2.5 persons per dwelling unit (ppdu) and five dwelling units per acre (du/ac) with a 25% market factor. $3,864 / (2.5 \text{ ppdu} \times 5 \text{ du/ac}) \times 1.25 = 386$ acres. The total population projection for the City of Poulsbo and the unincorporated Poulsbo JPA is 8,000, which is used as the basis for sewer planning. The city's Nov. 1997 land capacity analysis memo shows that the city can accommodate 4,136 additional people, therefore the unincorporated JPA can accommodate 3,864 people (8,000 - 4,136 = 3,864).

** Equivalent acreage total is calculated using 1,162 vested, unbuilt dwelling units in McCormick Woods and Campus Station. Two equivalent calculations are shown, one using 5 du/ac, which is the minimum density achievable under the urban low residential designation, and one using the 3.25 du/ac which is the current density of the vested lots excluding the roads, community open space and golf course.

**Table-9 Urban Residential Land Capacity Analysis
Kingston Unincorporated UGA Total**

			Vacant Land				Underutilized Land					
A	Reduction Factor	Percentage Reduction	Calculation	Urban Restricted (1 du/ac)	Urban Low (5du/ac)	Urban Medium (10du/ac)	Urban High (19du/ac)	Urban Restricted (1 du/ac)	Urban Low (5 du/ac)	Urban Medium (10 du/ac)	Urban High (19 du/ac)	Acreage Subtotal for each row
B		Gross Acreage		0	197	32	1	0	56	0	0	286

POPULATION APPENDIX

**Table-9 Urban Residential Land Capacity Analysis
Kingston Unincorporated UGA Total**

C	Redevelopment	Vacant 0% Underutilized 20%	Vac. = B - (B x 0) Und. = B - (B x .2)	0	197	32	1	0	45	0	0	275
D	Unavailable Land	Vacant 15% Underutilized 30%	Vac. = C - (C x .15) Und. = C - (C x.3)	0	167	27	1	0	31	0	0	227
E	Roads	17%	D - (D x .17)	0	139	23	1	0	26	0	0	188
F	Public Facilities	15%	E - (D x .15)	0	114	18	1	0	21	0	0	154
G	Critical Areas	15%	F - (D x .15)	0	89	14	0	0	17	0	0	120
H	Net Developable Acres		G	0	89	14	0	0	17	0	0	120
J	Dwelling Units (du)		G x A	0	444	144	9	0	83	0	0	680

**Table-10 Urban Residential Land Capacity Analysis
Port Gamble Unincorporated UGA Total**

			Vacant Land				Underutilized Land					
A	Reduction Factor	Percentage Reduction	Calculation	Urban Restricted (1 du/ac)	Urban Low (5du/ac)	Urban Medium (10du/ac)	Urban High (19du/ac)	Urban Restricted (1 du/ac)	Urban Low (5 du/ac)	Urban Medium (10 du/ac)	Urban High (19 du/ac)	Acreage Subtotal for each row

POPULATION APPENDIX

**Table-10 Urban Residential Land Capacity Analysis
Port Gamble Unincorporated UGA Total**

B		Gross Acreage		0	30	0	0	0	0	0	0	30
C	Redevelopment	Vacant 0% Underutilized 20%	Vac. = B - (B x 0) Und. = B - (B x .2)	0	30	0	0	0	0	0	0	30
D	Unavailable Land	Vacant 15% Underutilized 30%	Vac. = C - (C x .15) Und. = C - (C x.3)	0	26	0	0	0	0	0	0	26
E	Roads	17%	D - (D x .17)	0	21	0	0	0	0	0	0	21
F	Public Facilities	15%	E - (D x .15)	0	17	0	0	0	0	0	0	17
G	Critical Areas	15%	F - (D x .15)	0	14	0	0	0	0	0	0	14
H	Net Developable Acres		G	0	14	0	0	0	0	0	0	14
J	Dwelling Units (du)		G x A	0	68	0	0	0	0	0	0	68

**Table-11 Urban Residential Land Capacity Analysis
Silverdale Unincorporated UGA Total**

				Vacant Land				Underutilized Land				
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POPULATION APPENDIX

**Table-11 Urban Residential Land Capacity Analysis
Silverdale Unincorporated UGA Total**

A	Reduction Factor	Percentage Reduction	Calculation	Urban Restricted (1 du/ac)	Urban Low (5 du/ac)	Urban Medium (10 du/ac)	Urban High (19 du/ac)	Urban Restricted (1 du/ac)	Urban Low (5 du/ac)	Urban Medium (10 du/ac)	Urban High (19 du/ac)	Acreage Subtotal for each row
B		Gross Acreage		97	372	7	73	54	238	4	8	853
C	Redevelopment	Vacant 0% Underutilized 20%	Vac. = B - (B x 0) Und. = B - (B x .2)	97	372	7	73	43	190	3	6	792
D	Unavailable Land	Vacant 15% Underutilized 30%	Vac. = C - (C x .15) Und. = C - (C x .3)	82	316	6	62	30	133	2	4	637
E	Roads	17%	D - (D x .17)	68	262	5	52	25	111	2	4	529
F	Public Facilities	15%	E - (E x .15)	56	215	4	42	21	91	2	3	433
G	Critical Areas	15%	F - (F x .15)	44	168	3	33	16	71	1	2	338
H	Net Developable Acres		G	44	168	3	33	16	71	1	2	338
J	Dwelling Units (du)		G x A	44	838	32	625	16	353	12	45	1964

**Table-12 Urban Residential Land Capacity Analysis
Central Kitsap Unincorporated UGA Total**

POPULATION APPENDIX

**Table-12 Urban Residential Land Capacity Analysis
Central Kitsap Unincorporated UGA Total**

				Vacant Land				Underutilized Land				
A	Reduction Factor	Percentage Reduction	Calculation	Urban Restricted (1 du/ac)	Urban Low (5 du/ac)	Urban Medium (10 du/ac)	Urban High (19 du/ac)	Urban Restricted (1 du/ac)	Urban Low (5 du/ac)	Urban Medium (10 du/ac)	Urban High (19 du/ac)	Acreage Subtotal for each row
B		Gross Acreage		439	713	21	13	342	525	23	0	2076
C	Redevelopment	Vacant 0% Underutilized 20%	Vac. = B - (B x 0) Und. = B - (B x .2)	439	713	21	13	274	420	18	0	1898
D	Unavailable Land	Vacant 15% Underutilized 30%	Vac. = C - (C x .15) Und. = C - (C x .3)	373	606	18	11	192	294	13	0	1507
E	Roads	17%	D - (D x .17)	310	503	15	9	159	244	11	0	1250
F	Public Facilities	15%	E - (D x .15)	254	412	12	8	130	200	9	0	1024
G	Critical Areas	15%	F - (D x .15)	198	321	9	6	102	156	7	0	798
H	Net Developable Acres		G	198	321	9	6	102	156	7	0	798
J	Dwelling Units (du)		G x A	198	1606	95	111	102	779	68	0	2959

POPULATION APPENDIX

**Table-13 Urban Residential Land Capacity Analysis
Bremerton Unincorporated UGA Total**

				Vacant Land				Underutilized Land				
A	Reduction Factor	Percentage Reduction	Calculation	Urban Restricted (1 du/ac)	Urban Low (5 du/ac)	Urban Medium (10 du/ac)	Urban High (19 du/ac)	Urban Restricted (1 du/ac)	Urban Low (5 du/ac)	Urban Medium (10 du/ac)	Urban High (19 du/ac)	Acreage Subtotal for each row
B		Gross Acreage		0	413	3	1	0	235	0	1	653
C	Redevelopment	Vacant 0% Underutilized 20%	Vac. = B - (B x 0) Und. = B - (B x .2)	0	413	3	1	0	188	0	1	606
D	Unavailable Land	Vacant 15% Underutilized 30%	Vac. = C - (C x .15) Und. = C - (C x.3)	0	351	3	1	0	132	0	1	487
E	Roads	17%	D - (D x .17)	0	291	2	1	0	109	0	0	404
F	Public Facilities	15%	E - (D x .15)	0	239	2	1	0	89	0	0	331
G	Critical Areas	15%	F - (D x .15)	0	186	1	0	0	70	0	0	258
H	Net Developable Acres		G	0	186	1	0	0	70	0	0	258
J	Dwelling Units (du)		G x A	0	930	14	9	0	349	0	6	1307

POPULATION APPENDIX

**Table-14 Urban Residential Land Capacity Analysis
Port Orchard Unincorporated UGA Total**

				Vacant Land				Underutilized Land				
A	Reduction Factor	Percentage Reduction	Calculation	Urban Restricted (1 du/ac)	Urban Low (5 du/ac)	Urban Medium (10 du/ac)	Urban High (19 du/ac)	Urban Restricted (1 du/ac)	Urban Low (5 du/ac)	Urban Medium (10 du/ac)	Urban High (19 du/ac)	Acreage Subtotal for each row
B		Gross Acreage		80	299	10	0	24	232	5	0	650
C	Redevelopment	Vacant 0% Underutilized 20%	Vac. = B - (B x 0) Und. = B - (B x .2)	80	299	10	0	19	186	4	0	598
D	Unavailable Land	Vacant 15% Underutilized 30%	Vac. = C - (C x .15) Und. = C - (C x .3)	68	254	9	0	13	130	3	0	477
E	Roads	17%	D - (D x .17)	56	211	7	0	11	108	2	0	396
F	Public Facilities	15%	E - (D x .15)	46	173	6	0	9	88	2	0	324
G	Critical Areas	15%	F - (D x .15)	36	135	5	0	7	69	1	0	253
H	Net Developable Acres		G	36	135	5	0	7	69	1	0	253
J	Dwelling Units (du)		G x A	36	673	45	0	7	344	15	0	1121

LAND USE APPENDIX

I. INTRODUCTION

The existing land use and ownership pattern is the most powerful factor for determining future land use in the county. In order to develop the Land Use Chapter, a complete inventory of existing land use was made to show use and ownership patterns throughout the county. The inventory provides information on the existing development, densities, and acreage by land-use type. This information, along with information on economic and population forecasts and natural systems and resources was used in the development of the Land Use Chapter the Comprehensive Plan.

Most of the information for the Land Use Inventory was taken from Assessor’s records and transferred to Kitsap County’s Geographic Information System (GIS). The GIS allows data to be extracted in both written and graphic form. In order to provide a benchmark for comparison, a field survey of selected areas was made. The information gathered from the survey was compared to map and table information produced from the GIS. A side-by-side comparison revealed some discrepancies. After careful examination of the data and comparison with aerial photos, adjustments were made to the GIS database and the resulting land use information printed in both map and table form.

The land use information in the GIS is based on a standard land use classification system. The Land Use Map shows parcels as recorded by the Kitsap County Assessor. Each color in the non-residential categories represents a different land use type; these are not reflective of the plan designations. The seven residential categories vary by density, which is the number of dwelling units per acre. The classification scheme is broken down into the following 28 categories, which are defined in the Land Use Classifications section found later in this Appendix:

Miscellaneous	Residential	Commercial	Industrial
Water	Rural	Commercial Services	Light Industrial
Wooded Land	Estate	Commercial Retail	General Industrial
Open Land	Suburban	Auto/Highway	Heavy Industrial
Vacant Land	Urban Low	Hotel/ Motel	Mines & Quarries
Schools	Urban Standard	Off-Street Parking	
Parks	Urban Medium		
Institutional	Urban High		
Public Utilities	Mobile Home Parks		
Military			
Public Facilities			
Transportation			

The land use classification system is represented graphically on the land use map of Kitsap County. The Land Use map provides an overall view of development patterns, density, and land use types.

Summary of Recent Comprehensive Plans

The current Kitsap County Comprehensive Plan was adopted in 1977. Land use is addressed in this plan with four general goals. In addition, general policies were designed to address these goals, and specific policies for urban, semi-urban, semi-rural and rural areas are given. An environmental impact statement prepared as part of the Comprehensive Plan addresses the existing land use and development patterns, as well as housing.

The 1977 Comprehensive Plan allows a residential density for waterfront property in the rural areas of no more than two units per acre to take advantage of the limited shoreline property. It also recognizes existing development patterns and Kitsap residents' strong desire to live on or near Puget Sound. This characteristic is common in all counties and cities with waterfront on Puget Sound.

The 1977 Plan also allows for residential development at densities which exceed that which is considered rural in areas not planned for eventual transition to urban use. Designated as "Semi-Rural," these areas are often near the waterfront. Densities permitted range from one to three units per acre. Examples of areas designated Semi-Rural include Colby, Indianola, Point Jefferson and Lofall. These areas are generally served by public water systems and are not served by public sewer facilities.

Areas designated as "Semi-Urban" are also found on or near the waterfront. Suquamish, Port Gamble, Kingston, Manchester, Keyport and fringe areas of Silverdale, Bremerton and Port Orchard are examples. These areas are generally served by both public water and sewer. Densities permitted range from three to six units per acre with a maximum of 30 units per acre possible through a planned unit development approval.

While the 1977 Comprehensive Plan established land use designations, subsequent subarea plans refined and updated these designations and provided specific goals and policies for each designation. All of the subarea plans focused on the urban concentration concept, which provides the major core of future growth in and around already urban areas. The plans also developed transition areas which propose a series of concentric rings of decreasing density. The North Kitsap Subarea Plan was adopted in 1984, the Central Kitsap Subarea Plan was adopted in 1983, and the South Kitsap Subarea Plan was adopted in 1982.

Development Trends

Water is the lifeblood of the Puget Sound region. It has had significant impact in shaping Kitsap County, defining our boundaries, our economy and pattern of development.

Kitsap County comprises 396 square miles and ranks 36th out of the 39 Washington state counties in size. Despite its relatively small size, Kitsap County is the second, most densely populated county in Washington state with a 1995 density of 557 persons per square mile. King County has the highest density in the state with a density of 758.9 persons per square mile. Clark County comes in third with a density of 463.4 persons per square mile. A significant portion of the population

lives on or near Kitsap County's 228 miles of saltwater shoreline. It is estimated that approximately 35,000 people live within a half-mile of the marine waterfront outside of cities.

Kitsap County is also unique because it is virtually an island. Only a five-mile strip of land between Hood Canal and Case Inlet keep it from being an island. This relative isolation from the most densely populated areas on the eastern shore of Puget Sound have contributed to the perception of Kitsap County as a predominantly "rural" place. While this was true at one time, much of the county today is characterized by suburban and urban development.

Kitsap County has experienced a significant increase in population since the turn of the century, with the most significant growth occurring from 1900 to 1910 when the lumber industry was at its peak. During the early part of the century, development was concentrated in small settlements along the shoreline. Movement of people and goods depended on the water until road improvements began shifting development inland.

Many communities established along the water continued to grow after the timber supply had been depleted, depending on other industries such as agriculture. Cities such as Port Orchard, Poulsbo and Bremerton grew to become centers of activity. In a large part, the growth of these urban areas has been fueled by Navy facilities such as Puget Sound Naval Shipyard, Manchester Fuel Depot, Keyport and, most recently, Bangor. The siting of the Submarine Base at Bangor in the mid-1970s and the subsequent location of a regional shopping center in the early 1980s has led to Silverdale becoming the county's center for commercial and business activity.

Over the past 30 years, the trend has been to distribute low-density single family development in several parts of the county. Major transportation corridors linking urban areas with the ferries and bridges have encouraged settlement in areas not previously developed. The majority of land in the east half of the county has been divided into parcels of less than 10 acres, and in many areas below 2.5 acres. While not all of these parcels have been developed, if current trends continue many more will be developed in the next 20 years.

Shoreline development has also continued at a steady pace. The predominantly single-family houses are often located on long, narrow lots along the shoreline. This type of development rings the county with somewhat intensive residential development which may or may not be associated with incorporated municipalities. Much of the development is not served by public sewer. Living on or near the waterfront is highly desirable to most people and still affordable when compared to other areas of Puget Sound. This, and the fact that there are still undeveloped areas along the shoreline, only increases development pressure.

There are many areas along the shoreline where urban densities are present, often without the benefit of urban services. Some waterfront settlements, such as Indianola, were developed on substandard lots at urban densities at a time when there were few development standards. Many of these lots were intended for vacation and weekend use. Gradually, permanent homes have been built, resulting in the density seen today. These communities are usually not adjacent to existing urban areas, and in many cases are separated from existing urban areas by rural and forest lands.

This same development pattern can be found around most lakes in the county. These lakes were, and in some cases still are, popular recreation areas. Homes that once served as summer and weekend retreats have become permanent residences. The deep, narrow lot pattern intensifies the impact of septic failures and stormwater runoff on the water quality of many of these lakes.

For waterfront communities such as Hansville, Indianola, Suquamish, Manchester, South Colby, Southworth and Olalla, preservation of the existing character is a primary goal of residents in these areas. Recognition of these communities in the Comprehensive Plan is needed in order to assess whether they are to grow and by how much. Numerous areas along the waterfront, including many of these old established communities, will need increased public sewer and other services to protect the water quality of Puget Sound. These areas are not necessarily associated with a city nor proposed for urban growth areas, yet they offer opportunities to locate future residential development and thus help protect natural resource lands located in the county's interior.

Natural Development Limitations

The purpose of this section of the Land Use Inventory is to describe the implications of development in Kitsap County on the environment. A detailed discussion of natural systems is included in the Natural Systems Appendix.

Kitsap County has a number of environmentally sensitive areas -- from forested wetlands and steep slopes to saltwater shorelines and estuaries. These areas are especially sensitive to urbanization and have a number of building limitations. Soil conditions, aquifer recharge areas, topography, wetlands, sensitive shorelines and streams and a number of species of fish and wildlife all must be considered.

Kitsap County contains some areas with limitations for building because of specific soil conditions and/or geologic hazardous areas. Steep, unstable slopes exist along many shorelines. These areas have a history of landslides and are very difficult to build on. Such areas exist along the eastern shore of the north end of the county south of Hansville to Kingston. They are also present along the shoreline from Brownsville to Manette; along the south shore of Sinclair Inlet between Gorst and Port Orchard; and along Colvos Passage from the Southworth Ferry Terminal to Olalla. Steep slopes are also found inland along stream corridors such as Big Beef Creek and Blackjack Creek.

Aquifer recharge areas are particularly important in Kitsap County where approximately 80% of the potable water comes from below ground. Development can have an adverse impact on groundwater recharging in a variety of ways. The density at which an area develops has a direct impact on recharging capability and therefore development approval must mitigate these impacts. Shallow aquifers (less than 100 feet) are especially susceptible to surface contamination. Well contamination has not been a widespread problem, but it is a serious problem for some smaller water systems with wells drilled to shallow depths. Saltwater intrusion is another problem that develops with over-drafting of water from an aquifer. This problem has developed in some individual shallow wells drilled near the shoreline.

Approximately 50,000 homes in Kitsap County are on septic systems. On-site systems are composed of a septic tank and drainfield. They are economical and provide an adequate level of treatment if installed, operated and maintained properly. Recent watershed studies in Kitsap County have indicated that approximately 5% of the existing septic systems are failing. A failing system is one which the chemical and biological processes that treat the effluent before it reaches groundwater, or a restrictive layer, do not occur. Bacteria, viruses and/or hazardous chemicals reach the surface or groundwater. When on-site systems fail, they are potential health and environmental hazards. Failure can be the result of a number of factors: poor design, improper installation, improper use and lack of monitoring.

Another important factor in septic system failure in Kitsap County is the existence of old systems installed before sanitary wastewater disposal regulations existed. Many of the systems were installed on small lots in marginal soil conditions. Some were originally platted as vacation sites and never intended as permanent home sites. This lot pattern is most often found in old established shoreline communities and around many of the larger lakes. Communities such as Indianola, Driftwood Keys, Island Lake, Chico, Wildcat Lake and Colby in South Kitsap represent this type of high-density development.

Development of shoreline areas at densities greater than one unit per acre has particular implications for on-site sewage disposal. Although it is possible to install a system on less than half an acre, the impact of a number of small lots concentrated near the shoreline is significant if soil conditions are poor or there is a high seasonal water table. Drainfields are more likely to fail in these conditions, threatening water quality and public health.

Failing septic systems are one type of threat to water quality intensified by development; stormwater runoff is another. Stormwater runoff intensifies as an area becomes more densely developed. When vegetation is removed, soil is exposed to the forces of runoff and rain. Particles are picked up by swiftly flowing stormwater and deposited in still waters downstream resulting in sedimentation. Increased runoff from roads, parking lots, streets, highways and industrial yards carries pollutants into the streams. Increased flooding can also result from the loss of vegetation and increase in stormwater runoff.

Degradation of shorelines and water quality because of non-point pollution has a direct impact on the plants and animals found in these areas. Shellfish beds are very sensitive to contamination from agriculture, failed septic systems, sewage outfalls and stormwater runoff. In Kitsap County, Liberty Bay, Dyes Inlet and Sinclair Inlet are closed to shellfish harvesting because of pollution.

II. ASSESSOR'S LAND USE CLASSIFICATIONS

In order to understand the existing development pattern in Kitsap County, it is useful to look at the breakdown by land use type, both in terms of acreage and percentage of the total land in the county, as recorded by the Kitsap County Assessor. Although these numbers do not represent spatial patterns, the data is useful in examining the mix of current land uses.

Table A-LU-1 Land Use Acreage Totals for Unincorporated Kitsap County		
Land Use	Acreage	% Total
Wooded and Open Land	102,256	48.5%
Vacant Land	41,669	19.8%
Residential Land	50,565	24.0%
Commercial Land	1,076	0.5%
Industrial Land	1,926	0.9%
Public Land (not including roads)	6,533	3.1%
Military	6,852	3.2%
Total	210,877	100.0%

Source: Kitsap County Geographic Information System data base.

Wooded Land

Wooded Land is defined for the purpose of the Land Use Inventory as land used for forest use found on parcels of more than 10 acres; it may or may not contain a dwelling. Parcels of less than 10 acres were not considered in this category. The Wooded/Open Land category accounts for 48.5% of land in unincorporated Kitsap County. A complete discussion of forest resource land and forest soils is provided in the Natural Systems Appendix. This section addresses the broader land use implications associated with wooded land, not just land managed for forestry.

Most large wooded parcels in Kitsap County are devoted to forestry and Christmas tree farming, many of which are under the Current Use Tax Exemption program for forest and timber land. Under this program, taxable value is based on use, rather than market value. The remaining forest lands are owned by the City of Bremerton, the tribes and the state of Washington. In addition to these lands, which are managed for forestry, there are many smaller parcels of wooded land owned by private citizens or government agencies that do not fall under the classification of forest land. These lands may or may not be in the Current Use Tax Exemption program, but are heavily wooded and would be included under this land use classification system as wooded land.

Wooded land is important to Kitsap County for many reasons. Commercial forestry provides lumber, firewood, Christmas trees and other forestry related products for local use and export outside the county. Wooded land also provides environmental benefits, including clean air, control of stormwater runoff, open space and fish and wildlife habitat. In addition, it is used for outdoor recreation, municipal watersheds and other multiple uses.

Wooded land has been adversely impacted by encroaching development. Commercial forest production is adversely impacted by nearby residential uses, roads, airports or other development

which restricts the ability to engage in site preparation burning, aerial spraying, harvesting or other essential activities. Development brings with it not only the impacts of clearing and building, but increased land values as well. As the value goes up the incentive to keep land in its natural state is reduced. Subdividing large forested tracts into smaller and smaller parcels becomes more attractive to the property owner.

In addition to the environmental impacts associated with the development of wooded land, there are a number of economic impacts as well. As more people move into previously undisturbed areas the growth brings increased traffic and increased demand on other services such as water, fire protection and schools. Improvements to these services is expensive and inefficient when development is scattered.

As density increases in rural areas, demand for public services also increases. Roads reach their capacity and accidents become more frequent. Police and fire services are stretched thin and schools become overcrowded. The impact is not only financial and environmental, but social as well. When rural densities disappear, rural character also disappears. The intangible qualities that make a rural area unique and desirable are often lost as more people move in and land is divided into smaller parcels.

Open Land

Open land includes agricultural land and open or brush-covered land which could be used for seasonal or periodic grazing, and may or may not include a dwelling unit. No attempt was made to break down the different agricultural uses. This category includes parcels of 10 acres or more. The Wooded/Open Land category accounts for 48.5% of land in unincorporated Kitsap County.

For the purpose of the Land Use Inventory, Open Land is characterized by its lack of trees, size and use. Some parcels are included under the Current Use Property Tax Exemptions in the Open Space or Open Space Agriculture categories. Other parcels have been cleared and left undeveloped.

Open land is distinguished from open space by its use. Open space includes many different land use types, while the Open Land category is more specific. It does not include parks, play fields, streams, lakes, shorelines or open land being used for specific commercial or industrial purposes.

Open land, like forest land, is important for commercial resource production, as habitat for wildlife and for recreation. The Open Land category is used to describe a variety of landscapes from wetland areas to land used for agricultural purposes.

Although agriculture is not a major industry in Kitsap County, there are some valleys where open land is used to graze livestock and grow crops. These valleys have historically been in production and contain the most suitable conditions for agriculture. They include Big Valley in North Kitsap; Central Valley and Clear Creek in Central Kitsap; Long Lake and Olalla Valley in South Kitsap.

Development of Open Land used for agriculture can have many of the same economic impacts as development of Wooded Land. Open Land that contains wetlands is especially sensitive to development. Plant and animal life can be disturbed, loss of vegetation can increase erosion and cause sedimentation. Even development that is upland can affect a wetland's role in the hydrologic cycle. Hydric soils which are often associated with wetlands pose additional problems for

LAND USE APPENDIX

development because of the wet conditions. Land that is relatively dry during the summer may become saturated and wet during the winter.

Open Land near existing urban areas is the most desirable in terms of developability. If environmentally sensitive areas are not present and the land is not used for resource production, it is the least expensive land available to accommodate future growth. Unfortunately, this type of land is not plentiful. Most open land near urban areas has been left undeveloped because of natural development limitations such as wetlands.

Vacant Land

The Vacant Land category includes open, wooded and undeveloped land in parcels less than 10 acres in size that do not contain a dwelling unit at this time. These lands have apparently been segregated into parcels of various sizes, all less than 10 acres in size, to be used or sold as building sites. Some parcels are simply left vacant for economic reasons. On the other hand, vacant lands are usually the easiest to develop because of no active use and the size of the parcel. Land in this category accounts for 19.8% of the land. The impact of the amount of land in the Vacant Land category is tremendous. As these lands develop, the need for increased services increases. This occurs without further County review, except for that which is required by the building and health departments. The demand on basic health, safety and welfare services will be greatly impacted.

Residential Land

For the purpose of the Land Use Inventory, Residential Land Use has been classified into seven different descriptive designations accounting for 24% of the land. These categories include at least one dwelling unit and vary according to density. Density is the number of residential dwelling units in a specific area, usually expressed as dwelling units per acre of land. For the purpose of the Land Use Inventory, density refers to gross density. Gross density is the total number of dwelling units divided by the total land area of the site including land used for public purposes such as roads, parks and utilities.

The Residential Land Use categories include single family residences, mobile homes, duplexes, multi-family complexes and condominiums. They are defined as follows for analysis purposes, based on Kitsap County Assessor records:

Rural: 5 to 10 acres/d.u.

Rural residential lots in Kitsap County are typically used for weekend farming, grazing or left in their natural state for the rural atmosphere. In general, they are too small to be the sole source of income, but in some cases they may provide a second income. Rural lots can be subdivided with relative ease. If soil conditions are good, they are often not a problem for septic tank systems and are generally not served by public sewer and water systems. There is adequate room to have both on-site septic and a private well on the same parcel with little health risks.

Estate: 2.5 to 5 acres/d.u.

Estate lots are rural lots that are more difficult to divide into smaller parcels. The ease at which these lots can be divided depends on the location of existing dwellings and configuration of the site.

Access may be a problem for further subdivision. Lots in this category may or may not be a problem for septic systems depending on soil type and the presence of environmentally sensitive areas. Developments in this category do not have the density to support municipal sewer system services.

Suburban: 1 to 2.5 acres/d.u.

Suburban lots are the most difficult to divide into smaller parcels. At this density, septic tanks and wells on the same lot can be a problem and further development is constrained by the location of existing structures.

Urban-Low: 12,500 s.f. to 1 acre/d.u. (1 to 9 units/acre)

Lots in the urban-low classification typically have single family homes and some duplexes. Lots in this category are suitable for sewer and water services, although in Kitsap County many areas along the water that are built at this density do not have sewer systems. If services are not available at this density, septic systems and wells are often a problem due to site constraints. Public water is generally available and sewer may be available on parcels near existing urban areas.

Urban-Standard: 5,000 s.f. to 12,500 s.f./d.u. (3.5 to 8.7 units/acre)

Urban-standard lot sizes are commonly found in subdivisions, usually in urban areas where services are available. It is also typical of many lower-density, multi-family developments containing townhouses and attached, single-family housing. These smaller lot sizes are common in older, single-family residential areas. Development at this density requires urban services such as sewer and water.

Urban-Medium: 3,000 s.f. to 5,000 s.f./d.u. (8.7 to 14.5 units/acre)

Urban-medium contains some small, single-family units, but primarily contains multi-family developments. At this density, sewer and water services are needed. Good access to major roads is required. Proximity to schools, parks and commercial and public services are also important.

Urban-High: less than 3,000 s.f./d.u. (greater than 14.5 units/acre)

Urban-high contains multi-family developments with full urban services and good access to major arterials and highways. Public transportation, parks and proximity to schools and other public services are desirable and can be supported at this density. These areas are the highest concentration of residences in the unincorporated area.

Mobile Home Parks

Mobile home parks are color-coded for density and follow the classification system described above. They commonly fall within the urban-standard classification.

LAND USE APPENDIX

TABLE A-LU-2 Kitsap County Residential Land Acreage Totals				
Classification	North (Acres/ % Total)	Central (Acres/ % Total)	South (Acres/ % Total)	Total (Acres/ % Total)
Rural 5-10 acres/d.u.	2,231 4.4%	3,228 6.4%	3,980 7.9%	9,436 18.7%
Estate 2.5-5 acres/d.u.	3,142 6.2%	4,748 9.4%	6,264 12.4%	14,154 28.0%
Suburban 1-2.5 acres/d.u.	3,163 6.3%	4,828 9.5%	6,277 12.4%	14,268 28.2%
Urban Low 1-3.5 units/acre	1,638 3.2%	4,148 8.2%	2,881 5.7%	8,667 17.1%
Urban Standard 3.5-8.7 units/acre	412 0.8%	1,613 3.2%	918 1.8%	2,943 5.8%
Urban Medium 8.7-14.5 units/acre	13 0.03%	103 0.2%	51 0.1%	167 0.3%
Urban High greater 14.5 units/acre	3 0.006%	115 0.2%	21 0.04%	139 0.3%
Mobile Home Parks	463 0.9%	233 0.5%	92 0.2%	788 1.6%
Total	11,065 21.9%	19,016 37.6%	20,484 40.5%	50,565 100%

* The classifications are further defined in the Assessor's Land Use Classifications section (Page A-5).

TABLE A-LU-3 Kitsap County Residential Dwelling Unit Totals				
Classification *	North (Units/ % Total)	Central (Units/ % Total)	South (Units/ % Total)	Total (Units/ % Total)
Rural 5-10 acres/d.u.	291 0.6%	438 0.9%	521 1.1%	1,250 2.6%
Estate 2.5-5 acres/d.u.	800 1.7%	1,233 2.6%	1,558 3.3%	3,591 7.5%
Suburban 1-2.5 acres/d.u.	1,708 3.6%	2,683 5.6%	3,352 7.0%	7,743 16.2%
Urban Low 1-3.5 units/acre	2,883 6.0%	8,049 16.8%	5,217 10.9%	16,149 33.8%
Urban Standard 3.5-8.7 units/acre	1,956 4.1%	7,816 16.3%	4,372 9.1%	14,144 29.6%
Urban Medium 8.7-14.5 units/acre	142 0.3%	1,137 2.4%	554 1.2%	1,833 3.8%
Urban High greater 14.5 units/acre	71 0.1%	2,271 4.8%	395 0.8%	2,737 5.7%
Wooded & Open Land 10 acres or greater	104 0.2%	123 0.3%	131 0.3%	358 0.8%
Total	7,955 16.6%	23,750 49.7%	16,100 33.7%	47,805 100%

* The classifications are further defined in the Assessor’s Land Use Classifications section (Page A-5).

Commercial Land

Historically, large-scale commercial development was confined to Port Orchard, Bremerton and Poulsbo. These areas served as regional shopping centers for residents, with Bremerton as the major commercial center. Small centers with a grocery store and gas pumps typically served local residents’ needs. These small commercial centers are scattered around the county, often in the old, established waterfront communities of Port Gamble, Hansville, Indianola, Seabeck, Brownsville, South Colby, Southworth and Olalla.

Over the past decade, Silverdale has grown to become Kitsap County’s regional commercial center. Beginning in the early 1980s with the construction of the Kitsap Mall, Silverdale has become the retail center of Kitsap County and also draws from parts of Mason, Jefferson and Clallam Counties. A number of large retailers, such as Costco and Home Base, as well as a variety of specialty retailers, restaurants and services have followed. In addition to retail trade, Silverdale has

LAND USE APPENDIX

experienced steady growth in professional, financial and real estate services. With the growth in Silverdale, services provided in the older, small commercial centers have diminished.

This type of commercial development is centralized, has good access to major arterials, has good internal traffic circulation and follows more cohesive design standards. Concentrating commercial development in one location minimizes trips, allows for comparative shopping and provides opportunities for mass transit. Services are more easily provided and future expansion can be anticipated and more easily incorporated.

While Silverdale has received the majority of large-scale retail development, Poulsbo and Port Orchard have experienced growth in both the retail and service sector. Much of this growth has been in the form of neighborhood centers. These smaller commercial centers, usually containing one or two large, retail grocery or variety stores, often developed at major intersections. They are intended to serve the needs of residents living within the immediate urban area and are usually found on sites ranging from one to 10 acres. Neighborhood centers have some of the same advantages found in a regional shopping center: good access, good internal circulation, adequate parking and one-stop shopping. Neighborhood commercial centers differ from regional centers in scale -- they serve the day-to-day shopping needs of the community. Typical uses include supermarkets, drug stores, restaurants, laundry and dry cleaning establishments, branch banks and small specialty retailers.

Small convenience commercial centers can be found in most of the urban areas in Kitsap County. These commercial centers occur on smaller sites, usually ¼-to-½ acre, and provide for the quick-stop shopping needs of the immediate neighborhood in which they are located. Typical uses found in these centers include small grocery stores with gas pumps, laundromats, hair styling and video rental.

Somewhat similar to convenience commercial centers found in the urban areas are the small commercial centers found in the rural areas of the county. These centers are usually located at the intersection of major roads or in small, old, established communities. Rural commercial centers serve the immediate needs of rural residents. They range in size from small sites less than one acre to larger sites of five to 10 acres, depending on the population size served. Typical uses include small grocery stores, drug stores, hardware, feed and seed, farm equipment and repair and post offices. An example of this type of small commercial center would be Camp Union on Holly Road.

Some of the established rural villages contain historic commercial areas which originally were oriented to water traffic. These areas have evolved over the years to include a variety of goods and services including eating and drinking establishments, hardware and building supplies, small grocery stores, specialty shops, auto service and public facilities such as post offices. These areas also serve as the heart of the community where local residents and visitors gather for special events and celebrations. Old town commercial centers of this type can be found in Kingston, Suquamish, Silverdale and Manchester.

One of the most problematic types of commercial development in Kitsap County occurs along major arterials and is commonly referred to as strip commercial. This type of development is not centralized and lacks common access points. Each business has a separate parking area that fronts on a busy road and requires dangerous turning movements. Adjacent land uses are often not related. Coordinated planning and design between developments is often not possible, resulting in unattractive, uncoordinated development. Most of the uses found in these areas require large

acreage sites and/or a high degree of visibility. Typical uses include motels and restaurants, supermarkets, furniture stores, lumberyards, home improvement sales and services, auto sales and service and drive-up restaurants. In Kitsap County strip commercial development is found along Mile Hill Drive in Port Orchard, Kitsap Way and Wheaton Way in Bremerton, along Viking Way and Highway 305 in Poulsbo and in Gorst.

For the purpose of the Land Use Inventory, commercial land is separated into four descriptive categories: Service, Retail, Auto/Highway and Hotel/Motel. These uses are distinguished by locational considerations, site requirements, compatibility and proximity to the market.

Services

Services include commercial activity where a service is rendered rather than goods or wares sold. Some examples include finance, insurance, real estate offices, banks, barber and beauty shops, professional services, laundromats, and sit-down restaurants.

Retail

The Retail category includes retail stores and business. They generally will have relatively small land requirements and operate within a building. Examples include the sale of building materials, hardware, groceries, shoes, apparel, home furnishings, drugs, and sporting goods. Retail also includes bakeries, convenience stores, clothing stores and shoe stores.

Auto/Highway

Auto/Highway includes commercial sales and services oriented toward the automobile with good road and highway access. For the purpose of this Land Use Inventory, certain types of services and retail business have been included in the auto/highway category. They are oriented towards the auto, either directly or indirectly because their product is dependent on visibility, easy access, and parking. These uses typically require large sites and often include outside storage of products.

Examples of the types of businesses in the Auto/Highway category include gas stations, minor auto repair, auto dealers, auto parts, auto painting, RV sales, equipment sales and rentals, nurseries or greenhouses, fast food restaurants, bowling alleys, skating rinks, and mini-storage.

Hotel/Motel

The Hotel/Motel category contains all types of hotels, motels, inns and bed and breakfast establishments. These uses tend to be located near highway access with good visibility for travelers.

Off-Street Parking

Individual private or public parking lots not associated with a specific business or shopping center.

TABLE A-LU-4 Kitsap County Commercial Land Acreage Totals		
Category	Acreage	% Total
Services	381	35.4%
Retail	336	31.2%
Auto/Highway	352	32.7%
Hotel/Motel	7	0.7%
Total	1,076	100%

At this time there are 1,076 acres of land devoted to commercial use. This computes to a ratio of 0.8 acres of commercial land per 100 people in unincorporated Kitsap County. Of the different land use types, commercial land use is the smallest consumer of developed land. However, it is often the most visible because of location and its presence often establishes the appearance of the community from arterial streets and highways.

Industrial Land

Land Zoned Manufacturing and Light Manufacturing

Except for the Naval Shipyard in Bremerton, manufacturing and light manufacturing uses in unincorporated Kitsap County are relatively small-scale and are found scattered throughout the county. Only small properties have been developed in the last several years. The most common new use has been warehousing. Other zoned sites have been developed with low-intensity uses that didn't necessarily need manufacturing or light manufacturing zoning.

Kitsap County's pre-Growth Management Act Zoning Ordinance stated that the intent of the manufacturing zones is "to permit research, testing and warehousing of products and the fabrication,

assembly and processing of products in a manner and means characterized as light industry." In the manufacturing zone, its intent is "to permit the widest range of industrial and manufacturing activity."

For the purpose of the Land Use Inventory, industrial land is divided into four descriptive categories: Light, General, Heavy and Mines and Quarries. Industrial land use is distinguished by large land requirements and specific characteristics such as noise, dust, etc, that may be incompatible with other land use types.

Light Industrial

Light Industrial includes a variety of wholesale activities, warehousing and light manufacturing, fabricating and processing. (eg, wholesaling, warehousing, light manufacturing, printing, cabinet shops and bottling companies.)

General Industrial

General Industrial includes servicing of large equipment, and heavier storage or processing activities. (eg, truck repair and service, contractor operations, lumber storage and trucking and freight handling.)

Heavy Industrial

Heavy Industrial includes such things as lumber and plywood mills, wrecking yards, sand and gravel operations, foundries and iron works. These activities may include uses which are characterized by noise, dust, odor and smoke, thus making them incompatible with many other uses.

Mines and Quarries

Mines and Quarries include all types of active mines and rock quarries.

TABLE A-LU-5 Kitsap County Industrial Land Acreage Totals		
Category	Acreage	% Total
Light Industrial	367	19.1%
General Industrial	613	31.8%
Heavy Industrial	276	14.3%
Mines and Quarries	670	34.8%
Total	1,926	100%

Public Uses

Schools

Includes all public and private school facilities including administrative offices, maintenance shops and other special facilities.

LAND USE APPENDIX

Parks

Includes public recreation facilities such as neighborhood, community, regional and special park and recreation facilities as well as private recreation facilities which have large sites such as golf courses, marinas, resorts, etc.

Institutional

Uses of various kinds considered institutional in nature and usually non-profit; examples include religious institutions and parochial schools, hospitals and cemeteries, lodges, granges and meeting halls and the Red Cross.

Public Utilities

All electric and gas utilities, telephone, telegraph, radio and television stations and facilities; examples include equipment and transformer yards, offices, radio or television stations and antennas.

Military

All military facilities including Puget Sound Naval Shipyard, Bangor Submarine Base, Keyport and Camp Wesley Harris.

Public Facilities

Includes county and city offices, library, public agency shop facilities, federal and state offices and solid waste disposal sites.

Transportation Facilities

Railroads, transit, docks and terminals, airports and private roads.

TABLE A-LU-6 Kitsap County Public Use Acreage Totals		
Category	Acreage	% Total
Schools	558	4.1%
Parks	2,434	18.0%
Institutional	199	1.5%
Public Utilities	598	4.4%
Public Facilities	2,753	20.5%
Transportation Facilities	78	0.6%
Military	6,852	50.9%
Total	13,462	100%

III. OPEN SPACE LANDS INVENTORY

As the population grows and the amount of land used for residential, commercial and industrial development increases, the county permanently loses natural areas, resource lands and the rural character that make it unique. Policies and programs that encourage open space preservation will limit these losses and complement other land use strategies by providing a range of environmental, aesthetic and recreational functions.

Recently completed community-based design plans for Hansville, Kingston, Silverdale, Suquamish and South Kitsap highlight the importance of open space preservation in maintaining the quality of both rural and urban life. The term “open space” itself is difficult to define: it includes undeveloped land and water areas and land partially developed to the extent compatible with forestry or agriculture. It can include steep slopes, wetlands, stream corridors, wooded or vacant lots, farms, forests, wildlife habitat, or other environmental, cultural or aesthetic areas and may additionally provide recreational or educational opportunities.

Many of Kitsap County’s undeveloped open spaces are identified in the Land Use Inventory as Wooded Land, Open Land (includes farms and cleared areas), Vacant Land, Park, and School. Open space values may also be provided by some Rural Residential and Estate Residential land uses. Most of these lands are privately owned and are not actively managed for permanent open space preservation.

This inventory summarizes the values of open space, identifies privately and publicly preserved open space throughout the county and describes the existing regulatory and nonregulatory framework for open space preservation. The information contained within this inventory may be revised in the future to reflect the findings of the Countywide Greenways Plan, to be completed in 1995.

Functions and Values

Open space comes in a variety of shapes, sizes and types and can provide a number of different benefits or purposes. Open spaces are areas which help to define a community and provide distinctive character, such as a wooded entrance to Indianola, a farm along Dogfish Creek or a view of Yukon Harbor at Colby. They may preserve rural character and may serve as boundaries between incompatible land uses, breaks from continuous development or natural linkages between communities.

In addition to defining community character and serving as a respite from an urbanizing environment, open spaces may also provide the following:

- ! Protection for important critical areas such as steep slopes, wetlands, estuaries, floodplains, streams and shorelines;
- ! Important wildlife habitat and wildlife corridors;
- ! Protection of surface and ground water quality and quantity;
- ! Preservation of forests and farmlands;

- ! Active and passive recreational opportunities, including those found at some parks and schoolyards, as well as trails and bike paths;
- ! Scenic areas and vistas;
- ! Economic benefits such as increased property values, tourism and jobs and income from farm, forest and fisheries resources.

To optimize the functions and values of open space, open space planning should be integrated into overall planning, and a meaningful system of open space should be designed.

Existing Framework for Open Space Preservation

In Kitsap County, open space preservation occurs through a combination of public and private efforts and with a variety of regulatory and nonregulatory tools. This section summarizes the preservation tools most widely used.

Fee-simple acquisition (outright purchase, donation, or transfer) of open space ensures permanent public access and preservation of significant lands. Public entities can use a bond levy, general funds, impact fees, conservation futures tax and real estate excise tax to fund acquisition. In some cases, the public may receive the land for a minimal cost -- landowner donations consistently provide Kitsap County with some of its most exceptional parks, including A Quiet Place County Park in Kingston and Winn Jones County Park on Sinclair Inlet. The County may also be able to garner state or federal matching grants for regionally significant land acquisitions or may receive the land from the federal government as surplus property, further reducing the cost of open space preservation to local residents.

In 1992, Kitsap County initiated the **Conservation Futures Tax**, a property tax levy of 6.25 cents per \$1,000 of assessed value, which generates revenue to preserve open space throughout the county. Properties to be protected are recommended by a nine- member citizen committee, the Open Space Council. To date, approximately 260 acres of open space have been acquired with monies from the Conservation Futures Tax and matching grants and donations.

Conservation easements represent an alternative to fee-simple acquisition. Conservation easements legally bind a set of restrictions to a property to preserve it for environmental attributes or for resource production. These restrictions remain in effect regardless of who owns the land, and the land can remain in private ownership. Although land trusts in the county have used this means of preservation, it has not been widely used by public entities.

Similar to conservation easements, **Purchase of Development Rights** (PDRs) can also be used to protect open space while maintaining land in private ownership. Development rights are privileges of a landowner to improve property; purchasing these rights prohibits the land from being further developed. While Kitsap County has not taken advantage of PDRs for open space preservation, King County has used it as a method of preserving farmlands.

Tax incentives provide public entities a way to encourage private landowners to preserve open space with minimal expenditure. The Current Use Property Tax Assessment utilized by Kitsap County encourages landowners with significant open space, agricultural or forest lands to maintain

their land in its current use. Eligible farmlands must generate a minimum income or be 20 acres or less; timberlands must be at least five acres; open space lands must provide conservation of significant ecological functions and/or be designated in official planning documents.

Enrollment in the current use tax program is voluntary; landowners must apply to be included. Once accepted, land is taxed according to its current use as open space, rather than according to its market value. Withdrawing land from this classification can incur serious penalties, which serves as some incentive to maintain the property as open space.

Some zoning code provisions can enable open space preservation to occur. Large-lot zoning may provide encouragement for landowners to maintain lands for agriculture or timber production and can provide flexibility in protecting open space or critical areas.

Clustering of homes may also provide a useful method for providing open space amenities. As discussed in various community plans, open space and rural character can be maintained through a variety of siting and design criteria. Clustering, encouraged in the rural areas, allows lots to be smaller than existing zoning by grouping units together and maintaining common open space areas. Design criteria that encourage development away from scenic areas, productive agricultural fields or critical areas can also protect open space.

Critical areas regulations or policies protect natural systems and public health and safety and may as a by-product preserve open space associated with wetlands, shorelines, streams, steep slopes, wildlife habitat, aquifer recharge/wellhead protection areas or floodplains.

A more complex method of open space preservation involves **Transfer of Development Rights (TDRs) or Density Transfer Arrangements**, which transfer development rights from a designated preservation area to an urban receiving area. Landowners in a designated preservation area can sell or transfer their development rights to landowners in designated receiving areas, who can then develop at higher densities than would otherwise be permitted. This technique has not yet been widely used; the most noteworthy TDR program exists in Columbia County, Maryland.

Private Land Trusts and other conservation organizations play a vital role in protecting open space. These nonprofit groups can acquire land more quickly than government, and have expertise in a variety of conservation techniques. They may assist public entities during the acquisition process, or may acquire land for their own preserve system. Land trusts and community groups can also play a role in stewardship and monitoring and lead public participation and planning activities.

Existing Managed Open Space

Unlike many counties around Puget Sound, Kitsap County does not have national parks or national forests to provide large-scale recreational opportunities, employment or environmental benefits to its citizens. Instead, the county has a variety of smaller-sized, publicly owned parks, forests and natural areas and a collection of open spaces stewarded by private land owners. These areas are mapped in **Figure A-LU-1** and summarized below as either public or private open space.

Public Open Space

The largest concentration of public open spaces in Kitsap County are 12,240 acres of **DNR Trust Lands** managed by the State Department of Natural Resources (DNR) for various beneficiaries. In

LAND USE APPENDIX

the county, the two major types of Trust Lands are Common School and Forest Board Transfer. The DNR uses revenue generated from its 3,726 acres of Kitsap Common School Lands to help fund construction for K-12 schools, while the County distributes revenue from 8,898 acres of Forest Board Transfer Lands to the state general fund, county general fund and junior taxing districts. Forest Board Transfer Lands were originally acquired by the County from taxpayer defaults during the early part of the century and were later transferred to the DNR for management. Under some circumstances, Forest Board Transfer Lands can be conveyed back to the County for use as parks. DNR Trust Lands should not be considered as a permanent part of the open space program. Although most of the DNR Trust Lands are managed for long-term forest production, the properties are subject to sale or trade in order to maximize the revenues for beneficiaries. **Figure A-LU-1** identifies DNR Lands.

Although the DNR manages land throughout the county, the largest portion of its total acres is at Gold and Green Mountains. Other large parcels include Banner and Illahee sites.

Bremerton Municipal Utilities Lands lie adjacent to the DNR lands at Gold and Green Mountains and within Bremerton city limits. The city utility manages these undeveloped forest lands primarily to protect the city's potable surface water supply.

As described further in the Parks and Recreation Plan, the state operates 808 acres of **State Parks** in unincorporated Kitsap County and 154 acres on Bainbridge Island. These lands, including Blake Island, Scenic Beach and Manchester typically have water access and are used primarily for recreation in a semi-natural setting.

County Parks total more than 1,023 acres of developed and undeveloped land (including the Fairgrounds and Pavilion) and range from highly developed, like the Silverdale Waterfront Park, to natural areas such as Anderson Landing on Hood Canal. Cities and Park Districts manage more than 1,367 acres (including municipal golf courses), almost half of this on Bainbridge Island.

Approximately 260 acres of **Conservation Futures Fund Lands** have been preserved through monies generated by the county's Conservation Futures Fund, and others lands are slated for acquisition. Some lands purchased through the Open Space Program will be transferred to parks departments or districts to be used as natural parks, like Meigs Farm and Guillemot Cove, while others, like the Indianola Greenway parcels, may be preserved for wildlife habitat, water quality or scenic value.

Finally, **schools** provide more than 308 acres of ballfields and play areas that can be considered open space, and which will play an important role in an open space system.

Private Open Space

Private Conservancy Lands

Like those owned or managed by the Kitsap Land Trust, Indianola Land Trust, Hood Canal Land Trust, Bainbridge Island Land Trust, the Mountaineers and the Nature Conservancy provide more than 400 acres of scenic and sensitive open space. Public access to conservancy-type lands is generally restricted. These private, nonprofit organizations may own the land, like the 93-acre Foulweather Bluff Nature Preserve in Hansville, or may hold conservation easements that protect it in perpetuity, as with the Wiltermood wetlands in South Kitsap.

Current Use Property Tax Assessment

Property owners may apply for property tax relief through Current Use Property Tax Assessment program, which enables property to be taxed based on current use rather than market value. In Kitsap County, properties may fall into one of four categories: Open Space, Agriculture, Timber and Designated Forest Land.

Dedicated Open Space

Lands maintained as open space through this property tax program lie scattered throughout the county. Designated Current Use Forest Lands contain the largest number of acres of open space, with large portions of Forest Lands in the southwest part of the county. When landowners withdraw lands from this tax classification, penalties are assessed, thereby encouraging property to be maintained as open space. Yet, because this land is privately owned, its use may be subject to change and it cannot be considered permanent open space.

In a Planned Unit Development (PUD), dedicated open space amenities must be provided. Common open space may include buffers along the perimeter of the site, critical natural areas or recreational sites. Hundreds of short plats and larger PUDs throughout the county combine to provide more than 2,259 acres of common open space.

TABLE A-LU-7 Kitsap County Open Space Acreage Totals	
Category	Acreage
State Forest Lands	15,932
Bremerton Water Utility Lands	8,400
State Parks	962
County Parks	1,283
City Parks	1,367
Schools	308
Private Conservancy	more than 400
Current Use Tax Program	53,995
Dedicated Common Areas	2,259
Water System Lands	more than 200
Resorts and Group Camps	648
TOTAL	85,754

Water System Lands

Some water system lands in Kitsap County are undeveloped for wellhead or watershed protection. While information about water system lands is not readily accessible, known water system open space totals more than 200 acres, much of it in five acre parcels or larger. In some cases, such as at Burley Park and in Kingston, water system lands provide not only water quality protection and wildlife habitat, but serve dually as community recreation areas.

Other types of privately owned open space include resorts and group camps, privately run parks and ballfields and cemeteries.

Open Space Plans

During the comprehensive planning process, community design plans were developed, each of which indicated open space areas vital to the character of the community, and recommended a variety of techniques for realizing open space goals. Among other recommendations, some of these prized open spaces include a Hansville Greenway stretching from Hood Canal to Puget Sound; a protected Clear Creek Corridor in Silverdale; Soundview Boulevard in Suquamish; and Carpenter Lake/Kingston Slough in Kingston.

In addition, both the Indianola Greenway Plan and the Dyes Inlet Open Space Pilot Project, projects designed by the Indianola Land Trust and Kitsap Land Trust, respectively, will be considered during the countywide designation of open space.

IV. RESOURCE LANDS INVENTORY

The natural resource lands inventory provides the necessary background information for determination of the economic, fiscal and environmental impact these lands have in Kitsap County. The decision of how best to protect natural resource lands was based on an analysis of existing conditions, projections of future growth and economic development in the county. The land use designations and goals and policies addressing resource lands are contained within the Land Use Chapter.

Interim Resource Lands Designations

Kitsap County went through a lengthy process to determine whether or not long-term commercially significant resource lands, as defined by the Growth Management Act, existed in Kitsap County. This process began with the development of the Interim Development Regulations for resource lands as required by the Act. A citizens advisory group, the Rural Policy Roundtable, began meeting in October 1991 to discuss the resource lands issue. This group consisted of 15 members representing the Homebuilders Association, Board of Realtors, Farm Forestry Association, Conservation District, Large Lot Owners (Forestry), Tribal Representatives (2), Open Space Council, North Kitsap Coordinating Council, Kitsap County Planning Commission (3), South Kitsap Community Council, Washington State Department of Natural Resources and one representative for the Seabeck, Olympic View, Holly, Crosby and Lonerock Communities. Staff support for the Rural Policy Roundtable was provided by the Kitsap County Department of Community Development, the Kitsap County Regional Council (KRC) and two private consultants. This process culminated with the April 20, 1992 adoption of a document entitled Strategies For Resource Lands Designations and Interim Development Regulations by the Kitsap County Board of Commissioners. Application of the forest resource lands criteria resulted in approximately 8,000

acres in North Kitsap County meeting the 1992 Strategies document definition for interim forest resource lands designation.

In addition to residential uses, also occurring within the rural areas of the county are several nonresidential, resource-based land uses. These include agricultural, forestry and mineral extraction activities. These resource-based uses are often scattered throughout the rural areas and intermix or occur together with residential development.

Agriculture

There is a limited quantity of agricultural lands in Kitsap County due to poor soil conditions. (see Natural Systems Appendix for a discussion of soil conditions within Kitsap County.) The close proximity to a large urban area with a strong demand for housing has also hastened the loss of agriculture lands. While there are still some farms remaining and a substantial Christmas tree industry, the agricultural industry in Kitsap County is relatively small. The county has other agricultural activities, such as small noncommercial farms, that have been developed on a limited basis.

Existing Land Use Patterns

Over the past 20 years, the general character of land use activities in Kitsap County has changed from primarily rural to suburban, and in some cases, urban. The raising of poultry, pigs, cows and horses were significant farm activities in the county for many years. The county's proximity to densely populated areas and low transportation costs to markets helped contribute to the agricultural activity in the region. Other significant types of agricultural products were the cultivation of strawberries, blackberries and other fruits and vegetables. Historically, Christmas tree farming has also been an important agricultural activity in the region, especially in areas of soils less productive for growing commercial timber.

While the region is experiencing a resurgence of interest for the growth and sale of fresh locally grown produce, there are very few large commercial agricultural operations remaining in the county. Much of the agricultural production occurs on noncommercial farms and "you-pick" farms. These operations do not generally provide the sole income source for the operators but are secondary or supplemental. The 1992 Census of Agriculture defines a farm as any place from which \$1,000 or more of agricultural products were produced and sold or normally would have been sold, during the census year. **Table A-LU-8** presents information from the 1992 Census for Kitsap County.

LAND USE APPENDIX

TABLE A-LU-8 Kitsap County Agriculture Industry	
Number of Farms	366
Average size of farms	28 acres
Number of Farms by Size	
1 to 9 acres	143
10 to 49 acres	184
50 to 179 acres	34
180 to 499 acres	4
500 to 999	0
1000 and above	1
Total land in farms	10,302 acres
Percent of County in farm land	4.1%

Source: U.S. Department of Commerce, 1992 Census of Agriculture.

Some agricultural land in Kitsap County is enrolled in the Current Use Property Tax Exemption Program. Washington state law provides property tax relief for special use properties. If a property meets certain use requirements, its taxable value will be based on its use, rather than market value. The intent of the Open Space Agriculture designation is to preserve lands used for the commercial production of agricultural products. For land to be eligible for this designation, it must be primarily devoted to raising agricultural products for commercial purposes. Eligible lands include cultivated Christmas tree farms. The income requirements are as follows:

Less than 5 acres — requires an annual gross income of \$1,000

5 to 20 acres — requires an annual gross income of \$100 per acre.

20 or more acres — does not require a specific amount, but there must be sufficient income to ascertain the property is a commercial scale farm.

The 1980 Prime Agricultural Soils map for Kitsap County, prepared by the U.S. Soil Conservation Service, provides some information on the location of farms in the county; however, it does not locate specific farms. Farms are located in all parts of the county, with the largest concentration in valleys and along stream corridors. Valleys that are still characterized by farming include Olalla Valley and Long Lake Valley in South Kitsap, Central Valley in Central Kitsap, and Big Valley in North Kitsap.

There are many smaller concentrations of farm activity in the rural areas of the county, primarily grazing lands and cultivated Christmas tree farms.

Economic Factors

Economies of scale are an important attribute of agriculture. Historically, farms were much smaller on the average than they are today. Although the Census of Agriculture defines a farm as any place from which \$1,000 or more of agricultural products were produced, this is a very broad definition that says nothing about the commercial viability of farming. Statistics show that over the past several decades, the average size of a farm has increased, but the number of farms has decreased. Big machines, large corporations and vast acreage are replacing the small, family farms.

While agriculture is still a major industry in Washington state, Kitsap County’s share is small. Historically, agriculture has not been a major industry in the county. Lack of good agricultural soil and an abundance of trees have limited agriculture on the Kitsap Peninsula. **Table A-LU-9** describes the direct economic impact of farming in Kitsap County.

Comparison of the market value of products sold in Kitsap County with other counties in western Washington indicates the minor role agriculture has in Kitsap County’s economy. Measuring the indirect impact of agriculture in Kitsap County is difficult, due to the limited amount of data available. It is fair to say that the impact of agriculture in the county is small. Many of the jobs in retail sales of equipment and feed exist as a result of the many small noncommercial farms that exist throughout the county.

TABLE A-LU-9 Value of the Agricultural Industry in Kitsap County	
Number of farms by value of sales	
Less than \$2,500	23 4
\$2,500 to \$4,999	69
\$5,000 to \$9,999	36
\$10,000 to \$24,999	13
\$25,000 to \$49,999	3
\$50,000 to \$99,999	3
\$100,000 or more	8
Market Value of Agricultural products sold	\$10,580,000
Total Farm Production Expenses	\$11,713,000
Value of Land and Buildings (average per farm)	\$253,131

Source: U.S. Dept. of Commerce, 1992 Census of Agriculture.

Environmental and Physical Characteristics

Agriculture is often viewed as one way to preserve open space and environmentally sensitive areas; however, agricultural activities can have a negative impact on the environment. Agriculture itself is not a source of pollution. It is poor management of agricultural lands and improper livestock practices that may lead to the degradation of the environment. An intensive study of one Puget Sound watershed (Portage Creek) revealed that small farms, representing 25% of the agriculture, were responsible for 80% of the water pollution.

Livestock account for a significant amount of the pollution caused by agricultural activities. The number of animals on a pasture affects the pasture conditions. Increasing the number of animals on a pasture increases the potential for contaminating stormwater runoff. Another major problem associated with livestock is their direct access to streams. This can lead to increased stream bank erosion and sedimentation, bacterial and nutrient contamination, elevated stream temperatures and loss of fishery habitat.

Air pollution is another potential problem of agricultural activities. Dust often results from improper tilling and cultivation, while crop-dusting sends particulates into the air.

Some agricultural activities are also viewed as nuisances as urban developments encroach upon farming areas. The handling and storage of livestock wastes can create unpleasant odors. Farm operations can also create noise that is considered a nuisance to nearby residents.

While agricultural activities may have some negative impacts on the environment, other nearby uses can adversely affect agriculture. Increased urbanization around farms may impact farming operations where farmers may be forced to make adjustments to their activities. Increased development can cause an increase in vandalism and traffic. Perhaps the biggest impact is economic, where increased land values make farming a less viable option.

Values and Importance

Agricultural lands are important to the overall quality of life in Kitsap County. They are an integral part of the rural character that makes Kitsap County such an attractive place to live. Agricultural lands are valuable not only for their economic production, but also for their positive environmental impacts and for their open space character.

Conserving agricultural land offers a number of advantages. Farming “prime” soils takes less energy due to the natural characteristics of the soil. Because these soils are ideal for growing crops, less time and effort is needed in operation of farm equipment, irrigation, pesticide and fertilizer applications and conservation practices. When the prime soils are maintained near their primary markets, the urban centers, energy is conserved in reducing transportation costs.

Conserving agricultural soils can also be a way of preserving critical lands. In preserving farmland, the communities also meet other objectives in the preservation of wetlands, small watersheds, aquifer recharge areas, floodplains and special wildlife habitats. While agriculture can damage some sensitive areas, with proper management it can be compatible.

In saving farms and farmland, communities often prevent sprawl and promote compact urban development. Farmland preservation can also result in the maintenance of open space between

urban areas. As densities increase, open space becomes more valuable and difficult to maintain if not set aside and preserved. Farmland preservation is one way to accomplish this.

Forest Lands

Forests provide a variety of products and services for Kitsap County. The raw materials for housing and wood products are extracted from the forest and wood is burned for fuel. Paper products are derived from wood fiber. Trees cleanse the air by absorbing carbon dioxide and adding oxygen. Forests provide shelter and sanctuary for wildlife and play an important role in maintaining the watersheds that supply much of our drinking water.

The Revised Code of Washington (RCW) 84.33.100 defines forest land as being “synonymous with timberland and means all land in any contiguous ownership of twenty or more acres which is primarily devoted to and used for growing and harvesting timber and means the land only.”

Kitsap County contains 251,520 acres of land, and of this total approximately 49,014 acres are taxed as forest land or open space timber by the County Assessor’s Office. These lands have been used for commercial production, reforestation or forest habitat, although they may at some point be taken out of that tax classification.

Existing Land Use Patterns

The following **Table A-LU-10** provides a summary of total acreage of forest lands in Kitsap County. Currently, of the 76,818 acres of forest land in Kitsap County, 49,014 acres are in private ownership. The remaining 27,804 acres are owned by the City of Bremerton, the tribes and the State of Washington Department of Natural Resources. Long-term use of the forest lands owned by the City of Bremerton, the tribes and DNR will be determined, in part, by the specific objectives of those owners in holding those lands.

The majority of the large parcels of forest land (tracts greater than 80 acres) are owned by a few landowners. **Table A-LU-10** shows the number of acres of forest lands owned by the largest landowners in Kitsap County. These lands have large stands of unharvested timber or future commercial timber crops. Lands reforested for commercial harvesting are typically planted on a 50- to 60-year harvest cycle.

LAND USE APPENDIX

TABLE A-LU-10 Acres of Forest Land in Kitsap County by Landowner	
Department of Natural Resources	16,000 acres*
City of Bremerton (watershed)	8,600 acres
Port Madison Indian Reservation	2,204 acres
Port Gamble S'Klallam Indian Reservation	1,000 acres
Private (based on tax classification)	
Pope Resources	19,208 acres
McCormick Land Company	5,828 acres
Alpine Evergreen	4,095 acres
Overton & Associates	3,971 acres
Port Blakely Mill Company	3,216 acres
Manke Lumber Company	1,295 acres
Other Landowners	11,401 acres
TOTAL	76,818 acres

Source: *Kitsap County Assessor's figures, 1994*
**Kitsap County Assessor's figures, 1991*

In the northern part of the county, Pope Resources owns many of the large parcels of forest land. Many other large tracts of forest land are found on Indian reservation lands in this area. The remaining forest lands in the North Kitsap area are predominantly small parcels less than 80 acres in size. Kitsap County's most productive forest soils are in the north end. The predominant species types are Douglas fir and Western hemlock.

There are several large blocks of publicly and privately owned forest lands in the southern part of the county. These lands are used for Christmas tree farms and commercial timber harvesting. The main species types are Douglas fir and Western hemlock. The primary land owners in the southern part of the county are the Washington State Department of Natural Resources (DNR), Alpine Evergreen, Overton and Associates, McCormick Land Company and the City of Bremerton.

Although Kitsap County appears to be heavily forested, in reality only a few major timber owners actively harvest, log or cultivate their lands for commercial forest production. The remaining forest lands are small, privately owned parcels less than 40 acres in size. For the most part, these forest lands are being harvested on a limited basis or they are used for other commercial forestry activities. In some areas timber stands are simply being left alone.

Commercially Significant Forest Lands

The Growth Management Act requires the county to identify and protect "natural resource lands," including "forest lands that are not already characterized by urban growth and that have long-term significance for the commercial production of timber." For purposes of the Growth Management

Act, “forest land” is defined to be “land primarily devoted to growing trees for long-term commercial timber production on land that can be economically and practically managed for such production.” The Growth Management Act goes on to provide that “(I)n determining whether forest land is primarily devoted to growing trees for long-term commercial timber production on land that can be economically and practically managed for such production, the following factors shall be considered: (a) The proximity of the land to urban, suburban, and rural settlements; (b) surrounding parcel size and the compatibility and intensity of adjacent and nearby land uses; (c) long-term local economic conditions that affect the ability to manage for timber production; and (d) the availability of public facilities and services conducive to conversion of forest land to other uses.”

On September 8, 1997, the Central Puget Sound Growth Management Hearings Board issued an order in *Bremerton v. Kitsap County*, CPSGMHB Consolidated Case No. 95_3_0039c, which invalidated substantial parts of the County’s 1996 comprehensive plan, found that these, as well as other parts of the plan did not comply with the GMA, and remanded them to the County with instructions to bring the plan into compliance with the GMA and the Hearings Board’s Order on or before April 3, 1998. This date was later extended to May 1. As part of the September 8, 1997 Order, the Hearings Board found that the criteria in the 1996 comprehensive plan for designating forest land were within the range of acceptable options, although it questioned the basis for the 1 1/2 mile definition given to the criterion on proximity to urban land uses. The Board also asked whether or not all elements of the forest industry must be located within a county for RCW 36.70A.020(8), the GMA’s natural resource industries goal, to apply. And the Board ordered that, at the very least, the County must review its forest land decisions and determine whether they were consistent with the revised plan.

The Hearings Board’s decision on forest lands was appealed to superior court by some of the forest land owners in the County. The case did not come to hearing until March 18, and the court did not enter its decision until June 22.

The Commissioners determined that the issue of forest lands is sufficiently important to the County that it required a more in_depth review and analysis than was technically required by the Hearings Board’s Order. Such a review would have required more time than was available on remand, in light of all the other work required on plan. Also, if a comprehensive review had been started, it could have been preempted at any time by a ruling from the superior court. Therefore, the Commissioners decided to do a basic review of consistency between the mapped wooded lands and planned urban growth areas, designate the wooded lands with a 20_acre rural density, establish joint planning overlays for urban reserve lands that might conflict with a forest land designation, and establish in the 1998 Plan, the process for immediately reviewing and resolving the forest land issue.

On May 7, 1998, the Commissioners adopted 1998 Revised Comprehensive Plan and various implementing development regulations. The Plan does not take effect until the Hearings Board issues an order finding that it is valid. It designates land previously designated as “Rural Wooded” as “Interim Rural Forest”, retains the 20_acre rural lot size requirement, and establishes a comprehensive two_part approach for resolving the forest lands issue. The first part of the process involved a review of GMA criteria and guidelines on forest lands, relevant hearing board and court decisions, the record, and approaches and programs used in other jurisdictions. The second part of the process was to involve an advisory committee to discuss and recommend a potential program for encouraging forestry activities within rural areas.

LAND USE APPENDIX

On August 3, 1998, the Commissioners retained Environment International, Ltd. to perform the review of forest land issues and governing statutes and cases. On October 9, 1998, Environment International submitted to the Commissioners its final report, "Kitsap County and the GMA: Defining Forest Resources".

In response to a request from the Commissioners, staff of the Department of Community Development (DCD) then used information from the consultant's report to develop three alternative scenarios in which they compared potential criteria for designating forest lands. On November 5, 1998, the Commissioners held a joint work study session with the Planning Commission to review the report from Environment International and discuss alternative criteria for designating forest lands.

The Planning Commission held a hearing to receive public testimony on the issue of forest lands. Following many hours of deliberation, the Planning Commission developed a recommendation to the Commissioners on the criteria to be used for designating forest lands within the County. The Board of County Commissioners then held their own public hearing on the Planning Commission's recommendation on forest lands. On December 3, 1998, the Board of County Commissioners adopted Ordinance No. 228-1998, which established the following criteria for identifying forest resource lands within the county:

1. Property shall be in private forest land grades 1 through 3;
2. Property shall not be within a special purpose sewer or local (not countywide) water district and shall not have access (hook-up rights) to such services as of November 1, 1998;
3. Property shall not be within 1 mile of: A) property which has a density of 3 du/acre or greater and is within a sewer district boundary; B) existing commercial or industrial property; C) property with a vested commercial or industrial development, or a vested residential development at net density of 3 du/acre or greater; D) within the Belfair UGA in Mason County. Property shall not be within 1/2 mile from those portions of compact rural developments identified on p. A_303 of the 1998 Comprehensive Plan, a copy of which is attached hereto and incorporated herein, which comprise lots of 1 dwelling unit per acre or smaller. As of November 1, 1998, greater than fifty (50) percent of the linear frontage of each candidate parcel within a block shall abut parcels that are greater than 5 acres in size.
4. Each block shall be covered by 75% or more of the corresponding minimum land grade or above.
For land grade 1 _ nominal minimum block size of 640 acres
For land grade 2 _ nominal minimum block size of 640 acres
For land grade 3 _ nominal minimum block size of 1280 acres
5. The County should follow the right to practice forestry guidelines as identified in the 1992 strategies document, page B_19, which is attached hereto and incorporated herein by reference.

6. Property shall be enrolled, as of November 1, 1998, in the Open Space Timber or Designated Forest or Classified Forest Property tax classification program pursuant to Chapter 84.33 or 84.34 RCW, or is owned by a state or local governmental body.
7. Economic conditions should be conducive to long-term commercial forestry management. The following economic conditions may affect the ability to manage timberlands for long term commercial production in Kitsap County:

- Travel distance to mills and ports
- Current timber prices/market
- Environmental regulations
- Competing land uses
- Size of tract
- Quality of land
- Public pressures
- Favorable tax incentives (state)
- Cost of doing business
- Availability of work force
- Terrain
- Alternative products

The Commissioners have considered the history of land development permits issued nearby in the context of considering the criteria listed above.

Approximately 2,700 acres in central Kitsap County meets the criteria listed above for designation as forest resource lands.

Existing Land Use. A primary consideration is the existing land use pattern which has resulted from past land use decisions and the county’s natural geography. A significant portion of the area currently being managed for timber production is within one mile of existing urban density development. Modern commercial timber management is significantly restricted by that degree of proximity to urban density development. Major portions of rural Kitsap County have been divided into smaller acreage tracts. Development has occurred around lakes with considerably smaller lot sizes. A similar pattern exists in the central and northern parts of the county. As growth continues and homes are built on these vacant tracts, it will become increasingly difficult to continue forestry in these areas. As more people live in and near forest areas, land-use conflicts increase. Normal forest practices such as spraying, logging, slash burning, etc., are subject to complaints. In addition, trespassing onto private forest land and subsequent damage becomes more frequent. There was a Forestry Zone designation in the pre-Growth Management Act Kitsap County Zoning Ordinance; however, it was never applied on the zoning map. Forestry is permitted in most zones, but a forest practices application may be required before harvesting can occur.

Soils. In classifying forest land, counties and cities should use the private forest land grades of the department of revenue. This system incorporates consideration of growing capacity, productivity, and soil composition of the land. Forest land of long-term commercial significance will generally have a predominance of the higher private forest land grades. However, the presence of the lower private forest land grades within the areas of predominantly higher grades need not preclude designation as forest land. (WAC 365-190-060, “Minimum Guidelines”)

LAND USE APPENDIX

The classification system suggested by the state are private forest land grades as defined by the Department of Revenue with the help of the Department of Natural Resources (WAC 458_40_530). Private Forest Land Grades rate soils from 1 to 5 based on the growth of Douglas Fir. The forest land grades are based on the soils growing capacity, productivity, and soil composition. Prime forest soils are Land Grades 1 and 2. Good forest soils are land grade 3. The DNR has mapped private forest land grades for the county.

Availability of public facilities and services. The availability of sewer and water services are essential elements for the conversion of land for urban uses. Major capital investment are needed to plan for and provide public facilities and services such as sewer and water. Cost are often passed on to properties owner in the form of Local Improvement Districts (LID), property assessment or hookup fees. Therefor, properties that has access to both sewer and water services are not appropriate for long term forest management.

Block Size. The issue of block size was also considered in determining if commercial forestry, as defined in the Growth Management Act, exists in Kitsap County. Having a large contiguous block of land in forest designation helps to reduce conflicts with incompatible land uses and provides for greater efficiency for resource management. A review of other counties with GMA forest resource lands designations, coupled with extensive public testimony, shows a range of acceptable block sizes for forest management from 80 acres to 5,000 acres.

"Criteria used by Washington DNR and private holding companies for consideration of forest land purchases generally include a minimum size of 100 to 120 acres when the parcel adjoins present ownership, and at least 640 acres when isolated." (A Report on Long term Timber in South Kitsap County, 11/93, page 4).

A 1992 report showed that kitsap County still had approximately 37,000 acres that are taxed for forest or open space timber in parcels of 80 acres or larger. This is in addition to roughly 8,600 acres of contiguous land in the Bremerton watershed, 16,000 acres managed by DNR, and 3,200 acres managed as forest land by the Port Gamble S'kallam and Suquamish Tribes.

Compatibility with surrounding plans. Currently forested areas in Mason and Pierce Counties abut the southern and western borders of the county. Only a small portion of land in Mason county along the Mason/Kitsap County border is designated forest resource lands. Pierce County has not designated forest resource lands along the border with Kitsap County.

Economic Factors. Forest lands in Kitsap County are suitable for commercial production and cultivation of Douglas fir and Western hemlock. The forest industry provides lumber, firewood, Christmas trees and other forestry-related products for local use and export outside of the county. Forests also provide recreational opportunities and open space.

There are many characteristics of timber production that distinguish it from other types of industry. First, while timber is a renewable resource, timberland is not. Conversion to other types of land uses virtually assures its loss as forest land. Second, once planted trees cannot be moved to another location. They are subject to the particular stresses of a site for many decades. Third, trees must be given at least 25 years to mature into harvestable timber. Fourth, large-scale timber harvesting and the resulting noise and traffic may make it incompatible with many other uses. Finally, the size and bulk of the raw material which must be transported and processed can have some negative impacts on the site and land use around the site.

Christmas tree growing, which was once a major source of forest-related income in Kitsap County, has been severely reduced as the market has shifted to much higher site index land in southwest Washington and western Oregon. Loss of the Christmas tree market has restricted the flexibility of several of the remaining timberland owners.

The issue of fiscal impacts caused by a specific land use are important to local government, specifically, the ratio of costs compared to revenues for forest land. Timberland areas demand very few services and in turn generate substantial direct revenue for local jurisdictions. In terms of expenditures, the timber industry does not cause a significant ripple effect. Many large industries generate demand for housing, sewers, water and roads. Forest uses require little infrastructure and typically does not generate these types of demands. Most public and private timberlands are supplied with roads by the property owners and do not require the County to expend resources to provide other services.

Kitsap County is part of the larger puget sound regional economy. It is also ideally situated between the Olympic Peninnusla and the Puget Sound area and can take advantage of the opportunities presented by both regions. Kitap County benefits from the regional infrastructure and work force for timber management and harvesting. In fact, much of the wood produced in Kitsap county is transported to ports in Everett, Port Angeles, Tacoma, or Olympia to be sold on the international market. Kitsap County must be viewed in the context of the regional and international markets.

In 1971, the Washington State Legislature enacted a new system for taxing private forest lands and timber. Lands subject to state timber taxes are identified on maps prepared by the County Assessor. Private lands taxed under the Current Use Tax Exemption are in one of two categories: Designated Forest Land or Open Space Timber. Designation under Open Space Timber requires a minimum of five contiguous acres that must be primarily devoted to the growth and production of timber. Any property 20 acres or larger will be classified under Designated Forest Land. In both cases, taxable value is based on soil type. Typically, the better tree-growing soil will have a higher value.

Under the Current Use Tax Exemption, timberland is taxed at values much lower than under the “highest and best use” standard the County Assessor applies to other land. These values are, on average, 3% of normal value. In return for the minimal valuations, the state collects a 5% excise tax on the timber when it is cut. If an owner removes land from the forestry classification, the state charges a rollback tax that is greater than the owner would have paid over 10 years had the land not been designated for forestry. Four-fifths of the 5% tax from logging on private land goes to the counties. All of the 5% tax from logging on government land goes to the State.

TABLE A-LU-12 Timberland Tax Payment to Kitsap County, 1992	
Acreage Classified as Designated Forest Land	48,604.7 acres
Estimated Property Tax Due, 1993	
Timber Excise Tax Distribution to County	
DNR Trust Land Revenues to County	
TOTAL	

Source: Kitsap County Treasurer's Office

Environmental and Physical Characteristics

Natural forest lands in Kitsap County are primarily classified as “coastal forest,” a subdivision of the lowland Pacific Northwest forests common to the Puget Sound area. Coastal forests are an important component of the ecosystem and help maintain species diversity and richness. Plant and animal communities vary greatly between the different forest types throughout the county. Many of

the forested areas in Kitsap County contain wetlands and provide habitat to a variety of birds and animals.

Forest types in Kitsap County include conifer, broadleaf and mixed forests. Douglas fir is the dominant species in forests in the county. Red alder is common in moist areas and disturbed areas. Western red cedar is present in “low-lying” areas. Western hemlock, bigleaf maple and Pacific madrona are often part of forest stand, but in minor and varying amounts. Lodgepole pine is common in the southwestern part of the county. Because of the geology of this area, slight variations in elevation result in different soils and different vegetation.

Kitsap County is noted for production of floral greenery. The Puget Sound climate and the soils of this area result in excellent production of high quality greenery. Floral greenery, such as western swordfern, evergreen huckleberry and salal, are a part of the forest understory. Management of the forest overstory is important in floral greenery production.

Uncut commercial forest lands also provide environmental benefits including clean air, control of stormwater runoff, open space and fish and wildlife habitat. Commercial forestry in Western Washington requires clear cutting on a 50- to 60-year harvest cycle. For some period of time during or after harvest, commercial forestry may adversely affect stormwater runoff and fish and wildlife habitat. In addition to commercial forestry activities, forest lands in Kitsap County are used for outdoor recreation, municipal watersheds and other multiple uses. While most of these benefits are not easily quantifiable, they must be seriously considered as policies are developed.

Values and Importance

In the State of Washington, population growth and urbanization between 1930 and 1980 resulted in the conversion of about 4 million acres of forest land to other uses. In Kitsap County, more than 2,000 acres of forest land have been converted to nonforest uses, primarily for use as residential developments or short plat lots. The amount of forest land in the county, the availability of other land and the pathway of development all play a role in the overall effect of population growth on forest land.

Although the primary use of commercial forest land is forestry, these lands provide other benefits, including fish and wildlife habitat and open space. The Washington State Forest Practices Act (RCW 76.09) and new forestry techniques encourage the protection and use of commercial forest lands for wildlife habitat and minimization of impacts on the forest ecosystem through selective logging and reforestation.

All forest lands, including uncut commercial forest lands, function as fish and wildlife habitat by providing nest sites, feeding areas, roost/rest sites, thermal cover and migratory pathways. In Kitsap County, lowland and coastal forests support a wide variety of species of mammals, birds, reptiles and amphibians. Bald eagles and great blue herons can be found along the County’s shorelands where the forest meets the water.

Forest land provides required habitat and watersheds for many fish species. Fish are an important component of the state’s history, economy, culture and recreation industry. Salmon, steelhead, trout and many other species depend on forest-lined streams and bodies of water for rearing and spawning. In addition, rivers and streams in forest areas provide a source of clean water and

LAND USE APPENDIX

nutrition for many species which completely reside in salt water. More than a million persons each year purchase licenses to sport fish for freshwater game fish, salmon and steelhead.

Public forest lands are an important component of the state's available recreation opportunities. They provide the majority of developed recreational facilities and most lands available for hiking, hunting, fishing and other non-developed recreational uses. Urbanization of forest areas impacts outdoor recreation. Recreation places become scarcer as natural landscapes near urban areas change to residential and commercial areas.

Mineral Resource Lands

Mineral lands are defined as "lands that are not already characterized by urban growth and that have long-term commercial significance for the extraction of minerals" (RCW 36.70A.170). Mineral resource lands of long-term commercial significance are to include, at a minimum, land with the potential for extracting sand, gravel and valuable metallic metals on a long-term basis.

Existing Land Use Patterns and Geology

The geology of Kitsap County is the controlling factor in the location and availability of sand, gravel and other minerals in the county. In general, recoverable sand and gravel deposits occur in glacial outwash terrace and alluvial deposits. Where bedrock is predominant at or near the surface, aggregate can be produced only by quarrying and crushing.

Sand and gravel deposits in Kitsap County are, for the most part, glacial in origin. Extensive sand deposits of recent origin are present along much of the coast. Those glacial deposits which provide the largest useful amounts of both sand and gravel have a heterogenous mix of all sizes of material ranging from fine clays through sand gravel to boulders. Higher quality material will occur in the "outwash" areas where reworking of the heterogenous material has sorted the coarse from the fine.

On the Kitsap Peninsula, the presence of sand, gravel and hardrock are a result of volcanic action, glaciation and erosion. The county lies in the center of the Puget Sound Lowland. The Puget Sound Lowland is part of a large glacial drift plain formed by repeated advances and retreats of glaciers over the area. The county has been covered by at least five successive continental ice sheets during the last 1.5 million years, with the most recent coverage being 15,000 years ago. This history of complex glacial erosion and deposition events separated by long periods of non-glacial deposition has created a very complex mixture of unconsolidated sediments. This sediment blanket ranges in thickness from 0 to more than 3,600 feet. When the glaciers moved through the region, they deposited gravel, sand and silt.

The central region of the county around Gold and Green mountains has areas with very little glacial material. Isolated outcrops of tertiary basaltic bedrock are located south of Bremerton. Sea cliffs in the county exhibit drifts of two glaciations which are separated by fine-grained sediments of stratified clay, silt, sand and gravel deposited during the Whidbey interglacial period. Many small valleys, closed depressions and swales are found in the area. These commonly contain post-glacial to recent alluvium, or bog deposits and organic-rich sediment, such as peat.

Proven mineral deposits (excluding sand, gravel and rock) on the Kitsap Peninsula have been insignificant and of minor economic value. Kitsap County has no known deposits of commercial value, such as metallic minerals, oil and gas deposits, or industrial mineral products.

There are, however, major glacial deposits of sand and gravel found throughout the county. Some of these locations have been mapped in the *Draft Kitsap County Groundwater Management Plan, Vol. II, 1991*. Certain clay mineral deposits offer some potential for manufacturing of cement and for refractory purposes, but to date these have not been exploited. The Washington State Department of Natural Resources (DNR) has issued 29 surface mining permits for sand, gravel, rock or stone in Kitsap County. These permit locations have been identified on the Mineral Resources map and entered into the GIS for Kitsap County.

The locations of the existing surface mining permits are scattered around the county. Of the 29 current DNR surface mining permits issued, 26 of them are for sand and gravel. Five of these permits are held by Kitsap County. While there has been no large-scale inventory of commercially viable mineral resource deposits, DNR has developed a map showing potential mineral resource deposits on state land. The largest potential sand/gravel and rock deposits are in the southwest portion of the county. These deposits occur on land currently devoted to forestry and along streams. Future planning should contain a survey of mineral resources.

Economic Factors

The sand, gravel and quarried rock industries, which produce construction aggregates, fill, pitrun, riprap and larger rock products, are a key component of Washington's economy. Rock products provide the basis for infrastructure construction and maintenance, including low-cost housing, highways and public works.

According to information published by Washington Aggregate and Concrete Association, in 1990 the mineral industry in Washington state was valued at \$500 million. The valuation included metals, industrial minerals, sand and gravel mining and processing. Of the total, 40% is attributable to aggregate resources alone. The primary uses of round-rock aggregate are for the manufacture of concrete and for drainage applications. Crushed oversize gravel and crushed quarried rock are used for roadbase and as asphalt aggregate.

The cost of transportation controls the price of rock products: a moderate increase in the distance from mine to market markedly increases the cost of the rock. Current transportation cost for sand and gravel are \$1.25 per mile per ton. Additional concerns include routes which are congested with traffic and the number of trips per day the operator can make. Under present economic circumstances and transportation limitations, it is necessary for sand and gravel operations to develop deposits near market areas because sand and gravel are bulky, low-cost products which can incur little increase in hauling distance from excavation site to consumer without a prohibitive increase in the product cost.

As sources are depleted in some areas, local government must decide whether to plan for rock consumption outside their jurisdiction. Mason County has abundant high-quality, round-rock aggregate and currently exports rock to Kitsap County where deposits are of poorer quality owing to high clay contents.

LAND USE APPENDIX

Mineral industry employees have increased three-fold in the past 10 years in Washington, despite the cyclical nature of the business. **Table A-LU-13** shows the breakdown for Kitsap County. There are many others employed in related industries such as construction; however, employment data was not available.

Standard Industrial Classification	Industrial Category	Wages Paid	Number of People Employed
14	Nonmetallic Minerals	\$883,738	38
32	Stone, clay, glass and concrete products	\$2,797,341	107

Source: Washington Aggregates and Concrete Association

The most significant demands which sand and gravel operations place on the public sector are increased road maintenance costs and greater time demands on regulatory agencies. Truck traffic results in higher road maintenance costs to the county. The potential for environmental pollution and impact on neighboring properties requires monitoring by government agencies and enforcement of ordinances governing such operations. Sand and gravel operations require a minimum of public services in terms of police, fire and school services, and place very little burden on the water, sanitary sewer and storm water facilities.

Environmental and Physical Characteristics

There are significant impacts involved in mining operations. The removal of aggregate alters the land form, changes the elevations and disturbs the ecosystem through the removal of soils and vegetation. This can lead to soil erosion if proper steps are not taken to stabilize the area.

Social impacts from all mining activities are locally intense and include truck traffic, noise, dust, back-up alarms on trucks, blasting vibrations and flyrock from blasting. Noise levels are particularly important to nearby residents. Hours of operation and the location of machinery on the site are important considerations.

Water quality can also be a problem when mining sites are near rivers, lakes or wetlands. In quarries, surface water quality is commonly a problem because the quarry floors are generally impermeable and very little of the rain that falls on the site enters the ground. The resulting surface water runoff may become polluted or sediment laden, and adversely impact the watershed.

One of the major objections to mining operations has been the useability of the site once it is no longer being mined. The Washington Surface Mining Law (RCW 78.44), administered by the Washington State Department of Natural Resources was adopted in 1970 in order to assure that a reasonable level of reclamation occurred in all surface mines. At best, reclamation of abandoned mining sites can result in parks that provide biking, walking, fishing, picnicking and enhancement of wetland areas. Unfortunately the law, in its present form, is characterized by imprecise statutes,

inconsistencies resulting from prior incomplete amendment of the statute and a lack of compliance tools for regulators.

Values and Importance

Unlike the timber industry, where productivity and growing potential can be measured directly and choices made over a broad expanse of the landscape, mineral deposits only exist where you find them. Geologists can predict on a crude scale of likelihood where certain mineral deposits are most likely to occur, but the economic factors which turn rocks into viable mineral deposits are specific to an individual situation. Unlike agriculture and forestry, mineral resources are a nonrenewable resource. Once a site is mined, they cannot be replaced.

Mineral deposits in Kitsap County provide material for the construction of private and public facilities. Hardrock quarries supply material for the construction of railroad beds, roads, streets, breakwaters and bulkheads. Gravel resources are used for the construction of buildings, roads and streets and other construction projects. Sand is mixed with gravel or crushed rock as specified by government standards for highway construction, concrete tilt-up buildings and other uses.

Of all the factors which impact the economies of a sand and gravel deposit, transportation costs are the most important. Because mining and quarrying of mineral resources are very sensitive to distance to market, it is important to preserve potential high-quality sites near the market for future use. Hauling sand and gravel long distances is expensive and contributes significantly to the cost of these materials. As the county becomes more populated, the demand for quarried material will increase. In order to keep costs at a minimum, incompatible development of potential mineral resource sites of high quality should be discouraged.

While the economic value of high-quality aggregate resources is clear, care must be taken to balance this land use with other important economic interests. Proper procedures must be followed and regulations enforced to assure a minimum of environmental damage.

V. GREENWAYS

The Kitsap County Greenways Plan is a process and a plan that addresses a range of elements, such as recreational and commuter bikeways and trails, scenic resources and wildlife corridors. These elements of the Greenways system link together a variety of destinations, such as parks, schools, places of employment, shopping areas and transit facilities as well as provide access to a variety of scenic, educational, and interpretive resources. These connecting links will consist primarily of built facilities such as commuter and recreational bike routes, pedestrian trails and equestrian trails, but may also include other undeveloped corridors which are intended to maintain the underlying scenic and natural resources of Kitsap County. The resultant network will work with other existing and proposed facilities and policies to enhance the quality of life in Kitsap County. Following is a summary of the Plan; copies of the Kitsap County Greenways Plan are available at the County Community Development Department.

The Greenways Plan crosses political boundaries to a large degree and is drawn from, coordinated and integrated with plans from the Department of Public Works, the Department of Fair and Parks,

the Department of Community Development and the Open Space Council. The Plan also is coordinated with, and relates to, relevant plans of the incorporated municipalities.

Basic Components of the Plan

In order to create a linked system, the Greenways Plan will, to some extent, incorporate all of the following components:

- 1. Transportation:** Single- and multi-use, non-motorized transportation facilities for use by pedestrians and bicyclists seeking access between their homes and specific destinations (e.g. schools, parks, transit stops, shopping areas or work places).
- 2. Recreation:** Single and multi-use “recreational” transportation facilities for use by pedestrians, bicyclists and equestrians (such as trails and bikeways) to scenic amenities, recreational features and educational opportunities.
- 3. Scenic Resources:** Scenic resource corridors and districts to maintain the visual character of the roadside landscapes adjacent to, and visible from, well-used, non-motorized transportation facilities designated in the Bicycle Facilities Plan.
- 4. Natural Resources:** Wildlife corridors that maintain wildlife movement routes and their critical existing habitats and provide additional passive recreational and educational opportunities, where appropriate.

Transportation

Non-motorized elements of this Transportation Component address a variety of local, subregional and regional transportation goals. At the local level, they connect residential areas with locally significant destinations. At the inter-community level, they link nearby communities with one another. At the regional level, they link residential areas to major transportation, employment and business centers, or connect existing urban and developed areas with surrounding rural areas.

The Greenways Plan proposes a Bicycle Facility Plan to direct future development of road-related bicycle and pedestrian facilities, with the understanding that some of these facilities or “improvements” will be developed as capital improvements and that some could be developed by means of incentives to private developers, and with the further understanding that it will be integrated with the Kitsap County Transportation Plan and the Kitsap County Parks and Recreation Plan.

Recreation

The Kitsap County Greenways Plan strives to provide the core of a continuous, county wide, off-road trail system that:

- # Provides rides or hikes of extended duration for a varying mix of recreation as well as transportation trail users (i.e. equestrian, pedestrian or bicycle users);
- # Links a variety of local communities, parks or other areas of interest and provides access to rural areas of the county; and

- # Establishes future off-road trail access within presently undeveloped areas of the county. The Greenways Plan proposes an Off-Road Trail Plan which is integrated with the Kitsap County Comprehensive Parks and Recreation Plan, as well as the proposed Kitsap County Bicycle Facilities plan, and which guides future development of off-road (equestrian, pedestrian and bicycle) trail facilities that would be developed as capital improvements or as a result of a variety of tools or incentives to private landowners.

In contrast to the paved, on-road facilities suggested by the proposed Kitsap County Bicycle Facilities Plan, the Off-Road Trail Plan would be concerned with a mix of paved and predominately soft-surfaced, multi-use trails that follow off-road alignments and that are capable of use by various combinations of bicycles, pedestrians and equestrians, depending on standards applied to a particular length of trail.

Scenic Resources

The Greenways Plan addresses roadside scenic issues for three reasons:

1. To enhance a “functional,” non-motorized transportation component and thereby creating a pleasant, enjoyable and well-used recreational facility;
2. To provide a network of explicit scenic touring routes or loops; and, perhaps most importantly,
3. To protect investments in such bicycle and pedestrian facilities from visual degradation of the adjacent environment.

Particularly important in this context are those attributes that promote the formation of scenic touring routes. If there is a potential scenic touring loop comprised primarily of scenic and urban corridors and districts, but a portion of that loop is not scenic and urban, the Greenways Plan seeks to close the loop by enhancing or improving the character of that corridor.

Protected resources could include existing roadside scenic corridors and districts along vehicular routes. Each of the identified landscape types present different resource management challenges and require different policies, incentives, guidelines and controls to maintain or enhance their scenic character.

Natural Resources

The Natural Resource Component of the Kitsap County Greenways Plan strives to protect existing Wildlife Corridors. The Plan designates primary and secondary Wildlife Corridors along specified stream/wetland corridors with suggested, additional protective measures which expand upon and that will be integrated with similar parameters of other Comprehensive Plan elements.

The Composite Greenways Plan

The Composite Greenways Plan illustrates the recommended Greenways Plan in its entirety. It depicts the subplans of all four components, revealing the alignments and interrelationship of the Bicycle Facilities Plan, the Off-Road Trails Plan as well as the Roadside Scenic Resource Corridors

Plan and the Wildlife Corridors Plan. Physical improvements of the Greenways Plan are represented by the Bicycle Facilities and Off-road Trail Facilities. Together, these facilities represent the “trunk” non-motorized transportation facilities proposed for construction in Kitsap County over the next 20 years. The Scenic and Wildlife Corridors represent the “unbuilt.” See **Figures A-LU-2, A-LU-3 and A-LU-4** for Composite Greenways Plan maps.

The Greenways Plan will provide the residents of Kitsap County and its visitors with safe, non-motorized transportation alternatives and recreational facilities, and will preserve the existing scenic character of roadside landscapes as well as significant wildlife habitat and movement corridors. The Plan will provide a countywide network of all of these elements by means of interconnected open spaces and corridors.

VI. FULLY CONTAINED COMMUNITIES

The Comprehensive Plan recognizes that there may be a potential for the development of Fully Contained Communities (FCC) at some time in the future as allowed by the Growth Management Act. The plan intends that development of a FCC be allowed, subject to certain criteria for approval being met. Upon approval of a Fully Contained Community, the Comprehensive Plan Map would be automatically amended to reflect the new urban area.

Criteria for Approval

1. New infrastructure is provided for and impact fees are established consistent with state law;
2. Transit-oriented site planning and traffic demand management programs are implemented;
3. Buffers are provided between the new Fully Contained Communities and adjacent urban development;
4. A mix of uses is provided to offer jobs, housing and services to the residents of the new community;
5. Affordable housing is provided within the new community for a broad range of income levels;
6. Environmental protection has been addressed and provided for;
7. Development regulations are established to ensure urban growth will not occur in adjacent non-urban areas;
8. Provision is made to mitigate impacts on designated agricultural lands, forest lands and mineral resource lands;
9. The plan for the new Fully Contained Community is consistent with the development regulations established for the protection of critical areas by the county pursuant to state law;

10. Development shall be sited adjacent to, or in reasonably close proximity to, a major transportation corridor;
11. Master plans for new Fully Contained Communities shall include plans for public facilities and places such as parks, recreation and open space areas, school sites and public safety related facilities necessary to accommodate the development;
12. New Fully Contained Communities applied for, but not identified on the Land Use Map, shall be processed as an amendment to the Comprehensive Plan;
13. On-site and off-site infrastructure impacts shall be fully evaluated. Resort design, development and operation shall first, avoid; second, minimize; and third, mitigate potential adverse impacts.
14. The approval of new fully contained communities constitutes the establishment of a new urban growth area. As such, proposed new fully contained communities shall be reviewed for consistency with regional policies by the Kitsap Regional Council prior to public hearings for development permit approval.

VII. MASTER PLANNED RESORTS

The intent of the Comprehensive Plan is to allow master planned resorts. Master planned resorts are developments which have urban characteristics and may be located outside of urban growth areas. A master planned resort must be a fully integrated planned unit development, in a setting of significant natural amenities, with primary focus on destination resort facilities. These resorts shall consist of short-term visitor accommodations associated with a range of on-site indoor or outdoor recreational facilities. A master planned resort may include other residential uses within its boundaries, provided the residential uses are integrated into and support the on-site recreational nature of the resort.

It is the policy of Kitsap County to allow the development of fully integrated destination resorts at appropriate locations within the county to promote tourism and take advantage of the area's scenic and natural attributes. There shall be provisions within development regulations which will allow the review and approval with conditions, of master planned resorts.

Master planned resorts shall be designed to blend with the natural setting and shall not block scenic views from adjacent properties. Off-site and on-site impacts to roads, other public facilities, and the natural environment from a master planned resort shall be mitigated at the time of development. New urban and suburban land uses in the vicinity of the master planned resort shall be restricted, except in areas designated for urban growth. Plans for master planned resorts shall be consistent with development regulations established for critical areas. Master planned resorts shall be subject to design and development standards relating to landscaping, buffers, setbacks, access and design review.

VIII. PUBLIC FACILITIES

The intent of the Comprehensive Plan is to identify and designate existing public facilities. These uses include County and City offices, public agency shop facilities, federal and state offices and solid

waste disposal sites. Examples of these uses include the Olympic Landfill, County road sheds, County offices and other publicly and privately owned sites.

IX. ESSENTIAL PUBLIC FACILITIES

An “essential public facility” (EPF) may be any facility which provides a public service as its primary mission; the facility may be owned or operated by a unit of local or state government or by a privately owned entity. EPFs include, but are not limited to, the following examples: state education facilities; state or regional transportation facilities; prisons, jails and other correctional facilities; solid waste handling facilities; airports; in-patient facilities (including substance abuse and mental health institutions and group homes); and communication towers and antennas.

Although EPFs are necessary for the common good, they are seldom welcome into any community or neighborhood. In order to ensure that future public facilities of a county, regional or statewide nature are equitably located throughout the county and that they are designed to have a minimum impact on the community in which they are located, cooperation between the county and all jurisdictions within the county will be necessary through the Kitsap Regional Council. When an EPF is proposed in Kitsap County, the Council should form an Essential Public Facilities Advisory Committee composed of citizens, staff from the county and each city, other interested agencies and elected officials. This committee should:

- # Analyze the need for the proposed facility;
- # Develop siting criteria specific to the proposal;
- # Identify, analyze and rank potential sites;
- # Assess potential impacts to the local economy, environment and community;
- # Determine general measures that could minimize and/or mitigate impacts noted above.

Upon completion of the review of the proposed EPF, the committee should make a recommendation on the proposal to the Kitsap Regional Council. It will be the responsibility of the agency initiating the EPF to develop a community notification and communication plan that will ensure ongoing contact with the community during the planning and construction phases of the project.

X. HISTORIC PRESERVATION

The historic, cultural and archaeological resources of an area do much to promote a *sense of place* that is typically quite valuable to local residents. In Kitsap County, our rich and colorful history can

provide a context in which to understand current growth and development trends and can help to provide a sense of continuity and community.

The beautiful location and rich natural resources of Kitsap County have greatly influenced its development history and settlement patterns. The historical record of Kitsap County includes the formation of its unique geography, settlement by Native American groups, exploration by European nations, development of the area's prime timber resources and the evolution of the lumber industry, utilization of marine highways, the harvesting of aquatic bounty and the rise of the Navy presence. From Native American settlements to Scandinavian and Japanese farming communities, mill towns and regional employment centers, all of the major settlements in the county began along the shoreline and were oriented towards the marine environment. Today, development of existing communities is expanding and historical preservation is becoming more important to pursue if we wish to maintain cultural ties to the past.

Existing Programs

There are a number of organizations and agencies which are interested in documenting and preserving Kitsap County's historic, archeological and cultural resources:

National Level

The National Historic Preservation Act of 1966 authorized the creation of the National Register of Historic Places and the National Landmark program as a means of recognizing sites and structures associated with significant people or events in our national history. Sites or structures listed on the National Register are provided protection through various federal funding sources and, if the sites receive federal funding, are prevented from demolition by federal agencies without careful consideration. Placement on the register is strictly voluntary for the landowner and does not provide absolute protection of a site. The National Register is maintained by the National Park Service. There are currently 11 properties in Kitsap County on the National Historic Register (three of them located inside the Puget Sound Naval Shipyard) and two National Landmarks -- Puget Sound Naval Shipyard and the Port Gamble Historic District.

State Level

The Washington State Office of Archeology and Historic Preservation (OAHP) performs the functions of the State Historic Preservation Officer (SHPO) which were established by the *National Historic Preservation Act*. The OAHP maintains records of all historic resource inventories and sites and acts as liaison between local agencies and the federal government. The OAHP is also responsible for reviewing proposed federal projects for their potential impacts on historic and archeological resources. There are currently four sites in Kitsap County on the Washington State Register of Historic Places.

Local Level

The Kitsap County Historical Society was founded in 1948 and is dedicated to preserving, recording and interpreting Kitsap County's history. The Society owns and operates the Kitsap Historical Museum which provides exhibits, a research library, old photos, historical tours, publications and other services. The Society also maintains the Kitsap County Register of Historic Places. A local Historic Sites Committee reviews applications and nominates appropriate sites to

LAND USE APPENDIX

the Kitsap County Historical Society for inclusion on the Kitsap register. Historic preservation offices are also maintained at Puget Sound Naval Shipyard and the Suquamish and the Port Gamble S'Klallam Tribes. There are several other groups and organizations throughout the County who participate in historic, archaeological and cultural preservation efforts.

NATURAL SYSTEMS APPENDIX

I. INTRODUCTION

This Appendix examines the natural environment in Kitsap County and provides a framework for understanding natural systems during the land use planning and regulatory process. The inventory is compiled from a variety of federal, state and local resource documents, as well as from notes taken from technical experts who presented information to the Kitsap County Planning Commission. Information from the inventory is displayed on a series of maps produced by the County's Geographic Information System.

The inventory begins with an overview of the county's location, topography, climate, vegetation and drainage patterns. This leads into a more detailed survey of natural systems and environmental factors. The inventory notes where complete information does not exist and will be revised as more information about natural systems becomes available. (Note: An inventory of the county's natural resource lands -- agricultural, forest and mineral -- is found in the Land Use Appendix)

Location

Kitsap County is centrally located in the Puget Sound region, on the northern Kitsap Peninsula. The Puget Sound borders Kitsap County on the north and east, while the shoreline of Hood Canal stretches along the western border. The county's political boundaries include both Blake and Bainbridge Islands on the east and adjoin the boundaries of Mason and Pierce counties to the south. Due in part to its close proximity to Seattle and Tacoma, and in part to the natural beauty of the peninsula, population growth trends in Kitsap County reflect the rapid growth characterizing most of the Puget Sound region.

Geology and Topography

In geological terms, the Kitsap Peninsula lies within a structural downfold, between the Olympic and Cascade mountain ranges. The principal rock formations underlying the county include basalt and sandstone formed millions of years ago and silt, sand, clay and gravel deposits left by ice flow and streams during glaciation about 13,000 years ago.

Meltwater streams emerging from the glacier deposited layers of gravel, sand and silt, while fine silts and clays were deposited in extensive lakes and ponds where drainages from the Cascade and Olympic mountain ranges were blocked. The ice sheet itself laid down till, an unsorted and unlayered, concrete-like mixture of silt, sand and cobbles. The ice, stream and lake deposits are known as glacial drift, which forms a broad plain across the county's lowlands. These broad formations are shown in **Figure A-NS-1, Generalized Surficial Geology of Kitsap County** (Molenaar, 1993).

FIGURE A-NS-1

Generalized Surficial Geology of Kitsap County

Much of the county is characterized by broad glacial-drift plain, with gently rolling hills. The area's topography was formed by the most recent glacier, a 3,000-foot-thick ice flow which molded long north/south trending terraces, valleys and troughs as it moved south. Elevation typically ranges between 100 to 400 feet, with the exception of the Green Mountain-Gold Mountain area a few miles west of Bremerton, where the highest peak reaches 1,761 feet. This greater relief is due to a 40- to 50-million-year-old basalt bedrock formation that withstood glaciation.

Throughout the county, kettle lakes can be found, i.e. lakes and ponds with no surface inlets or outlets. These water bodies, like Island Lake, formed where large chunks of ice were stranded as the glacier receded north.

Kitsap County's saltwater shorelines stretch over 228 miles, extending along bays and inlets. The coastline is interspersed with steep sea cliffs and gently rolling lands and is dotted with small estuaries where streams empty their freshwater loads.

Cimate

The climate in Kitsap County reflects the moderating influence of Puget Sound and the Pacific Ocean. During the county's mild, wet winters, the average temperature is 40-50E F during the day and 30-40E F at night. During the fairly warm summer, the temperature ranges between 70-80E F during the day and 50-60E F at night.

The county receives an annual average of 50 inches of precipitation, 80% of which typically falls in October through March. The prevailing winds blow from the south-southwest, and the amount of moisture they carry is affected by the presence of the Olympic Mountains. Because of the "rain shadow" effect, precipitation volumes vary greatly throughout the county. Per **Figure A-NS-2**, precipitation in the northern end averages 26 inches annually, while precipitation may total over 70 inches annually in some areas in the south. This variation in rainfall causes different areas of the county to experience dissimilar aquifer recharge rates, stream flows and suitability for forestry and agriculture.

The average seasonal snowfall is nine inches. In most winters, one or two storms bring strong winds and sometimes heavy rains, which may damage trees, buildings and utility lines and may cause flooding. During the normally dry summer, thunderstorms typically occur about seven times.

Vegetation

Before the arrival of non-native settlers, old-growth Douglas fir and red cedar forest blanketed much of Kitsap County. The remnants of this forest, cleared at the turn of the century, can be seen only in the enormous stumps which dot the county's second-growth forest lands. Most of the county's mature forests are dominated by Douglas fir, a species well adapted to the local climate. Other common coniferous species include Western hemlock, Western red cedar and Western white pine. Ocean spray, Evergreen huckleberry and ferns are among the shrubs and plants found in the understory.

Throughout the county, human activities have increased the range of deciduous vegetation, which successfully competes with conifers in cleared and urban areas. Red alder and big-leaf maple are the

most familiar components of broadleaf forests, but Pacific willow, Madrona and Cascara are also commonly found. Understory species include salmonberry, blackcap, red elderberry and sword fern. Pastures and meadows typify the county's valleys and low-lying areas. These places may support agricultural crops or may host woody vegetation, grasses, salmonberry, blackcap, ox-eye daisy, sword fern, rushes and wildflowers. A variety of wetland types exist in these pastures as well as other environments and sustain vegetation such as alder, willow and reedgrass adapted to the hydric soils and wet surroundings.

Drainage Patterns

Most of Kitsap County's surface drainage is influenced by glacially formed topography or by large channels that were the sites of glacial meltwater streams. The county's permeable upper soils (a product of glaciation) combine with cool, wet winters to produce relatively low surface water runoff and saturation of the lower part of the soil profile. This leads to a high potential for groundwater recharge and low runoff to streams.

The low runoff levels and short distances to marine waters contribute to a dearth of large river or stream systems. More than 80 drainage basins have been identified throughout the county, most of which are characterized by small streams that empty directly into Hood Canal or Puget Sound, with intermittent tributaries fed by springs. Two small river systems, the Union and Tahuya Rivers, drain the Green and Gold mountains area.

Due to the small sizes of streams, most floodplains in Kitsap County are narrow and the probability of catastrophic flooding is low. Many of the streams provide critical fish and wildlife habitat, with small salmon populations scattered throughout the county combining to total a significant countywide fish resource.

II. GEOLOGICALLY CRITICAL AREAS

Geologically critical areas are places highly susceptible to erosion, landslides, earthquakes or other geologic events. In Kitsap County, the most hazardous of these areas are typically found along the marine shoreline, stream ravines and the steep slopes of Gold and Green mountains. In many cases, these areas may be extremely desirable for development because of their scenic views or water and beach access, but their development may endanger people, property and surface water resources.

Because of the potential threats associated with land use activities in geologically critical areas, hazardous conditions must be identified in the land use planning process and addressed in associated regulations. This inventory summarizes the characteristics of geologically critical areas and concludes with a designation of those areas which, given existing information, should be considered hazardous for public health and safety reasons.

Information for this inventory is derived from a number of federal, state and local sources, most notably the U.S. Natural Resources Conservation Service, the Coastal Zone Atlas of Washington State and a study known as the Quaternary Geology and Stratigraphy of Kitsap County, Washington. Despite these sources, countywide information about geologically critical areas is incomplete and as more data about geologic conditions in Kitsap County becomes known, designations and regulations will be subject to change.

Characteristics of Geologically Critical Areas

In Kitsap County, three types of geologically critical areas exist: landslide hazard areas, erosion hazard areas, and seismic hazard areas. (In other regions, volcanic hazards and mine hazards may be considered geologically critical, but these two types of hazards are not known to exist in Kitsap County.) This section reviews the causes of these hazardous areas and describes criteria suitable for identifying them.

Landslide Hazard Areas

Causes: The geology and climate of Kitsap County contribute to its potential for landslides. Thousands of years ago, glaciation deposited unconsolidated materials over the bedrock of much of the area. Subsequent glacial meltwater, streams and wave actions sculpted these unconsolidated materials into steep ravines and bluffs. When rain or groundwater permeate the unconsolidated materials on or at the top of slopes, landslides can occur. Almost all landslides in the Puget Sound region are triggered by excessive groundwater.

A common type of landslide, occurring on bluffs, is a slump. A slump occurs when the upper bluff is pervious sand and the lower bluff is compact silt or clay. Rainwater saturates the ground, moves down through the sand, concentrates at the sand/silt contact and moves laterally to the nearest bluff, causing the ground above it to slump. The slumped and saturated upper bank material turns into mud and flows down and over the steep but still intact lower bluff, carrying trees and rocks with it.

Debris avalanches, or shallow slides, can occur when the soils underlying the uppermost sediments become saturated. Where the slope is steep enough, the smooth surface of the underlying clay or silt may become a slide plane. A single storm, or even storm drainage from a single lot, may trigger these shallow slides.

A landslide can also occur when a slope composed of unconsolidated materials is undercut or steepened by human or erosional activities and the slope fails. This situation is occasionally seen where roads cut through steep slopes and can also occur when waves undercut shoreline slopes during winter storms.

Because many of the landslides in Kitsap County are induced by excessive groundwater, most landslides become mudflow during some or all of their travel. Due to their viscosity and weight, mudflows are capable of great destruction, and can move logs, roadbeds and even houses. Notoriously destructive mudflows in Kitsap County have occurred in recent years at Fragaria, Applecove Point and along Highway 160 (Beach Dr.) in Port Orchard.

Landslides, while also occurring naturally, can be exacerbated by human activities like removal of vegetation, increase in stormwater runoff, undercutting of slopes, on-site sewage system discharge and increased burden at the top and base of slopes caused by buildings.

Criteria for Identification: Potential landslide hazard areas can be identified based upon geology, hydrology, slope or the evidence of historical slide activity. More specifically, these landslide hazard areas may include the following characteristics:

1. An area characterized by all three of the following characteristics: slopes greater than 15%; hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; springs or groundwater seepage; or
2. Areas that have shown movement during the Holocene epoch (from 10,000 years ago to the present) or which are underlain or covered by mass wastage debris of that epoch.
3. Slopes that are parallel or sub-parallel to planes of weakness (such as bedding planes, joint systems and fault planes) in subsurface materials; or
4. Slopes with gradients steeper than 80% subject to rockfall during seismic shaking; or
5. Slopes potentially unstable as a result of rapid stream incision, stream bank erosion or undercutting by wave action.
6. Areas located in a canyon or on an active alluvial fan, presently or potentially subject to inundation by debris flows or catastrophic flooding.
7. Any area with a slope of 40% or greater and with a vertical relief of 10 or more feet except areas composed of consolidated rock.
8. Areas classified by the Coastal Zone Atlas of Washington or by the Quaternary Geology and Stratigraphy of Kitsap County as unstable, unstable recent slide or unstable old slide (See **Table A-NS-1**).

Areas identified by any of these characteristics may be unsuitable for building or development. Property located at both the top and toe of hazardous slopes may contribute to and be damaged by slide activities. Roads through slide areas are also susceptible and may represent potential threats to vehicle safety and traffic patterns. Development along hazardous marine bluffs may increase the potential for slides to occur, resulting in harm to beach habitat and shellfish beds. Land use activities at the top of stream ravines may provoke landslides, leading to stream habitat destruction and flooding.

CATEGORY (MAP SYMBOL)	CRITERIA
Intermediate ₁	Slopes between 15% and 30%, including slopes in sand, gravel, till and thin soil over bedrock, without known failures.
Intermediate ₂	Slopes greater than 30%, including slopes in sand, gravel, till and thin soil over bedrock, without known failures.
Unstable (U)	Slopes considered unstable due to geologic, groundwater, slope or erosional factors. Includes areas of talus and landslides too small to be individually categorized.
Unstable Recent Slide (URS)	Recent or historically active landslide.
Unstable Old Slide (UOS)	Old, post-glacial but prehistoric slides.
Modified Slopes (M)	Slopes highly modified by man, including areas of significant excavation and filling.

Erosion Hazard Areas

Causes: The term “erosion” encompasses all natural processes by which soil and rock are moved by wind, water and gravity on the earth’s surface. Erosion hazard areas are places susceptible to mass erosion due to soil conditions or wind and water actions. Mass erosion can pose threats to property by instigating landslides, as when slopes and bluffs are undermined by stream or wave erosion; and can affect water quality and quantity, as when sediment from hillsides are deposited in streams or marine waters.

Some soils are highly susceptible to erosion by rain, wind, stream flow or frost action. These soils may not bind well to themselves or may not have the chemical or physical properties to absorb excess amounts of water. In some cases, soil may not be susceptible to erosion until vegetative cover is removed. When vegetative cover is absent from certain types of soils, sheet erosion (when soils slide off the land as a sheet) and rill erosion (the creation of a steep-sided channel several inches deep) may occur.

Along marine shorelines, winter storm waves wear away at exposed banks. This may lead to the undercutting and steepening of shoreline slopes and may result in slope instability and landslides.

Criteria for Identification: Potential erosion hazard areas can be identified using the following:

1. The Natural Resources Conservation Service’s classification of highly erodible and potentially highly erodible soils with slopes greater than 15%, as listed in **Table A-NS_2**. All soils considered highly erodible have slopes greater than 15%. The general locations of these soils in Kitsap County have been determined by the U.S. Natural Resources Conservation Service.

TABLE A-NS-2 Soils And Potentially Highly Erodible Soils With Slopes Greater Than 15%		
SYMBOL	SOIL TYPE (Slope)	ACRES
10	Dystric Xerortments (45 - 70%)	12,300
17	Harstine (30 - 45%)	1,900
21	Indianola-Kitsap Complex (45 - 70%)	7,550
26	Kilchis (30 - 70%)	5,100
27	Kilchis, Shelton Complex (30 - 50%)	2,390
31	Kitsap (30 - 45%)	540
48	Schneider (45 - 70%)	1,490
54	Shelton (30 - 45%)	1,440
3	Alderwood (15 - 30%)	8,080
25	Kilchis (15 - 30%)	1,890
46	Ragnar (15 - 30%)	3,490
53	Shelton (15 - 30%)	3,290
9	Cathcart (15 - 30%)	370
13	Grove (15 - 30%)	570
16	Harstine (15 - 30%)	6,600
20	Indianola (15 - 30%)	1,640
30	Kitsap (15 - 30%)	1,670
36	Neilton (15 - 30%)	1,470
41	Poulsbo (15 - 30%)	2,170
47	Ragnar-Poulsbo (15 - 30%)	3,170
57	Shelton (15 - 30%)	930
61	Sinclair (15 - 30%)	590
	TOTAL ACRES	68,640

Source: U.S. Natural Resources Conservation Service, Soil Survey of Kitsap County Area, Washington, September 1980

2. Areas subject to intense erosion may also be identified as landslide hazard areas by the Coastal Zone Atlas or Quaternary Geology and Stratigraphy of Kitsap County.

Because soil erosion problems are frequently caused by land use activities, site-specific topography and drainage are often as important as the natural erodibility of the soil in determining susceptibility to erosion. Standard construction techniques and appropriate permanent stormwater drainage designs can be used to greatly reduce the risk of erosion damage.

Seismic Hazard Areas

Causes: Regional forces related to temperature differences inside the earth produce slow movements of continent-sized slabs of rock called plates. Off the Washington coast, three plates converge and the forces created by this movement cause rocks to suddenly break and slip. The ground shaking from the sudden slip is called an earthquake. In the Puget Sound area, damaging earthquakes appear to occur about every 30 years.

While the likelihood of a serious earthquake is unknown, precautions can be taken to lessen the amount of damage incurred as a result of earthquake-induced ground shaking, slope failure, settlement, soil liquification, or surface faulting. Some areas are more prone to damage than others, and are known as seismic hazard areas. They include places prone to landslides, areas with hydric soils and fill areas. Hydric soils and fill areas may undergo liquification when vibrated and thus may not provide sufficient support for structures or equipment.

Criteria for Identification: the following areas may be at higher risk of damage caused by seismic activity:

1. Places with historic earthquake damage. While no historical evidence exists of a massive earthquake in Puget Sound during the past 200 years, geologic evidence indicates that massive earthquakes have occurred in the region.
2. Areas along fault lines. The only known fault in Kitsap County extends from Restoration Point on the southern tip of Bainbridge Island through downtown Seattle.
3. Areas with hydric soils. Hydric soils occur throughout Kitsap County and have been identified by the Natural Resources Conservation Service. Their location is discussed in more detail in the wetlands section of the natural systems inventory.
4. Areas that have been filled with additional soil materials to enhance buildability. In many cases these are former wetland areas or areas with small slopes.
5. Slopes subject to landslides. The criteria to determine these areas are listed above in the discussion of landslide hazard areas.

While earthquake damage can be minimized by avoiding high-density development in areas highly susceptible to seismic activity, the threat of damage can also be avoided through proper engineering and construction practices.

Designations of Geologically Critical Areas

For comprehensive planning purposes, areas that may be geologically unstable must be designated as critical areas. In some areas, incompatible residential, commercial or industrial development in these areas should be avoided for the protection of public health and safety. In some cases, geological hazards can be reduced or mitigated by engineering, design or modified construction practices, so that risks are diminished.

While detailed geological data about Kitsap County is not available, three sources of information exist that can be used to estimate the location of geologically critical areas: the Coastal Zone Atlas of Washington (Department of Ecology) and the Soil Survey of Kitsap County (US Natural Resources Conservation Service). These sources provide information on slope stability, erodible soils and hydric soils.

Because of the amount of overlap that exists between landslide, erosion and seismic hazard areas, this section separates geologically sensitive areas into two broad categories based on potential threats. These two categories and the criteria that comprise them are listed below and are mapped in **Figure A-NS-3**. As more information about the geology of Kitsap County becomes available, these designations may be revisited.

Geologically Hazardous Areas

1. Areas with slopes greater than 30% (see **Table A- NS-2**) and mapped by the Coastal Zone Atlas or the Quaternary Geology and Stratigraphy of Kitsap County as U (Unstable), UOS (Unstable Old Slides) or URS (Unstable Recent Slides) as defined in **Table A-NS-1**. (These places could be extremely hazardous due to landslide, erosion or seismic activities); or
2. Areas deemed, by a qualified Geologist, to meet the criteria of U, UOS, or the URS.

Because of the high hazardous potential associated with these areas, they should generally be considered unsafe for construction and the development in these areas should be avoided.

Areas of Geologic Concern

1. Areas designated Unstable in the Coastal Zone Atlas or Quaternary Geology and Stratigraphy of Kitsap County, with slopes less than 30%; or areas found by a qualified geologist to meet the criteria; or
2. Slopes identified as Intermediate (I) on the Coastal Zone Atlas or the Quaternary Geology and Stratigraphy of Kitsap County as defined in **Table A-NS-1**; or areas found by a qualified geologist to meet the criteria of I; or
3. Slopes 15% or greater, with soils classified as “high” or “potentially highly erodible;” or
4. Hydric soils as identified by the U.S. Natural Resources Conservation Service; or
5. Areas that have been filled with additional soil materials to enhance buildability. In many cases these are former wetland areas or areas with small slopes.

Areas of geologic concern are likely to present geological risks for development and construction. Land Use activities within and adjacent to these areas will be carefully reviewed and mitigative measures may be required.

III. SOIL SUITABILITY

Soil is a loose mass of chemically weathered rock fragments mixed with organic matter. It plays a vital role in supporting vegetation and filtering water and is thus a key component of Kitsap County's natural systems. There are 63 kinds of soils in Kitsap County, which differ in depth, structure, moisture, organic content, steepness of slopes and other chemical and physical properties.

Soils can vary greatly within short distances and lay in patterns that reflect the county's topography and geological history. The parent rock material from which soil weathers has the greatest influence on its characteristics. Throughout most of the county, the parent rock is glacial, deposited by an ice flow over 13,000 years ago. However, the sedimentary bedrock found at Bremerton, Bainbridge Island and Waterman Point yields a distinct family of soils, as does the basalt bedrock of Gold and Green mountains.

The unique characteristics of each soil type make some soils more suitable for different land uses than others. This section on suitable soils discusses the relationships between soils and agriculture, forestry and on-site sewage systems and identifies the location of soil types compatible with these activities.

The 1977 Soil Survey of Kitsap County, provides much of the information discussed below. The U.S. Department of Agriculture's Natural Resources Conservation Service compiled this information and it represents the most comprehensive evaluation of soils available. As more precise information about Kitsap County's soils becomes known, this section of the natural systems inventory will be reevaluated.

Agriculture

Prime Soil Characteristics

The Natural Resources Conservation Service lists seven Kitsap County soils as "prime" for agriculture due to their temperature, salinity, erodibility, permeability, texture, ability to hold water and acidity/alkalinity. These characteristics are influenced mostly by parent material, organic content, slope and climate. When combined with an adequate growing season and moisture supply, soils identified as "prime" can economically support sustained yields of crops with minimal treatment.

Prime agricultural soils comprise about 15,020 acres of Kitsap County, less than 4% of the county's total area (**Table A-NS-3**). As shown in **Figure A-NS-4**, these soils are scattered throughout the county, predominantly in flat areas adjacent to streams or rivers. Five of the seven "prime" soil types are considered hydric, and must be drained to be productive farmland.

Not all prime soils are currently used for agriculture, nor are they all available for agricultural use. In some prime farm soil areas, such as Big Valley and upper Clear Creek, farms dot the landscape. In other places, prime agricultural soils may instead host stands of trees or may be covered by commercial or residential development.

**TABLE A-NS-3
Prime Farmland Soils in Kitsap County**

Soil	Acres
Belfast Loam	530
Bellingham	880
Kitsap	2,310
Mukilteo	1,320
Norma	7,700
Semiahmoo	1,320
Shalcar	960
TOTAL	15,020

Land Use Implications

Prime soils are only one indicator of the land’s suitability for farming. Commercially successful agriculture may also require large tracts of land in which to grow crops or graze animals. The relative scarcity of prime soils in sizeable, contiguous parcels inhibits large-scale commercial agriculture in Kitsap County. Smaller ventures located in areas with prime soils may successfully yield crops and provide supplementary income to the landowner. Farms with poorer soils can also successfully produce commercial farm goods if existing soils are improved (i.e., fertilizer, grading or rock removal), or if the enterprise is not soil-dependent (like poultry raising, egg production and animal breeding).

The presence of prime agricultural soils indicates that an area may have the capacity to efficiently and economically provide a source of food. This opportunity may be permanently lost when prime farm soils undergo excessive erosion or are otherwise modified or used by development. To maintain an agricultural base in Kitsap County, therefore, it is important to identify where these soils exist and to encourage their use for agricultural production.

Forestry

Prime Forest Soil Characteristics

Soils capable of growing trees for commercial forest production generally are located in climates with enough moisture to sustain tree growth and have a moderate soil temperature regime and an adequate supply of nutrients. Two means of measuring soil productivity for timber exist, both of which are based upon the quantity of tree growth that can occur in a soil. These rating systems are discussed below.

Culmination Mean Annual Increment: The U.S. Natural Resources Conservation Service identifies prime timberland soils nationwide as those not presently in urban or built-up land uses and capable of producing wood fiber at a culmination of mean annual increment (CMAI) of 85 cubic feet per acre. Approximately 34% of the commercial timberland in the United States, representing 48% of the productive capacity of forestlands, has a CMAI or 85 or higher. Most Kitsap County soils, and indeed most soils in western Washington, meet this national standard for prime timberland.

Soil Site Index: Both the Natural Resources Conservation Service and the Department of Natural Resources rate the soils of Kitsap County for commercial timber productivity based upon the 50-year “site index” for each soil unit. The site index of a soil type refers to the potential productivity of merchantable or “common” trees (those trees generally favored by foresters based on growth rate, quality and value) by measuring the average height in feet that dominant and co-dominant trees of commercial species attain in 50 years. Soil site indexes in western Washington are typically based upon the Douglas fir. The higher the site index, the taller the tree, indicating a more productive soil.

The site index applies to fully stocked, even-aged unmanaged stands. It is just one measurement of an area’s productivity -- it does not take into consideration ease of mechanical harvesting due to slope, erodibility, urban or rural development influences or other factors important to commercial timber production.

Inventory of Prime Forest Soils in Kitsap County

Figure A-NS-5 shows four categories of site indices based upon the soil survey’s data: site index greater than 110; site index 100-109; site index 90-99; site index 84-89. **Table A-NS-4** lists the most productive soil types, those with a site index greater than 100. Soils in Kitsap County are comparatively lower site index than other areas of Western Washington, where site indices may be as high as 140, and are frequently greater than 120. The 180,000 acres of productive soils listed in the table includes lands not available to forestry due to development or other conflicting uses.

According to **Figure A-NS-5**, the most productive timberlands lie in the northern part of the county and the least productive soils are found in the southwestern corner of the county. Despite the lower site index, this area is presently actively managed for timber production.

The numbers used for soil site indices vary among sources and studies, based upon the number of soil plots sampled. However, whether using the numbers produced by the Soil Survey or by other Natural Resources Conservation Service Department of Natural Resources reports, the soil type and characteristics do not vary.

Land Use Implications

Some soils are more conducive to growing trees than others. To maintain a productive forest base, soils prime for forestry should be encouraged to be used for timber production where feasible. Kitsap County site indexes are comparatively lower than other areas in Western Washington, although they would be considered highly productive when compared to other forestry soils in the arid west or the southern United States.

On-Site Sewage Systems

Soil Characteristics

A conventional, on-site sewage system consists of the septic tank, absorption trenches and surrounding soil which serves as an absorption field. Final treatment and disposal of the wastewater occurs in the soil, thus the type of soil available plays an important role in the functioning of the system.

Soil contains roughly 50% pore (air) space. Many chemical and biological reactions in soil occur on surfaces adjacent to the pore space. The ability of a soil to treat wastewater depends in part upon the amount of accessible soil particle surface area (smaller particles have greater surface area per unit volume); the chemical properties of the surfaces and temperature, moisture and oxygen levels. Depth of soil before encountering hardpan (a restrictive layer that doesn't allow water to pass through) and depth to the water table also play significant roles in soil treatment.

**TABLE A-NS-4 Soil Site Index
Based on a 50 Year Site Curve**

Soil	Site Index	Acreage
Ragnar	125	8,650
Kitsap	123	6,510
Poulsbo-Ragnar	123	7,280
Poulsbo	121	15,090
Cathcart	120	1,690
Belfast Loam	120	530
Kapowsin	119	16,730
Schneider	115	1,490
Ragnar-Poulsbo	112	3,170
Indianola-Kitsap	110	7,550
Kapowsin Variant	109	1,090
Shelton	107	12,430
Grove	106	3,060
Harstine	105	33,160
Ragnar (15-30% slope)	105	3,490
Alderwood	104	43,720
Sinclair	103	2,880
Kilchis-Shelton	103	2,390
Kilchis	101	6,990
TOTAL ACRES		177,900

*Note: Information is not available concerning forest soil land devoted to other land uses.
Source: SCS Kitsap County Soil Survey*

Although the Bremerton-Kitsap County Health District has ultimate authority regarding whether soils are suitable for on-site sewage systems, the U.S. Natural Resources Conservation Service has determined a rating system for soil suitability. This system evaluates the part of the soil between depths of 24 and 72 inches. Most soils in Kitsap County are rated severe for conventionally designed on-site sewage disposal fields due to cemented pan, soil saturation, flooding, ponding, slow percolation, poor filtering and slope. Cathcart soils, which comprise about 1,690 acres of Kitsap County, are the only soil not rated severe for conventional septic design.

Land Use Implications

According to the Bremerton-Kitsap County Health District, an on-site sewage system, properly designed, installed and maintained, is as effective as a sophisticated sewage treatment plant. Unsatisfactory performance of on-site sewage systems, including excessively slow absorption of effluent, saturated soil from water table or surface discharge of effluent can cause public health and environmental impacts. Groundwater can be polluted if the distance between the absorption field and groundwater is less than two feet.

The severe rating for most Kitsap County soils indicates that soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs and possibly increased maintenance are required. In some cases, a drainfield may not be possible or may require obtaining additional land beyond the initial site. Some areas of the county, particularly along the shoreline, may need to be sewered in order to adequately protect public health and water quality.

IV. WATER RESOURCES

The waters of Puget Sound and Hood Canal surround Kitsap County on the north, east and west. The estuaries and embayments and the open waters of the Sound define a county rich in scenic beauty and water-based resources. The streams, lakes, ponds and wetlands that form the county's freshwater landscape support significant numbers of fish and wildlife and provide a variety of recreational, economic and aesthetic opportunities for county residents and visitors.

As the population of the county grows, these water resources become increasingly threatened by land use activities and development patterns. This section explores the hydrology of Kitsap County, describes the necessity of protecting both surface and groundwater quality and examines the water quality and quantity threats caused by development, commercial activities and other land uses.

As efforts such as the Draft Kitsap County Groundwater Management Plan (GWMP) are completed and a better understanding of the complex hydrology of the county is refined, it is understood that this Comprehensive Plan and the appropriate subsections will be amended accordingly. The GWMP will require State Environmental Policy Act (SEPA) review, , and concurrence from local jurisdictions with the recommendations.

Hydrology

Hydrology is the science concerned with the distribution, movement and effects of the earth's water. The hydrological cycle is described in **Figure A-NS-6**.

A basic hydrological component is a watershed, or drainage basin. A watershed is an area of land that has one common denominator -- precipitation that falls within its boundaries and becomes surface water eventually drains to a common stream, river, bay or other water body. As water from rainfall (stormwater) flows over the land, it collects pollutants and sediments from the land. The runoff will eventually flow into a stream or other common body of water. Thus, every activity that occurs within a watershed has the potential to impact the body of water into which the watershed drains.

Some rainwater filters into the soil, and is absorbed by vegetation or recharged to underlying aquifers. Surface water flow, as well as groundwater movement and aquifer recharge can be affected by factors such as rainfall amount and intensity; soils or land cover; slope of land and stream channels; and evapotranspiration (water returning to the atmosphere through evaporation from the land and transpiration from plants).

The condition of the land's surface also has a major influence on surface water hydrology. When development occurs, the increase in impervious surfaces (such as roads and roofs), the loss of wetlands and vegetated areas and the concentration of stormwater runoff into ditches and pipes all lead to increases in total surface runoff and higher peak flows in streams and ditches. The immediate impact may be increased occurrences of flooding, increased erosion of stream beds and stream habitat loss. Increases in stormwater runoff can also lead to higher pollutant loads in the runoff and declines in water quality. Increased runoff in the longer term will decrease the amount of recharge to groundwater.

Aquifer Recharge Areas

Groundwater constitutes more than 80% of the water used by Kitsap County residents. It originates in aquifers -- saturated geologic formations located beneath the ground's surface. Aquifers are recharged from precipitation that slowly infiltrates the ground and eventually reaches the aquifer. Places where water passes through the ground to replenish aquifers are known as "aquifer recharge areas."

The quality and quantity of groundwater in an aquifer is inextricably linked to the aquifer's recharge area. In order to protect groundwater from contamination, aquifer recharge areas and the waters that flow through them must be protected from degradation and contamination.

Groundwater is available on most areas of the county and almost all of the county contributes to groundwater recharge. This inventory briefly identifies the known principal aquifers in Kitsap County that provide potable water and describes the characteristics of aquifer recharge areas. It summarizes land use threats to groundwater supplies and provides a preliminary designation of aquifer recharge areas in Kitsap County.

FIGURE A-NS-6

The Water Cycle

A more complete inventory and designation of aquifer recharge areas will be provided upon completion of the Groundwater Management Plan for Kitsap County. This plan is being developed by the Groundwater Advisory Committee (GWAC), a committee composed of citizens; groundwater-related businesses; tribal, state and local government agencies; and Kitsap Public Utility District (KPUD). The information and data produced during this planning process will be incorporated into the County's Comprehensive Plan.

Even with this additional information, much remains to be learned about the complex functioning of aquifer recharge areas. Strategies for protecting these areas and the county's groundwater supply will evolve over time as more data becomes available and the plan is subsequently amended.

Aquifer Characteristics

There have been 27 principal aquifers identified in Kitsap County. The aquifers are typically composed of glacially derived deposits of sand and gravel which are encountered from about 100 feet above to 800 feet below sea level. The aquifers are often capped or vertically separated by aquitards (materials which impede the flow of water). **Figure A-NS-7** shows the approximate location of these principal aquifers. Most major production wells in the county tap water from the principal aquifers, which are relatively deep. Some production wells and numerous private domestic wells withdraw water from principal aquifers which are relatively shallow, or from localized perched water tables. KPUD anticipates that additional aquifer systems will be identified in the future and continues to refine aquifer boundaries as more information becomes available. Refining the understanding of aquifers characteristics is a costly and time consuming process.

The water quality of these aquifers is generally good, and known water sources for most of these aquifers are expected to be adequate for projected water demand until 2010 (according to the Kitsap County Coordinated Water System Plan that was based on Puget Sound Council of Governments population figures of 258,600). There are some areas with saltwater intrusion, water with excessive iron or manganese concentrations, or groundwater contamination from man-made chemicals. The GWAC has initially identified four aquifers where groundwater contamination maybe a concern. These are the Hansville, Lynwood Center, Poulsbo and Meadowmere aquifers, in North Kitsap. Additionally, overdrafting may have occurred in the Island Lake Aquifer, and as a result of low lake level, the State Department of Ecology has imposed a moratorium on well completion in that aquifer.

As the county becomes more urbanized, the changing quality and quantity of the water recharging aquifers will play a greater role in determining the quality, quantity and cost of the water source available to county residents and businesses.

Aquifer Recharge Area Characteristics

Recharge of an aquifer occurs naturally by the percolation of surface water or precipitation through the ground's surface to a depth where the earth's material is saturated with water. Recharge can also occur from lakes, streams, stormwater from drainage ditches and retention ponds and wastewater from septic systems. Generally, aquifers are recharged sequentially from shallowest to deepest. Therefore, deep aquifers are recharged more slowly than shallower ones.

The majority of Kitsap County is considered a potential aquifer recharge area. Because of varying surficial geology, some areas are considered more effective or critical for aquifer recharge. Groundwater pollution may be a greater threat to recharge areas that contain shallow aquifers below porous soils because contaminants can rapidly infiltrate to the aquifer.

While it is difficult to determine exactly which areas of Kitsap County are responsible for the recharge of the county's principal aquifers, three characteristics of aquifer recharge areas can be identified at ground surface. These three factors, which influence the infiltration potential of an area, are discussed below.

Soil: Soil conditions such as composition, moisture and compaction influence the amount of infiltration that occurs. Soils composed of coarse-grained materials (i.e., sand and gravel) are generally more permeable than those composed of finer-grained particles such as clay and allow infiltration of surface waters. Surface waters that flow over soils that are already saturated will not be able to easily infiltrate those soils. Soil compaction inhibits infiltration because it decreases soil permeability (the size and number of passageways between soil particles).

Vegetation: The presence of vegetation encourages infiltration of rainfall in several ways: Vegetation decreases the velocity of runoff as water is diverted around plant stems and roots; slowing the runoff increases the time available for infiltration. Plant roots and live organisms (like earthworms) increase the porosity of the soil, thus facilitating infiltration. Plant cover absorbs some of the energy of raindrop impacts, reducing the amount of soil that is splashed into the air and thus reducing the amount of soil that fills the pores between soil particles. Plants also absorb water and return a portion of the water to the air through transpiration. Because vegetation is a key component of an area's recharge potential, the land use characterizing an area is an important component.

Topography: Rain tends to flow off of steep slopes, thus less moisture is available for infiltration. On uneven surfaces, runoff may be detained in pools for periods long enough for infiltration to occur.

Critical aquifer recharge areas in Kitsap County are being identified by the Groundwater Advisory Committee, as part of the Groundwater Management Plan. Preliminary discussion of critical aquifer recharge area identification focuses on soils, depth of aquifer, number of wells present and wellhead protection areas.

Land Use Implications

The quality and quantity of water being recharged into an aquifer can be affected by a number of activities occurring within an aquifer recharge area. These activities are summarized below and are described in more detail in the Issue Papers prepared as part of the GWAC Groundwater Management Plan and available from the Kitsap County Public Utility District No. 1.

The GWAC preliminary procedure for designation of critical recharge areas proposes that areas of the county be designated as Critical Areas of Concern, based upon the potential for water to be contaminated from land use activities which involve hazardous materials.

Urbanization and Stormwater Runoff. Water runoff increases and natural recharge decreases as an area becomes more urban. Impervious surfaces such as pavement, roofs and compacted soils can increase runoff of rainwater during and after storms. Removal of vegetation can also turn potential recharge into runoff. Overdrafting of an aquifer can occur during urbanization when lower recharge rates combine with higher demand for groundwater.

Leaking Underground Storage Tanks. Underground storage tanks typically contain motor fuels, heating oils or other compounds. Leaking underground storage tanks and associated piping can cause serious groundwater contamination.

Solid Waste Disposal. Leachate is water or liquid contaminated with dissolved or suspended materials due to contact with solid waste or associated gases. In some older landfills, leachate may be able to infiltrate the soils that lay below the waste.

Erosion. Clays and silts derived from erosion can plug the porous native soils where they are deposited and can decrease infiltration in streambeds by covering sand or gravel surfaces. Erosion of an area can also expose new layers of soil, which can enhance or diminish infiltration.

On-Site Sewage Systems. On-site wastewater treatment systems can replenish groundwater supply by returning used water back to the aquifer system. Improperly installed and/or maintained systems may provide a source of contamination by releasing untreated wastes and chemicals into the soil.

Sand and Gravel Mining. Sand and gravel operations decrease the distance between the groundwater table and land surface. Wastewater collected on the mine site can infiltrate more easily into the groundwater, increasing the potential for contaminants to enter the groundwater supply.

Fertilizers, Pesticides and Herbicides. Misuse of pesticides, fertilizers and herbicides can lead to excess chemicals or nutrients infiltrating the ground during rain or through stormwater runoff.

Hazardous Materials. The presence of hazardous materials within an aquifer recharge area can lead to the serious contamination of groundwater if the materials are exposed to surface waters or are contained in soils through which water infiltrates.

Surface Water

The county's marine and fresh surface waters provide more than aesthetic amenities to Kitsap County residents and businesses. Twenty percent of the people who live in the county depend upon surface water from streams, springs and freshwater reservoirs for their drinking water supply. Both fresh and salt water bodies provide habitat for fish, wildlife and plant life and provide unique recreational opportunities like fishing, beach combing, swimming, boating and shellfish gathering.

The regional economy also depends in part upon the health of Kitsap County's waters. Locally, some small farms rely upon clean water and adequate water quantity for animal and crop watering. Shellfish harvests in marine embayments and Hood Canal depend upon clean water supplies, while the Puget Sound salmon fishery depends upon healthy fresh-water habitats in local streams for survival. Indeed, the condition of Kitsap County's salmon streams has international implications. Coastwide fisheries are affected by the status of Washington's salmon stocks.

The health of salt and fresh water systems are inextricably linked through a stream network which carries water and pollutants from the county's uplands to the marine environment. A system of freshwater and saltwater wetlands which stretch throughout the county also play a vital role in filtering and transferring water. This section will inventory the county's fresh water and marine environments, discuss threats to water quality and survey existing problem areas.

Streams

Characteristics. According to the Department of Fish and Wildlife's Water Resources Information Area (WRIA) stream catalog, the Kitsap Peninsula is marked by hundreds of miles of small streams and creeks, which flow only short distances before meeting other streams, Puget Sound or the Hood Canal. River systems in Kitsap County (Tahuya River, Dewatto River, and Union River) originate in the semi-mountainous, south-central part of the county, while numerous creeks and streams drain the county's predominantly low lying lands.

Most Kitsap County streams originate from lakes, groundwater or spring-fed marsh basins. Streams supplemented by groundwater or springs usually flow throughout the year with water supplied by rainfall. Hundreds of intermittent streams flow only during certain seasons of the year with water supplied by rainfall. The County's streams used to provide excellent habitat for anadromous fish (salmon and trout) due to good water quality and insect supply. Degradation of streams has resulted in few streams having a viable fish run. Local groups are working to restore the damaged habitat of the streams to bring back the fish.

Throughout the state, water bodies, including streams, have been classified by the Department of Natural Resources based on flow volume and importance to fish and wildlife, domestic use or public recreation. Type 1 streams have the largest flow volumes and important fish and wildlife habitat, while Type 2 and 3 typically provide smaller flows but important fish and wildlife habitat. These classifications are defined in **Table A-NS-5**.

Stream types and locations of streams in Kitsap County are shown in **Figure A-NS-8** produced by the Kitsap County Geographical Information System. Type 1 streams in Kitsap County include portions of Big Beef Creek, Blackjack Creek, Burley Creek, Chico Creek, Minter Creek, Curley Creek, Tahuya River and the Union River.

TABLE A-NS-5 Department of Natural Resources Waters of the State Definitions (in accordance with WAC 222-16-030)

<i>Type 1:</i>	All waters within their ordinary high-water mark, inventoried as "shorelines of the state," but not including those waters associated with wetlands. (Under the State Shoreline Management Act of 1971 Chapter 90.58, shorelines of the state are those associated with water bodies of 20 acres or more and stream segments where the mean annual flow is 20 cubic feet per second or more).
<i>Type 2:</i>	Segments of natural waters that are not classified as Type 1 water and have a high use and are important from a water quality standpoint for: domestic water supplies; public recreation; fish spawning, rearing or migration or wildlife uses; or are highly significant to protect water quality.
<i>Type 3:</i>	Segments of natural waters that are not classified as Type 1 or 2 waters and have a moderate to slight use and are moderately important from a water quality standpoint for: domestic use; public recreation; fish spawning, rearing or migration or wildlife uses; or have moderate value to protect water quality.
<i>Type 4:</i>	Segments of natural waters not classified as Type 1, 2 or 3. The significance of Type 4 waters lies in their influence on water quality downstream in Type 1, 2, 3 waters. They are classified Type 4 until the channel width becomes less than two feet between the ordinary high-water marks, and may be perennial or intermittent.
<i>Type 5:</i>	All other waters, in natural water courses, including streams with or without a well-defined channel, areas of perennial or intermittent seepage, ponds and natural sinks. This type also includes drainage ways having short periods of spring runoff.
<i>Type 9:</i>	Those streams that have not been previously classified as one of the above types.

Functions and Values. Kitsap County’s streams and creeks play a major role in the hydrologic cycle. They are the drainage systems of the county’s surface, carrying runoff water and sediments from upper watersheds to low-lying land or water bodies. Some stream water may enter shallow aquifers as recharge. Through their influence on reservoirs, their role in groundwater recharge, and as suppliers of surface water, streams play a major role in drinking water quantity and quality. In addition, in-stream and stream-side vegetation provides food and habitat for insects, fish and other wildlife. The streams themselves provide necessary water for fish and water-dependent wildlife. Finally, stream corridors serve as passageways for wildlife and provide scenic open spaces.

Land Use Implications. If stream habitat and water quality are degraded by development and increased runoff, the county’s stream systems lose some of their significant values and functions. Studies indicate that, without mitigation, when 12% of a watershed becomes impervious, the hydraulic properties of streams are affected due to changes in

stream flow, increased erosion of stream banks and changes in the physical or chemical properties of the water.

Increased stormwater runoff from development can lead to increased flooding. The sedimentation affiliated with the runoff can raise streambeds, exacerbating flooding and destroying stream corridor vegetation and habitat. With increased sedimentation and increased flow velocity, the erosive power of the stream also increases. An unnaturally fast flowing stream will more rapidly cut its own stream banks, scour its bed and further increase sedimentation in the stream bed.

Increases in sedimentation lead to increases in stream turbidity -- the cloudiness of water caused by suspended particles. This reduces the amount of light reaching lower depths of the stream, and can affect the health of many species of plants and animals. The decomposing bacteria which feed on the organic debris use up the available oxygen in the water, contributing further to stream pollution, and resulting in an algae-choked, ecologically barren stream. Chemical and organic pollution from land use activities in a watershed can also create stressful, toxic stream environments.

Finally, development in stream corridors can alter stream systems by removing vegetation along stream banks and exacerbating flood conditions. In a natural condition, the soil and organic litter help to filter and purify the water. As stream-side vegetation and stream channels become altered, the stream system loses its filtering capacity and the ecological integrity of the stream becomes threatened.

Stream Problem Areas. Streams that empty into the county's eastern marine waters and embayments typically drain mostly rural upper watersheds and more densely populated lower watersheds. Most of these streams experience some water quality problems, tending toward increased stream flows and sedimentation due to urbanization, and sewage and animal waste contamination caused by poor farming practices and improperly installed and/or maintained on-site sewage systems. Watershed planning studies identify notably high bacterial levels in Burley, Minter, Gorst, Blackjack, Beaver, Clear and Dogfish creeks, as well as excessive sedimentation in Blackjack Creek.

Streams that drain into Hood Canal and Port Gamble Bay generally flow mostly through forest and rural lands to the more developed shoreline. For the most part, the water quality of these streams is good. Elevated bacterial levels from farm animals and leaking on-site sewage systems exist at Gamble, Little Anderson, Seabeck and Upper Big Beef creeks.

Lakes

Characteristics. More than 100 lakes and ponds exceeding one acre in size adorn Kitsap County, many of which are shown in **Figure A-NS-8**. Eighteen of these lakes are greater than 20 acres in size and are regulated under the Shoreline Management Master Program. These lakes, and their size, are listed in **Table A-NS-6**. Smaller lakes are generally considered wetlands or ponds and are later discussed in more detail as wetlands and fish and wildlife habitat.

Kitsap County's lakes originate from the glacial activity that characterized the area thousands of years ago. In some places, outwash materials from the ice sheet accumulated, and as the ice moved south it cut into these deposits, carving linear, north-south depressions in the land. Those depressed areas which later filled with water are now known geologically as glacial drift-plain lakes; Long Lake in South Kitsap is one example of this type of lake.

Other lakes, known geologically as kettle lakes, formed where the receding glacier stranded large isolated ice blocks. As the ice fragments melted away, they left depressions which eventually filled with precipitation. Lakes and ponds that formed in this way typically have no surface inlet, and may have no outlet, like Hansville’s Buck Lake and South Kitsap’s Horseshoe Lake. Water levels in these lakes depend highly upon the water table beneath the land, and as water tables fluctuate due to precipitation and groundwater withdrawal, the water levels of the kettle lakes also fluctuate.

Three Kitsap County lakes are man-made, all of which are found in the central part of the county. Lake Symington and Lake Tahuya were formed for residential development, while the Union River Reservoir provides the water supply for the city of Bremerton. Along most Kitsap County lakes, residential development dominates the shorelines. In some cases, development along the shorelines originally provided summer residences, most of which are now converted to year-round use. Less developed shorelines encircle Miller Lake, Buck Lake and Morgan Marsh.

Functions and Values. Kitsap County’s lakes provide the highly desirable residential amenities of water access and views. In some lakes, like Wildcat Lake and Long Lake, residents can water ski, while most other lakes provide boating, swimming, fishing and wildlife viewing opportunities. In some places, the Department of Fish and Wildlife stocks lakes with game fish to enhance sport fishing.

Fish and wildlife also depend upon lakes for habitat. Osprey, bald eagle, waterfowl and other types of wildlife are common sights along lake shorelines. Most species depend upon the trees and non-bulkheaded waterfront that characterize natural shoreline areas. Fish and aquatic vegetation depend primarily upon clean, unclouded waters for their survival.

TABLE A-NS-6 Kitsap County Lakes greater than 20 Acres	
<u>LAKE</u>	<u>(Acres)</u>
Buck Lake	(22.0)
Carney Lake	(39.2)
Kitsap Lake	(238.4)
Union River Res.	(93.0)
Panther Lake	(104.1)
Wye Lake	(37.9)
Wildcat Lake	(111.6)
Twin Lakes Res.	(21.7)
Mission Lake	(87.7)
Horseshoe Lake	(40.3)
Tiger Lake	(N/A)
Long Lake	(314.0)
Island Lake	(42.7)
Lake William Symington	(N/A)
Tahuya Lake	(N/A)
Three Fingers Pond & Holland Ponds	(30.8)
Morgan Marsh	(95.0)
Miller Lake	(25.7)

Land Use Implications. Residential and commercial development along Kitsap County's lakes represent the largest threats to this surface water resource. Disturbance of native vegetation and construction of impervious surfaces near the waterfront disrupt the shoreline's natural systems, reducing the shoreline's ability to filter pollutants out of surface water runoff and stem the flow of stormwater. Development along shorelines in non-urban areas can also lead to bacterial contamination of the waters due to improperly installed and/or maintained on-site sewage systems -- a condition prevalent in many rural areas of the county.

Construction of bulkheads to enhance landscaped properties may alter the natural erosion pattern of the shoreline and destroy habitat by blocking sunlight, replacing native lakebed vegetation and altering feeding, nesting and breeding areas. Removal of trees along the shoreline can also disrupt roosting and nesting areas for waterfowl and birds of prey.

Problem Areas. As shorelines are developed, water quality in the county's lakes deteriorates. Causes are stormwater runoff, failure of older on-site sewage systems, and other sources of non-point pollution, such as waterfowl, fertilizers, etc. Eutrophication (the excessive build-up of nutrients causing elevated plant growth and the depletions in dissolved oxygen) threatens recreational opportunities and degrades fish and wildlife habitat. Long Lake has experienced significant rates of organic pollution in recent years. A sewer line was recently extended to Kitsap Lake because of water quality problems. The County's Draft Comprehensive Sewer Plan also identifies Lake William Symington, Wildcat Lake and Tahuya lake as "hot spots" for water quality reasons.

In addition to water quality problems, kettle lakes must also weather low water levels caused by deficit precipitation or groundwater withdrawal. Water level fluctuations and declines in Horseshoe and Island Lakes are most likely due to a combination of groundwater withdrawals, large community wells, variable precipitation and increase in urban density.

Wetlands

Characteristics. Areas designated as wetlands exhibit three distinct characteristics: Hydric soils (soils saturated with water), high water table (the presence of standing water at least part of the year) and water-tolerant or water-dependent plant species. If water-tolerant vegetation has been removed from the site but the area still has hydric soils and high water table, the site may remain part of an aquatic system and may be classified as a wetland.

One general pattern of freshwater wetlands occurs in isolated, glacially carved depressions that have filled with silt, organic materials and rainwater. These wetlands are typically north-south, tending to be elongated figures. Another pattern of wetlands is associated with stream or other large hydrological systems, like lakes and marine waters. In low-lying areas, such as along streams or shorelines where water-velocity is slow, silt and organic materials are deposited. In these areas, water-tolerant vegetation has a chance to take root, which further slows the flow of water and eventually leads to the formation of a wetland.

Kitsap County relies primarily on the USDA Natural Resources Conservation Service (SCS) Soils Maps and the US Fish and Wildlife Service's National Wetlands Inventory (NWI) Map for identifying and regulating wetlands. These two sources have been compiled into **Figure A-NS-8**. Neither the NWI nor the SCS maps identify all the wetlands in the county, due in part to their scale. Additional wetlands information can also be derived from the Coastal Zone Atlas, from the

Department of Natural Resource stream types maps and from local wetlands inventories. In the future, the county's Geographic Information System will map the site-specific wetlands identified during the building and development process as well as the information provided in local wetland inventories.

Classification. The Natural Resources Conservation Service considers nine Kitsap County soil types to be hydric, totaling an estimated 20,140 acres (approximately 8%) of the county. The wetlands identified by the National Wetlands Inventory through aerial photography do not always coincide with the hydric soils survey. One Department of Ecology inventory completed in 1983 estimates that three major wetlands types exist throughout the county, totaling more than 17,700 acres:

Estuarine wetlands (13,614 acres): Located where fresh and salt waters meet. Estuarine wetlands extend upstream and adjacent and landward to where ocean-derived salinity measures less than 0.5 parts per thousand. Examples of this type of wetland include vegetated salt marshes, kelp beds or eelgrass beds and unvegetated areas such as sandy beaches or mudflats.

Lacustrine wetlands (1,154 acres): Essentially open water lakes, with a minimum of vegetated wetlands adjacent to them. These wetlands generally exceed 20 acres in size or have standing water that reaches a minimum depth of 6.6 feet.

Palustrine wetlands (2,971 acres): Inland freshwater habitats fed by groundwater as well as surface runoff. They include freshwater marshes and swamps, bogs, ponds and wet meadows.

When wetlands are identified, they are typically identified by one of the above types and categorized according to the Washington State Four-Tiered Wetlands Rating System. These categories are used to determine setbacks and buffers during the State Environmental Policy Act review process. The rating system is summarized in **Table A-NS-7**.

Wetlands containing sphagnum moss are one of the most sensitive types of wetlands -- one inch of organic soils in these wetlands can take 40 or more years to form. These wetlands are especially vulnerable to nonpoint source pollution and alterations to water regimes. While uncommon, examples of this type of wetland include those on the peninsulas east of Gamble and Seabeck Bays, near Newberry Road and near the intersection of Nellita and Albert Pfundt Roads. Other noteworthy wetlands are identified by the state's Natural Heritage Program and include Miller Lake, Foulweather Bluff and Stavis Bay.

Functions and Values. Wetlands represent a significant part of the local and regional hydrologic cycles. Some wetlands serve as groundwater recharge areas, and all wetlands serve in some capacity to store stormwater runoff, thus reducing flood damage. As timber harvesting, agriculture or development occurs in a drainage basin, stormwater flow in the drainage basin increases. The flood control capability of a wetlands is reduced when it receives these greater amounts of overland flow, and incidences of localized flooding increase. Likewise, the capacity to control wave and current erosion and prevent shoreline flooding is removed when coastal wetlands are seriously degraded, filled or dredged.

In addition to their water quantity roles, wetlands protect water quality by trapping and storing the nutrients from upland runoff in plant tissue and serving as a settling basin for silt from upland erosion. As a highly productive ecosystem, wetlands play a major role in providing habitat for the county’s fish and wildlife. Many fish species, including some salmon, depend upon wetlands for one cycle of their lives. Coastal wetlands are particularly important to productive marine fisheries and healthy waterfowl populations. Wetlands are also important to the survival of many species of insects, amphibians, reptiles, birds and mammals. The presence of diverse species in these ecosystems contributes to their value for recreation and education.

Land Use Implications. Development around a wetland can destroy its ecological health by overloading the wetland with silt and nutrients. This may destroy the wetland’s filtering abilities and affect plant, amphibian and fish life by reducing the amount of oxygen or sunlight available for life. Even a one-time silting from construction can have a long-term impact on marsh ecology: silt is slowly flushed out of wetlands and is constantly stirred up by wind and scavenger fish.

TABLE A-NS-7 Washington State Four-Tier Wetlands Rating System

Category	Criteria
Category I	(i) Documented habitat for endangered or threatened plant, fish or animal species or for potentially extirpated plant species recognized by state or federal agencies; or (ii) High quality native wetland communities, including documented Category I or II quality natural heritage wetland sites and sites which qualify as a Category I or II quality natural heritage wetland; or (iii) High quality, regionally rare wetland communities with irreplaceable ecological functions including sphagnum bogs and fens, kelp and eelgrass beds, estuarine wetlands or mature forested swamps; or (iv) Wetlands of exceptional local significance (i.e., rarity, groundwater recharge areas, significant habitats, unique educational sites or other specific functional values within a watershed or other regional boundary).
Category II	(i) Regulated wetlands that do not contain features outlined in Category I; and (ii) Documented habitat for sensitive plant, fish or animal species recognized by federal or state agencies; or (iii) Rare wetland communities listed in subsection Category I, iii, which are not high quality; or (iv) Wetland types with significant functions which may not be adequately replicated through creation or restoration; or (v) Wetlands with significant habitat value based on diversity and size; or (vi) Wetlands which provide exceptionally high habitat, or represent regionally rare habitat to anadromous fish or priority fish species; or
	(vii) Wetlands with significant use by fish and wildlife.

TABLE A-NS-7 Washington State Four-Tier Wetlands Rating System	
Category III	(i) Wetlands that do not contain features outlined in Category I, II, or IV.
Category IV	(i) Wetlands that do not meet the criteria of a Category I or II wetland; and (ii) Wetlands that are less than or equal to one acre in size, and have only one wetland class or only one dominant plant species (monotypic vegetation); or (iii) Isolated wetlands that are less than or equal to two acres in size, and have only one wetland class and a predominance of exotic species.

Land use activities in the uplands of a wetland’s drainage basin can affect the wetland’s role in the hydrologic cycle. Some wetlands serve as groundwater recharge areas, and all wetlands serve in some capacity to store overland flows of water. As timber harvesting, agriculture or development occurs in a drainage basin, overland flow of water in the drainage basin increases and groundwater recharge decreases.

The storage capacity of a wetland is reduced when it receives these greater amounts of overland flow. During the dry season, the demands on wetlands for groundwater recharge are increasingly high, creating seasonal fluctuations in the amount of water present. These fluctuations create disturbances in the ecological system of the wetlands, further threatening the wetland's ability to perform its hydrological role.

Coastal wetlands are sensitive to alterations in freshwater flows due to adjacent or upland development. Loss of coastal wetland ecosystems through filling, dredging, channelizing and adjacent development can exacerbate coastal flooding and erosion, reduce pollutant filtering and negatively impact fisheries resources.

Problem Areas. Historical losses of wetlands in Kitsap County are difficult to estimate for a number of reasons, including lack of historical wetlands inventories. The Puget Sound Water Quality Authority estimates that throughout Puget Sound an estimated 70% of the original tidal wetlands have been lost to diking, dredging and filling. Immeasurable acres of freshwater wetlands have also been lost in this manner.

In addition to direct losses caused by dredging, diking and filling, numerous wetlands have been degraded by land use activities which alter the quantity or quality of water entering the wetland or which disturb the wetlands ecosystem through encroachment or removal of perimeter vegetation.

Closed Depressions

Closed depressions are low-lying areas which have no, or such a limited, surface water outlet that in most storm events the area acts as a retention basin. Typically, closed depressions have no surface water outlet except for infiltration or evapotranspiration (water returning to the atmosphere through evaporation from the land and transpiration from plants). By their nature, closed depressions may contain wetlands regulated under Kitsap County’s Critical Areas Ordinance.

In those cases where a surface water outlet does not exist, and the underlying geology precludes infiltration, closed depressions should be given important consideration during the land use process.

Failure to consider potential increases in water level resulting from land development activities may result in flooding problems or degradation of valuable wetland resources. Because depressions are geographically widespread and discreet in configuration, they are not feasibly inventoried or classified as to individual value.

In those cases where a closed depression is underlaid by pervious soils, there may be significant aquifer recharge considerations.

Whether or not a depression has a surface water outlet, they act to attenuate stormwater runoff rates and volumes. In those cases where a depression has a surface water outlet, detention of peak runoff rates is provided. Where depressions retain significant volumes of runoff, shallow groundwater movement can be important in maintaining valuable fish habitat by providing dry period stream flows.

Land development activities contributing runoff to a depression require a specialized analysis to evaluate potential impacts to adjacent lands and downstream drainage courses. Kitsap County's "Stormwater Management Ordinance" Section 7.20(3) requires that major development activities contributing runoff to closed depressions with greater than 5,000-sf of water surface area at the overflow elevation, meet the following requirements:

- 1. CASE 1:** The pre-development 100-year, 7-day and 24-hour duration design storms from the drainage basin tributary to the closed depression are routed into the closed depression using only infiltration as outflow. If the design storms do not overflow the closed depression, no runoff may leave the site for the same storm events following development of a proposed project. This may be accomplished by excavating additional volume in the closed depression subject to all applicable requirements. If a portion of the depression is located off of the project site, impacts to adjacent properties shall be evaluated.
- 2. CASE 2:** The pre-development 100-year, 7-day 24-hour duration design storm events from the drainage basin tributary to the closed depression are routed to the closed depression using only infiltration as outflow, and overflow occurs. The closed depression shall then be analyzed as a detention/infiltration pond. The required performance, therefore, shall not exceed the pre-development runoff rates for 50% of the 2-year and 100% of the 10-year and 100-year, 24-hour duration and 100-year, 7-day duration design storms. This will require that a control structure, emergency overflow spillway, access road, and other applicable design criteria be met. If the facility will be maintained by Kitsap County, the closed depression shall be placed in a dedicated tract. If the facility will be privately maintained, the tract shall be located within a drainage easement. If a portion of the depression is located off of the project site, impacts to adjacent properties shall be evaluated.
- 3. CASE 3:** When a proposed project is contributory to a closed depression located off-site, the volume of runoff discharged may not be increased for the 2-, 10- and 100-year, 24-hour duration, and the 100-year, 7-day duration storm events. The exception to this requirement is in the case where discharge would not result in an increase in water surface elevation of greater than 0.01-foot for the 100-year storm events.

The method of analysis conforms to the technical requirements of the WSDOE "Stormwater Management Manual for the Puget Sound Basin."

Marine Environment

Characteristics. The marine waters along the shorelines and borders of the eastern part of the county contain a highly diversified salt water environment that can be greatly influenced by activities which occur on land. Three major types of water bodies exist off of Kitsap County's 228 miles of saltwater shoreline: embayments, Hood Canal and open water.

Embayments: Prominent embayments, like Gamble Bay, Liberty Bay, Miller Bay, Sinclair Inlet and Dyes Inlet, contain tidally influenced waters that mix slowly with the more open waters of Puget Sound or Hood Canal. Because of their slow mixing rates, their shallow depths and their proximity to land Use activities along the shoreline, marine embayments are extremely susceptible to both upland and offshore pollution.

Hood Canal: Hood Canal can be considered a narrow and deep extension of Puget Sound, with a marine ecosystem unique to the region. The Canal's depth reaches 600 feet in some places and averages 1.5 miles in width. In general, strongest tidal flow and greatest mixing with the waters of Puget Sound occur in the northern canal, with slow exchange and movement of water in the central and southern canal, particularly in the deeper waters.

From the surface to about 60 feet in depth, temperatures and salinities are largely influenced by freshwater runoff and tidal currents. Waters at these shallow depths are warm and rich in nutrients and susceptible to environmental changes caused by freshwater runoff.

Puget Sound: Colvos Passage, Port Orchard Narrows, Rich Passage, Agate Passage and the open waters of Puget Sound north of Bainbridge Island represent well-mixed, deeper marine waters where freshwater loads are mostly diluted. Pollution and excess sedimentation from land Use activities has the greatest influence on near shore habitats like shellfish beds and kelp and eelgrass beds.

Functions and Values. The waters off the shoreline of Kitsap County are vital to fish and shellfish resources because they provide mixing and transition zones from the cool, dense saline waters of Puget Sound to the warmer, less saline water layers of the peninsula's shallow shelves, bays and channels. Within prominent protected waters, such as Dyes and Sinclair Inlets and Liberty Bay, rich feeding areas for anadromous fish and birdlife exist, and the sheltered waters of these inlets provide important wintering habitat for migratory waterfowl. The strongly mixed currents within Colvos, Agate and Rich Passages also create prime feeding areas by collecting a great diversity of marine organisms within the tide rips.

A healthy marine environment is important to the survival of birds and marine mammals that depend upon fish and plant life for food. Near shore habitats, including mud flats, vegetation, cobble and sand provide critical spawning, rearing and feeding areas, protect the shoreline from erosion and filter pollutants from the water. In addition, Puget Sound's open waters, embayments and Hood Canal provide aesthetic benefits to county residents, benefits which are greatly reduced when waters and beaches are clouded with excessive nutrient growth or pollutants.

Land Use Implications. The marine waters surrounding Kitsap County can be greatly influenced by land use activities. Upland streams carry freshwater, nutrients and pollutants directly to the offshore salty waters. Runoff from areas adjacent to the shoreline also flows directly into embayments, Puget Sound and Hood Canal, while development-influenced changes in natural shoreline vegetation and beaches can directly impact marine ecosystems and near shore habitat.

In Kitsap County the marine environment is impacted by point source and nonpoint source water pollution related to land use activities. Point sources of pollution originate from single, readily identifiable locations, such as sewer pipes or industrial discharges, and are discharged to water at a specified point such as the mouth of a pipe or ditch.

Municipal and industrial discharges are forms of point source pollution and contribute to nearly half of the toxins loading in Puget Sound. Some industrial facilities or commercial businesses discharge wastes directly into Puget Sound. Others utilize municipal treatment plants that treat and then discharge the waste. However, even when the waste undergoes treatment, toxicants still enter the region's marine waters. Point sources of pollution are regulated through both state and federal legislation. Locations of point source discharges in Kitsap County are listed in **Table A-NS_8**.

TABLE A-NS-8 Locations of Point Source Discharges with State or Federal Permits
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Type of Industry	Location of Source
Wastewater Treatment:	Bremerton
	Manchester Central
	Kitsap Port
	Orchard Fort Ward
	Suquamish Kingston
	Winslow
Hatcheries:	Global Aqua (net pens in Gorst Creek Clam Bay and Fort Ward) Grovers Creek
Boat Yards:	Eagle Harbor
	Sinclair
	Kingston
General Industrial:	Fred Hill Concrete Navy City Metals
	Pope and Talbot Olympic View Sanitary Landfill
Construction Sites:	Greater than 5 acres,
	stormwater control
Federal Installments:	All Navy facilities

Source: Department of Ecology, Water Quality Division, 1993

Nonpoint sources of pollution enter streams, wetlands, lakes and marine waters from dispersed land-based or water-based activities, and include: surface water runoff from agricultural lands, urban areas or forest lands; failing on-site sewage systems; atmospheric deposition; leaking landfills and underground storage tanks; and sewage discharge and litter from boats and marinas. Sources of nonpoint pollution increase as an area becomes more developed and more human activity occurs.

The diffused nature of nonpoint source pollution makes it difficult to control, monitor or regulate. Requirements contained in clearing, grading and drainage ordinances help to control erosion and stormwater runoff, while some health regulations address improperly installed and/or maintained on-site sewage systems, farm practices and boater waste.

In Kitsap County, local jurisdictions, agencies and citizens have worked together to draft coordinated watershed management plans for the Burley Lagoon/Minter Bay, Dyes Inlet and Sinclair Inlet watersheds (plans are also currently being developed for the Hood Canal and Liberty Bay/Miller Bay watersheds). These watershed management plans are designed to improve the protection of both salt and freshwater resources through stronger control of nonpoint source pollution. They identify watershed-specific pollution sources and recommend voluntary and governmental actions to watershed residents, businesses, organizations and governments that reduce the occurrence of harmful pollutants.

Problem Areas. Most of the water quality problems identified in the county by the Puget Sound Ambient Monitoring Program occur in the county's embayments. In embayments, contaminants tend to settle rapidly, accumulating in sediments close to their source. Contamination can be severe and long-lasting in these areas because the toxic chemicals, for the most part, do not dissipate. Because contaminants diminish rapidly with distance from their source, the effects of toxic chemicals on the overall health of open waters are not as severe.

Sinclair Inlet is considered one of the most polluted embayments in Puget Sound. In 1993, the U.S. Environmental Protection Agency identified the area near the Puget Sound Naval Shipyard as a Superfund site. According to the Puget Sound Water Quality Authority, in 1992 both Sinclair and Dyes Inlets had chronic mercury problems, and Sinclair Inlet was one of the few places in Puget Sound that violated state fecal coliform standards.

Along Kitsap County's shorelines, shellfish beds have been restricted or closed to harvest in the following areas due to water quality problems: Liberty Bay, Dyes Inlet, Sinclair Inlet, inner Seabeck Bay; and at Port Orchard, Suquamish, Port Gamble and Kingston sewage treatment outfalls. Restrictions on shellfish beds translate into a loss of revenue for private industry -- in Liberty Bay alone, the total value of the shellfish resource unable to be harvested due to closure is estimated to be \$6 million.

The overall water quality of Kitsap County's portion of the Hood Canal is considered excellent. Localized problems exist with leaking on-site sewage systems at Olympic View and Driftwood Keys. Hood Canal's headwaters at Belfair (in Mason County) are experiencing pollution from nonpoint source pollution and shellfish beds have been closed to commercial harvest.

V. FREQUENTLY FLOODED AREAS

Frequently flooded areas are lands inundated with water during periods of high rainfall or strong coastal winds. They typically lie adjacent to streams, rivers, lakes and coastlines and include wetlands associated with these areas. During intense storms, properties located in frequently flooded areas are prone to severe damage. Development in these areas may be hazardous not only to the property owner, but may also aggravate flood conditions on neighboring lands and compound damage to the natural environment.

Kitsap County is not as prone to catastrophic flooding as other counties in the Puget Sound region, due to a lack of major river systems, a preponderance of embayments which soften wave velocities and the presence of steep bluffs along much of the shoreline. Despite this fact, some flooding has historically created minor damage in some areas of the county and should be addressed in the land use planning process and associated regulations. This section describes the characteristics of frequently flooded areas and summarizes the causes of flooding and the implications to land use.

Characteristics

Figure A-NS-9 illustrates the concept of a floodway and 100-year floodplain along stream and river corridors. It also depicts the changes to the floodplain when development occurs within frequently flooded areas. Along the shoreline, frequently flooded areas are typically low bank, or at the base of steep bluffs (which have typically been eroded by past wave action). Strong wave action, flood levels in stream outflows, high wind velocity and high tides may combine to make these coastal areas hazardous during storms.

The floodplain designations of the Federal Emergency Management Agency (FEMA) National Flood Insurance Program present the most complete information available about frequently flooded areas in Kitsap County. These maps were produced in 1980, mostly from aerial photography, and delineate different flood zone areas based upon flooding potential. Areas of 100- and 500- year floods are depicted in **Figure A-NS-10**, and lie mostly along coastal and lake shorelines and major streams.

Although a 100-year flood event theoretically has a 1% chance of occurring in a given year, this type of storm may actually occur more frequently than every 100 years; King County experienced two 100-year storm events between 1986 and 1990. Because the FEMA maps were designed only from aerial photos and topographic maps, in some areas they may not accurately portray the real flood risks. For example, no areas in Kitsap County are designated as V-Zones, points along coastal areas where the 100-year flood will be accompanied by high velocity waves. Despite this, Point Jefferson has incurred significant wave and wind damage in recent years.

Throughout the county, localized flooding occurs in areas that have not been identified on the FEMA maps. These flood occurrences can be described as “drainage problems” which have resulted from disturbance of natural hydrological patterns caused by development, vegetation removal and filling and damage to wetlands. Drainage control mechanisms, such as stormwater retention ponds and ditches, occasionally overflow and damage neighboring properties.

Flooding can result in loss of stream or shoreline habitat and can cause water quality problems through increased sedimentation, increased contamination from urban runoff or saturation of on-site sewage system drainfields. Along some stream corridors, floods have deposited fertile agricultural soils in the floodplain. Due to the danger inherent in building in frequently flooded areas, these places are often better suited for farmland, parks, trails and fish and wildlife habitat.

Causes

The county's FIRM (Flood Insurance Rate Map) maps delineate areas that would flood during a 100- or 500-year storm that bring unusually heavy rains and winds. These maps do not reflect recent hydrological changes in drainage basins, or changing environmental conditions along coastal areas. These additional causes of potential flooding in Kitsap County are discussed below.

Figure A-NS-9

**The Concept of the Floodplain
(From Ecology's Floodplain Management Handbook)**

High Tides/Strong Winds. High tides and strong winds may increase the risk of flood damage along the shoreline. According to the National Weather Service, the highest storm tide recorded in Puget Sound occurred in Seattle in December of 1977 and measured 14.6 feet above zero tide level. This storm tide caused significant flooding. Historical records of storm events do not exist for the Kitsap Peninsula.

Tsunami. A tsunami is a series of traveling ocean waves of great length and long period, generated by disturbances associated with earthquakes in oceanic and coastal regions. These enormous waves can cause great destruction along shorelines but are not likely to occur in the protected waters of Puget Sound.

Sea Level Rise. Global climate change and land subsidence may increase sea level rise between 0.75 feet and 5.7 feet over the next 100 years, according to the Department of Ecology. At its most extreme, this rise in the level of Puget Sound could inundate some low-lying shorelines, disrupt storm drain flow, increase coastal erosion and aggravate coastal flooding during storms.

Increased Runoff From Impermeable Surfaces. Roofs, roads, and parking lots in a developed area causes the volume of surface runoff and the peak rate of flow to increase and decreases ground water recharge. Runoff runs quickly off the surface directly into the streams. This increases both the velocity and total quantity of flow and leads to localized flooding along the stream corridor. In addition, sediment from increasingly eroded and unstable stream banks and cleared areas amasses downstream and fills ponds, streambeds and stormwater facilities. This filling can also result in flooding, as water catchments become incapable of holding high volumes of water.

Other Hydrological Changes. Other hydrological changes in drainage areas occur due to vegetation removal and land grading from timber harvest and development. These activities lead to higher volumes of stormwater runoff by reducing the amount of vegetation present to slow water movement as well as by increasing impervious surfaces. Increased runoff and erosion from these sites can obstruct flood channels, causing streams to overflow. Filling and degrading of wetlands impacts their water storage capacity and can lead to increased flooding in the wetlands' vicinity or lead to increases in water volumes released to streams.

Floodplain Development. Development In The Floodplains can also lead to hazardous flood conditions. Any structure that exists in a floodplain contributes to a rise in flood levels. Structures or debris swept away by floods create additional damage as they are carried downstream. In Kitsap County, development is not permitted in a floodplain unless stringent building and setback guidelines are met.

Land Use Implications

Because of the environmental, health and physical hazards to landowners and neighboring properties, alternatives to development should be encouraged in areas recognized by FEMA as floodplain. A floodplain maintained in its natural state can provide recreational land and can protect critical fish and wildlife habitat and stream water quality. Alternative uses for floodplain include agricultural lands (soils are typically prime in these areas), parks, trails and private or public open space. Other land use implications include the impacts of flood damage restoration and prevention, such as dredging, installation of bank protection, channel relocation and wood debris removal.

FEMA requires local jurisdictions to regulate development in areas designated by FEMA as floodplain. The Kitsap County Flood Damage Prevention Ordinance includes methods and provisions for restricting activities within floodplains that may be vulnerable to flooding and activities that might increase flood damage.

In areas not designated as floodplain, the threat of flooding from drainage problems can be partially alleviated through actions which reduce the amount of change in an area's hydrology. Protection of wetlands and stream buffers, reduction of soil erosion at development project sites, maintenance of stormwater ponds and ditches and minimization of impervious surfaces can help to reduce drainage problems and the occurrence of damaging flooding.

VI. PLANT, FISH AND WILDLIFE HABITAT CONSERVATION AREAS

Habitat conservation areas are places critical to the survival of Kitsap County's diverse plant and wildlife communities. These areas encompass a variety of habitat types, including large parcels of contiguous undeveloped land, special areas like streams or wetlands and structural elements like rocky shorelines or standing dead trees. The ecological value of an area depends on the quantity, quality, diversity and seasonality of the food, water and cover that it offers. A site's value is also a function of proximity to other usable habitats, the presence of rare species and the rarity of the habitat type. Habitat conditions are the prime determinant of wildlife abundance both in the number of species present and the number of individuals.

Protection and restoration of habitat conservation areas are key to maintaining the biological diversity of Kitsap County and the Puget Sound region. As development changes the face of the landscape, habitat conservation areas are lost or degraded. These losses can be minimized or reduced through land use policies and regulations which address important habitat issues. In some instances, the most valuable habitat conservation areas may undergo restoration or may be acquired for permanent protection.

This section summarizes the values of healthy habitat, provides an overview of terrestrial, freshwater and marine habitats in Kitsap County and discusses habitat needs and land use threats to significant species. It must be noted that the broad categorization of habitat in terms of terrestrial, freshwater and marine is for ease of discussion -- the health of these habitats is interdependent, and many species rely upon all three of these habitat categories for survival. Information for this discussion is drawn from a variety of sources. No complete countywide inventory of historic or current habitat exists.

Functions and Values

The variety of terrestrial, freshwater and marine habitat in Kitsap County supports a diversity of plant and wildlife types. In addition to providing food, cover and water for these species, habitat areas provide a number of other vital functions.

Biological Diversity

The biological diversity of the Puget Sound region is enhanced when habitat and intact ecosystems are protected in Kitsap County. Populations of some species, such as many types of birds, can colonize or enhance gene pools of surrounding areas. Healthy fish populations can contribute to the overall status of the Puget Sound food chain, as evidenced by the significant contribution of Hood Canal Coho salmon runs to the overall Puget Sound Coho salmon fishery.

Water Quality Protection

Water quality protection can also be enhanced when important habitat and vegetation is left undisturbed. Vegetation and groundcover help retain soil during a rain event, reducing the effects of erosion and sedimentation to lakes, streams, wetlands and marine waters. Vegetation along riparian corridors, wetlands and shorelines also plays an important role in reducing turbidity and siltation by trapping sediment and provides thermal cover to prevent water temperature extremes.

Groundwater Recharge

Groundwater recharge is maintained when woodlands and forests remain intact. In these vegetated areas, rainwater can slowly percolate into the soil, recharging groundwater and reducing stormwater runoff.

Flood Control

Flood control can be enhanced by the presence of marine and riparian vegetation. Marine vegetation such as kelp and eelgrass absorb wave energy and thus minimize the impact to the shoreline from stormwaves. The preservation of floodplains for wildlife habitat reduces the amount of impervious surface present in the floodplain, thus reducing stormwater runoff and minimizing the height and velocity of floodwaters.

Erosion Control

Erosion control can also be enhanced by vegetation in the watershed and along the shoreline. Plant roots prevent soil from being readily carried through a watershed by rainwater and prevent excessive erosion of streambanks and shorelines. Eelgrass and kelp beds slow shoreline erosion caused by waves. Eelgrass beds are the first step in the conversion of a marine environment to a wet meadowland and, ultimately into land.

Recreational/Cultural Activities

Recreational and cultural activities are afforded by wildlife habitat protection. Kitsap County's shorelines and tidelands provide recreational and subsistence shellfish harvesting opportunities for Suquamish and S'Klallam tribal members, county residents and visitors. Throughout the county's inlets, streams, lakes and ponds, opportunities exist to sport fish for trout, salmon and bass. For many people, the presence of healthy populations of fish and wildlife contributes to the quality of life in Kitsap County and birdwatching, nature walks and beachcombing provide popular nonconsumptive forms of recreation.

Commercial/Economic Vitality

Commercial and economic vitality from forestry, commercial fisheries, shellfish harvesting and tourism all depend upon healthy habitat areas which contribute to the local and tribal economies and provide economic diversification in a region heavily reliant on the defense industry.

Terrestrial

Characteristics

Before the turn of the century, old-growth Douglas fir and red cedar forest blanketed much of Kitsap County. The remnants of this forest can be seen as isolated, single, old-growth trees and as enormous stumps which lie throughout the county's second growth wooded lands. With the disappearance of the old-growth forest and the added human activity in the area, the Kitsap Peninsula lost the plant and wildlife communities associated with the Northwest's mature old-growth ecosystem, including various fungi, the fisher, the marbled murrelet and the spotted owl.

Today, the county's 396 square miles of land greatly reflect human presence. Mature second-growth forests stand in place of the old growth forest ecosystem and are dominated by Douglas fir, with some Western hemlock, Western red cedar and Western white pine also present. In cleared and urban areas, deciduous vegetation successfully competes with conifers. Red alder and big-leaf maple are the most familiar components of broadleaf forests, but Pacific willow, Madrona and Cascara are also commonly found. Large areas of forested or recently logged lands are found in the southwestern and northern parts of the county, while smaller forests or woodlots lie scattered throughout. Many plant and wildlife species rely on wooded areas, old trees or mature forests for habitat.

The county's topography is gently rolling, with the exception of Gold and Green mountains which reach 1,700 feet in elevation. Pastures and meadows are familiar components of valleys and low-lying areas. These places may support agricultural crops, or may host woody vegetation, grasses and wild flowers. They provide food for animals like migratory waterfowl and deer, enhance the habitat for rodents and other small mammals and support predators like barn owls, fox, garter snakes and red-tailed hawk.

The county's most rural areas provide habitat for large mammals like bear, deer and bobcat that depend for survival primarily upon contiguous parcels of undeveloped land, with minimal road or human intrusions. Large contiguous parcels of mature forest land also provide important habitat for wildlife, particularly birds, that compete successfully with other species only in deep forests.

Important Habitats and Habitat Elements

Available information about important terrestrial habitats and habitat elements in Kitsap County is generally specific to certain species. In some cases, state agencies have identified and mapped areas which provide unique habitat values, and these areas are shown in **Figure A-NS-11**.

Unique Plant Species and Plant Communities. The Department of Natural Resources Natural Heritage Program has identified six “sensitive plant species” which are in danger of becoming extinct within the county. The Kitsap Audubon Society has identified an additional eight rare plant species which they believe should also be protected where they exist. These plants and their habitat needs are listed in **Table A-NS-9**. Most of these species depend upon undisturbed wetlands, shorelines, or mature forests for habitat.

The Natural Heritage Program has also identified at least 10 areas throughout the county which contain plant communities of statewide significance. One Douglas Fir-Western hemlock forest has been identified as outstanding representatives of plant communities in central Puget Sound. These were once dominant woodland types across the Kitsap Peninsula and are now only found in remnant patches. Other natural heritage sites are associated with fresh and saltwater wetlands.

Department of Fish and Wildlife Priority Habitat. The Department of Fish and Wildlife (DFW) defines “priority species” as those species that are of concern due to their population status and their sensitivity to habitat alteration. Priority species in Kitsap County and their habitat requirements are listed in **Table A-NS-10**. The bald eagle is the only species still found in Kitsap County listed as threatened or endangered by state or federal agencies. The purple martin and pileated woodpecker are listed as candidate species, indicating that without substantial population recovery, these species may warrant the extra protection afforded by threatened or endangered status.

Priority terrestrial habitats mapped by the DFW include areas known to provide nesting or roosting sites for bald eagles, heron rookeries (where colonies of heron nest) and known nesting sites for purple martin and pileated woodpecker. Priority habitats are mapped in **Figure A-NS-11**. Other priority habitats listed by the DFW but not mapped include caves, cliffs, urban natural open space and snag-rich areas.

In reviewing the habitat needs of priority species listed in **Table A-NS-10**, certain important habitat requirements become evident. Important terrestrial habitat elements in Kitsap County include tall trees along the shoreline, mature forest with snags and fallen trees and undisturbed mature forest near or surrounding wetlands. These habitat elements are primarily important to bird species which use the trees for nesting and perching, and to small mammals like beaver and river otter which rely upon an interface between undisturbed terrestrial and aquatic areas. Some areas of the county may provide an abundance of important habitat elements, but these areas have not yet been mapped.

Other Important Habitats. Kitsap County’s rural areas are home to small populations of black bear and bobcat. Black bear have ranges that often reach 10 miles in radius, and both bear and bobcats rely on large areas of contiguous, undeveloped land that provide minimal contact with humans and roads. Many other animals rely on the habitat provided by large wooded areas. These species, most notably migratory songbirds, are known as area-sensitive, and do not adapt well to fragmentation of forest habitat. Further research on the habitat needs of these birds would help to determine ideal sizes for natural preserves. In general, there is a strong correlation between forest size and number of bird and mammal species present.

TABLE A- NS-9 State-Sensitive and Locally Unique Plants	
SPECIES	KITSAP COUNTY HABITAT
1. Bog clubmoss (sensitive)	Wetlands adjacent to low elevation lakes
2. Western yellow oxalis (sensitive)	Moist coastal woods, dry open slopes
3. Alaska alkaligrass (sensitive)	Salt marshes, mudflats, gravelly areas near beaches, rock outcrops in sea spray
4. Chain-fern (sensitive)	Stream banks, moist "seep" areas, mostly near salt water
5. Pink sandverbena (sensitive)	Sandy beaches along saltwater
6. Fringed pinesap (sensitive)	Duff and humus of shaded, low-elevation coniferous forest
7. Bristly sedge	Marshes and wet meadows
8. Gnome plant	Deep humus in coniferous forest
9. Water lobelia (lobellia dortmania)	Emergent freshwater wetlands
10. Chick lupine (lupinus micipcarpus)	Dry to moist soils
11. White meconella (meconella oregana)	Open ground where wet in the spring
12. Branch montia (montia diffusa)	Moist places, mostly in the west Cascades
13. Great pole monium (pole monium corneum)	Thickets, woodlands and forest openings
14. Woolgrass (scirpus cyperinus)	Wet, low ground

Source: *Flora of the Pacific NW, Hitchcock - Cronquist, University of Washington Press, 1973 Seattle, 1991*

Smaller tracts of natural habitat are suitable for many plant and animal communities and are temporarily used by other species as they forage for food or move from one large natural area to another. Even in urban areas, parks or open space can serve as wildlife refuges, but species diversity is less in smaller preserves and in refuges that are relatively isolated from other natural areas.

Natural corridors that connect small tracts and large reserves facilitate wildlife movement and thus help to maintain healthy populations of plant and animals by enabling species to colonize new areas, forage for food, find mates and exchange genes with neighboring populations. Studies performed in King County indicate that 100-foot buffers along streams provide adequate wildlife corridors, with variations for severe slopes or extensive wetland areas.

These important habitats thus include large tracts of undeveloped rural lands, small natural habitats (even in urban areas) and corridors that connect preserves with one another. These habitats have not yet been inventoried in Kitsap County, and optimal sizes for these habitat areas have not been determined.

Land Use Implications

When undeveloped land is converted to residential or commercial uses, existing habitat is permanently lost or greatly modified. Many species which lived on the property either die or move to adjacent parcels, where they compete with existing populations for space. When the habitat is modified, it may become more suitable for some species, like raccoons and crows. Small-scale opportunities for habitat enhancement, such as replanting of native vegetation, or cultivating berry or fruit-producing plants, may encourage colonization by others. In some cases, loss of important habitat elements such as mature trees along shorelines, snags and downed logs can cause the decline of different types of wildlife which might otherwise be able to adapt to urban or suburban development patterns.

As the landscape in rural areas becomes more fragmented by human development, less habitat remains for species like black bear and bobcat that avoid human contact. Wildlife deaths from automobiles, hunting or trapping also increase. As roads and residential developments fragment habitats, some plant and wildlife populations become isolated from neighboring populations. This isolation decreases genetic diversity and can lead to the eventual extinction of that population. In addition, habitat fragmentation increases the “edge effect” on remaining intact habitats. This enables urban tolerant species to invade the habitat from its edges and leads to localized extirpation of more specialized species.

Terrestrial habitat areas can best be preserved through land use policies which direct human population growth to concentrate in certain areas and encourage preservation of large, minimally developed parcels for rural uses. Sensitive development designs that minimize roads, optimize preservation of contiguous open space and maintain undisturbed native vegetation and critical habitat elements can also contribute to habitat preservation. Forestry operations that minimize roads, preserve critical wildlife habitat and replant quickly can also help to maintain habitat areas. Permanent protection of terrestrial habitat can be ensured through private or public efforts to acquire natural open space areas. A system of open spaces can help to address wildlife habitat areas in conjunction with preserving rural character, environmental quality and recreation lands.

Freshwater Habitat

Characteristics

Kitsap County’s freshwater habitat include streams and riparian areas, wetlands and lakes. Water is the primary habitat for many life forms and provides critical habitat during the life cycles of many others. One U.S. Forest Service report estimated that 87% of the wildlife and fish species found in forested areas of western Washington depend upon streams or wetlands during at least one part of their life cycle. Terrestrial species depend upon freshwater areas for drinking water, movement corridors or feeding, and a variety of plant species depend solely upon the moist soils or open freshwater associated with these habitats. The locations of freshwater bodies in Kitsap County are mapped in **Figure A-NS-8**, Surface Water and Wetlands.

NATURAL SYSTEMS APPENDIX

TABLE A-NS-10 Habitat Needs of Priority Species

SPECIES SPECIES	SIGNIFICANT KITSAP COUNTY HABITAT KITSAP COUNTY HABITAT	LAND USE THREATS LAND USE THREATS
Bald Eagle	Coniferous, uneven-aged forests near water. Large trees along river, lake and marine shorelines.	Loss of large shoreline trees; highly sensitive to human activity near perch, roost and nest sites.
Purple Martin	Tree cavities in low-lying forests.	Conversion of forest lands to non-forest uses.
Pileated Woodpecker	Mature 2nd growth coniferous forests with snags and fallen trees.	Conversion of forest lands; clear-cutting and removal of snags and fallen trees.
Great Blue Heron	Undisturbed stands of tall trees near wetlands or water bodies; fresh and saltwater wetlands, streams and shorelines.	Highly sensitive to human activity near nest sites; loss of wetlands; shoreline development.
Osprey	Tall trees or dead snags near large bodies of water.	Loss of shoreline habitat; highly sensitive to human activity near nest, perch sties.
Columbian Black-Tailed Deer	Forest.	Conversion of forest lands.
Harlequin Duck	Tree/shrub stream, banks, boulder/gravel shoreline, kelp beds.	Shoreline development; loss of riparian habitat; siltation of kelp beds.
Cavity Nesting Ducks (Barrow's Goldeneye, Bufflehead, Wood Duck, Hooded Merganser)	Tree cavities in trees adjacent to sloughs, lakes, beaver ponds; shallow open water wetlands.	Loss of tree cavities near water, loss of undisturbed wetlands.
Blue Goose	Open foothills (created by fire or small clearcuts) with streams, springs and meadows.	Conversion of foothills to farms and houses.
Band-Tailed Pigeon	Coastal forests with diverse tree ages, and farmland, mineral springs, streams with gravel deposits.	Conversion of forests and farmland.
Sea run and Coastal Cutthroat	Wetlands and riparian corridors.	Loss of wetlands and undisturbed riparian corridors.
Steel head	Wetlands and riparian corridors.	Loss of wetlands and undisturbed riparian corridors.
Green backed Heron	Wooded ponds.	Development adjacent to ponds.
Red-Tailed Hawk	Mature 2nd growth, urban open space.	Loss of wood lots and urban open space.
Black Brant	Eelgrass beds.	Shoreline development; siltation of eelgrass beds.
Beaver	Wetlands, streams.	Loss of wetlands and undisturbed riparian habitat.
Rover Otter	Wooded streams and estuaries.	Loss of undisturbed riparian habitat, shoreline development.

TABLE A-NS-10 Habitat Needs of Priority Species

Harbor Seal		
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Source: Washington Department of Wildlife, *Management Recommendations for Washington's Priority Habitats and Species*, May 1991.

Streams. Hundreds of streams and two rivers flow through the county, ranging in size from seasonal drainages to the Tahuya and Union rivers. Even the smallest of these creeks may provide important habitat for anadromous fish (salmon and sea-run trout that return to freshwater to spawn), and the county's anadromous fish populations contribute significant numbers to the overall Puget Sound fishery. Streams are "typed" by the Department of Natural Resources according to water volume and the importance of the stream for fish and wildlife habitat, drinking or recreation. Streams classified as Type 1, Type 2 or Type 3 typically contain anadromous fish habitat or have high value for fish and wildlife populations. Type 4 streams have habitat significance primarily for their impact as tributaries to other streams, while Type 5 streams generally have low habitat value. See **Table A-NS-6** in Water Resources for a more thorough description of stream types.

Riparian Areas. Riparian areas lie along rivers, streams and springs. They have high water tables, certain soil characteristics and vegetation that requires free water or moist conditions. These zones are transitional between freshwater and terrestrial lands, and the edge between the upland zone is usually identified by a change in plant composition, relative plant abundance or end of high soil moisture. Riparian corridors and streams serve as effective transport systems for water, soil, plant seeds and nutrients to downstream areas, and serve as important travel routes for the movement and dispersal of many wildlife species. Although they occupy only a small part of an overall landscape, riparian areas are an important source of biodiversity within the landscape.

Freshwater Wetland Habitats. Freshwater wetland habitats include marshes, swamps, bogs, seeps, wet meadows, shallow ponds and lakes less than 20 acres in area or less than six feet in depth. Like riparian areas, wetlands are characterized by high species diversity, species density and productivity of both plant and animal species. In many cases, wooded areas adjacent to wetlands provide a key habitat for wetland-dependent species by providing nesting areas for waterfowl or food and cover for small mammals like beaver. Studies of migratory waterfowl in Maryland have shown that migratory waterfowl greatly prefer shallow ponds to lakes.

As they are identified during the development process or by community wetlands inventories, wetlands in Kitsap County are categorized according to the Washington State Four-Tiered Wetlands Rating System. Category I wetlands are typically the most exceptional in terms of habitat and plant communities, while Category IV wetlands are generally small, less diverse habitat areas. Wetlands in Kitsap County have been mapped by the Department of Natural Resources, the U.S. Fish and Wildlife Service and the U.S. Natural Resources Conservation Service, and are depicted in **Figures A-NS-8** and **11**.

Lakes. Lakes greater than 20 acres in size or greater than six feet in depth also provide important fish and wildlife habitat. Eighteen lakes in Kitsap County are this size. The shorelines of these lakes are typified by waterfront residential development, with the exception of Buck Lake, Miller Lake and Morgan Marsh. Although most species generally prefer shallow ponds to lakes, the deeper waters and larger area of a lake support fish and wildlife, and wetlands associated with these lakes are particularly important habitat areas. The Department of Fish and Wildlife stocks many of these, and smaller lakes, with game fish for sport fishing.

Important Habitat and Habitat Elements.

Anadromous Fish Streams. Kitsap County’s streams provide freshwater habitat for six species of anadromous fish (fish like salmon and sea-run trout that live part or the majority of their lives in salt water but return to freshwater to spawn.) These fish have evolved to return to the stream in which they were born, and thus each stream provides habitat for fish uniquely adapted to it. While many of the county’s streams produce runs of fish numbering several hundred fish or less, the overall impact of these fish populations results in a significant resource countywide. Chico Creek, which empties into the west shoreline of Dyes Inlet, currently produces the largest run of wild salmon in the county.

Table A-NS-11 lists Kitsap County’s salmonids, their habitat needs and the streams upon which they rely. **Table A-NS-12** highlights streams currently providing anadromous fish habitat based upon information provided by the Washington State Department of Fish and Wildlife.

A natural anadromous fish run is an indicator of a stream’s health because salmon require cool, uncontaminated water with healthy stream beds and insect populations. Vegetated riparian areas are important to maintaining stream habitat because they stabilize water temperature through shade, produce an adequate insect supply, protect streams from excessive erosion and provide woody debris to the streams.

Streams Planted with Game Fish. Streams that provide habitat for steelhead trout and cutthroat trout and streams planted with game fish by the Department of Fisheries or various tribal governments are listed in **Table A-NS-13**. Tribal and state fish rearing facilities provide the fish for planting and are present on Cowling Creek, Grovers Creek, Dogfish Creek, Big Scandia Creek, Little Scandia Creek, Clear Creek, Steele Creek, Dickerson Creek, Gorst Creek and Blackjack Creek. Water quality and habitat conditions in these creeks are important for fish survival.

Other Streams and Riparian Areas. As described above, the Department of Natural Resources inventories and maps streams and categorizes them according to beneficial uses. Although stream Types 4 and 5, and unclassified streams (Type 9) generally do not provide habitat for game or anadromous fish and may flow only part of the year, they can still support populations of fish, amphibians or other animals. The riparian areas adjacent to these streams also provide important wildlife habitat and can serve as wildlife corridors. All streams identified by the Department of Natural Resources are mapped in **Figure A-NS-8**.

Lakes and Ponds Plantable with Game Fish. Lakes and ponds planted with game fish by the DFW are listed in **Table A-NS-13** and mapped in **Figure A-NS-11**. Game fish are those which may only be taken recreationally by non-Indian fishers. Foodfish are those species which may be taken commercially and/or recreationally. In order to support populations of game fish, open water must be maintained, and good water quality and healthy aquatic vegetation are necessary. These lakes and ponds provide recreational opportunities and can also support enhanced wildlife communities which feed on the fish.

Endangered Species Act. The National Marine Fisheries Services has recently proposed listing of the chinook and summer chum salmon under the Federal Endangered Species Act. Proposed listing of additional species is anticipated. Work with Federal and State agencies and area tribes, cities and counties will be needed to review local and regional programs and regulations in a coordinated effort to develop a recovery plan if final listing is to be avoided.

TABLE A-NS-11 Kitsap County Anadromous Fish and Habitat		
FISH	SPAWNING HABITAT/ REARING HABITAT	STREAMS OR RIVERS
Chinook Salmon (King)	Lower stream reaches with gravel and greater water flows/river mouth estuaries	Coulter, Rocky, Minter, Burley, Gorst, Chico, Dogfish, Dewatto, Tahuya, Union
* Chum Salmon (Dogs)	Coastal sloughs, blind channels, upstream as far as good gravel extends/coastal estuaries	Coulter, Rocky, Lackey, Burley, Purdy, Crescent, Curley, Blackjack, Dogfish, Chico, Big Beef, Anderson, Big Mission, Rendland, Dewatto, Tahuya, Union
Pink Salmon (Humpies)	Coastal streams, high velocities of water, may travel further upstream than Chum/coastal estuaries	Minter Creek and sometimes Dewatto, Tahuya, Union
Coho (Silvers)	Small streams with medium size gravel, medium flow velocity, springs, swamps, marshes, seasonal streams/streams and estuaries	Many creeks, independent streams and tributaries with suitable conditions
* Steelhead (Rainbow Trout)	Smaller streams with medium size gravel and medium flow velocity; seasonal streams/ripples and pools in streams; in winter, deeper, slower waters	Not listed by Fisheries
Searun Cutthroat (Trout)	Small, low gradient streams, near estuary mouth of streams	Not listed by Fisheries

Source: Department of Fish and Wildlife *Washington Rivers Inventory*, and Yates, *Adopting A Stream Handbook*.

- * Summer Chum Salmon in Hood Canal were identified by State Department of Fisheries as a critical stock in 1992. This means that population of the stock may be in jeopardy of extinction.
- * Winter Steelhead runs in the Tahuya River have been identified by State Department of Fisheries as a depressed stock - production is below expected levels.
- * Several Hood Canal Coho stocks have been identified by State Department of Fisheries as a depressed stock - production is below expected levels.

* Searun Cutthroat (Trout) throughout the county have been identified by State Department of Fisheries as a depressed stock - production is below expected levels.

TABLE A-NS-12 Streams with Salmon Releases in 1991 (Department of Fisheries, 1993) .

WATER BODY	SPECIES
Clear Creek	Coho, Fall Chinook, Chum
Burley Creek	Fall Chinook, Coho
Minter Creek	Fall Chinook, Chum, Coho
Barker Creek	Coho, Chum
Steele Creek	Coho, Chum
Big Scandia Creek	Coho, Chum
Johnson	Coho
Dogfish Creek	Coho, Chum, Fall Chinook
Salmonberry Creek	Coho
Olalla Creek	Coho, Chum
Beaver Creek	Coho
Little Boston Creek	Chum
Dickerson Creek	Chum
Cowling Creek	Chum
Gorst Creek	Fall Chinook
Steele Creek	Coho
Purdy Creek	Coho
Crescent Creek	Coho
Huge Creek	Coho
Coulter Creek	Fall Chinook, Chum
Hupp Springs	Spring Chinook
Mosher Creek	Coho
Grovers Creek	Fall Chinook, Coho
Hood Canal	Fall Chinook
Port Gamble	Chum, Coho
Agate Pass	Coho, Chum
Union River	Coho

TABLE A-NS-13 Lakes and Ponds with Game Fish		
LAKE	CURRENTLY MANAGED SPECIES	NATURALLY OCCURRING OR ESTABLISHED SPECIES
Big Beef Ponds		Cutthroat Trout
Buck Lake	Rainbow Trout	
Carney Lake	Rainbow Trout	
Crescent Lake	Rainbow Trout	
Fairview Lake		Largemouth Bass, Brown Bullhead
Flora Lake		Largemouth Bass, Brown Bullhead
Gluds Ponds	Rainbow Trout	
Hintzville Beaver Pond	Cutthroat Trout	
Holland Lake	Cutthroat Trout	
Horseshoe Lake	Rainbow Trout	Brown Bullhead
Island Lake	Rainbow Trout	Brown Bullhead
Kitsap Lake	Rainbow Trout	Searun Cutthroat Trout, Largemouth Bass, Brown Bullhead, Bluegill
Koeneman Lake	Rainbow Trout	Largemouth Bass
Long Lake	Rainbow Trout	Searun Cutthroat Trout, Largemouth Bass, Black Crappie, Bluegill
Ludvick Lake	Cutthroat Trout	Largemouth Bass
McCaslin Marsh		Cutthroat Trout
Mission Lake	Rainbow Trout	Brown Bullhead
Mission Pond	Cutthroat Trout	
Mission Ridge	Cutthroat Trout	
Panther Lake	Rainbow Trout	Brown Bullhead
Scout Lake		Largemouth Bass
Spur 3 Pond	Cutthroat Trout	
Square Lake		Largemouth Bass
Tahuya Lake		Searun Cutthroat Trout, Largemouth Bass
Wildcat Lake	Rainbow Trout	Cutthroat Trout, Brown Bullhead
Wye Lake	Rainbow Trout	Largemouth Bass

Source: Washington Department of Wildlife, Lakes of Washington Fish Data, 1991.

Land Use Implications

Land use activities can both directly and indirectly damage the quality of freshwater habitat. Loss of vegetation in riparian areas, adjacent to lakes and wetlands reduces the suitability of these areas as wildlife corridors and as nesting and feeding areas for many water-dependent species. Vegetative loss can also affect the habitat quality of fresh water bodies by reducing both water quality and the amount of organic debris present. It may also increase the amount of siltation that chokes waters or covers spawning gravel beds.

Fish habitat in streams, lakes and wetlands can be ruined when drainage patterns are disturbed by land use activities. Increased flow of water over land can cause excessive erosion of stream banks and can change the hydrologic balance of wetlands. Increased sediments in runoff can cover important salmon spawning gravel and choke aquatic plant, animal and fish life. Increases in contaminants carried by stormwater can also destroy the ecological balance of lakes, wetlands and streams by increasing nutrient loads or killing aquatic life. Drainage studies completed by the DFW for Kitsap County indicate that when 12% of a watershed becomes impervious, the hydrological balance of a stream begins to change.

Aquatic habitat can also be directly destroyed by filling or dredging of a wetlands. Changes in wetland functions can alter the natural hydrologic balance of a drainage basin and lead to water quantity or quality changes in related streams. Culverts and dams can change stream habitat as well as directly block fish migration. Roads which follow streams corridors can fragment critical wildlife habitat, disturb wildlife and create water quality and quantity problems. Invasive plant species introduced from nearby lawns and gardens can also enter a wetland area and successfully outcompete native vegetation.

Marine Habitat

Characteristics

The marine environment includes estuaries and the deep waters of Puget Sound and Hood Canal. These environments provide critical plant, fish and wildlife habitat, which can be greatly affected by activities on land as well as in the water. Estuaries are semi-enclosed bodies of water with free connection with the open sea and within which salt water is measurably diluted with fresh water from land drainage. They form transitions between freshwater, terrestrial and marine environments and support a rich and diverse biota. Anadromous fish migrate through estuaries to spawn upstream in freshwater, and juveniles of these species also spend time rearing in the estuaries prior to emigration to the ocean. Commercially important marine species like herring spawn, feed and rear in extensive areas of estuaries, and shellfish are found throughout the county's estuaries and off most of the shoreline. Birds of prey and many mammals use the fish, shellfish and other species found in embayments as their forage base, and many bird and mammal species use estuaries as primary habitat.

Both estuaries and the waters of Puget Sound and Hood Canal depend upon the health of tideflats and the water column for primary production. Eelgrass, kelp and phytoplankton which float within the water column serve as the cornerstone of the grazing food chain and provide shelter for both invertebrate and vertebrate animal species. The deeper waters and narrow channel of the Hood Canal

embayment produce a unique marine environment rich in nutrients and host a remarkable diversity of fish and animal life, including octopus, ling cod and wolf eels.

While the entire marine environment can be classified as important plant, fish and wildlife habitat, some marine habitat areas contain greater species diversity or are more commercially productive than others. Existing information about the marine waters off Kitsap County's shoreline is more extensive than that available for terrestrial and freshwater habitats. Specific marine habitats and habitat areas are described below.

Important Habitat and Habitat Areas

Unique Wetland Plants and Plant Communities. The Department of Natural Resources identifies two sensitive plant species (listed in **Table A-NS-9**) that are dependent upon Kitsap County's shoreline habitat. The DNR also declares the Nature Conservancy's Foulweather Bluff Preserve, Stavis Bay and Doe-Kag-Wats (on the Port Madison Indian Reservation) to be significant statewide. These areas are depicted in **Figure A-NS-10**.

Department of Fish and Wildlife Priority Habitats. The DFW has mapped a number of shorelines and estuaries as priority habitat due to their importance to populations of black brant, harlequin duck, cavity nesting ducks, sea lion and river otter, or for their significance as bald eagle and great blue heron feeding areas. These areas are mapped in **Figure A-NS-10**.

Kelp and Eelgrass Beds. Kelp and eelgrass beds provide habitat, feeding and rearing ground for a large number of marine organisms including fish, crabs and birds. The term "kelp" refers to any of the large brown seaweeds in the order Laminariales, typically found in rocky intertidal areas. Eelgrass is a vascular plant which grows most commonly in intertidal and shallow subtidal areas.

Kelp beds provide a surface upon which other plants and animals grow. They are used as resting areas by birds and mammals including gulls, herons, waterfowl, shorebirds and otters. Kelp beds help create protected environments for intertidal plants and animals and reduce inshore erosion on sand and gravel beaches. The reduced current and wave actions resulting from the presence of kelp beds creates habitat for organisms which would not be present in the absence of the beds.

Eelgrass is a highly productive plant and is important in the trophic functioning and nutrient cycling of the entire coastal zone. Eelgrass beds help make the shoreline an important stop-over and wintering ground along the Pacific flyway. Studies have shown that the diving birds use of eelgrass beds in the Hood Canal was three times greater than use of nonvegetated near shore areas.

In recent years, the overall number of kelp and eelgrass beds and their size has been decreasing throughout Puget Sound. These changes are believed to be due to changes in water quality and turbidity resulting from increased development and forest activities on land. However, kelp usually undergo natural fluctuations in abundance as a result of storms, unusually hot weather, or changes in the populations of grazers. The shorelines of Kitsap County that contain kelp and eelgrass beds are identified in **Figure A-NS-10**, based on information from the Coastal Zone Atlas of Washington State.

Shellfish Beds. Shellfish areas are those tidelands and intertidal lands supporting naturally occurring bivalve shellfish populations or commercial shellfish aquaculture facilities. A variety of shellfish inhabit the muds, sands and rocky substrate of Kitsap County. Hardshell clams are found in intertidal areas and include butter clams, native littleneck, manila clams, cockles and horseclams. Geoducks typically burrow offshore, buried in subtidal areas two to three feet deep in the mud or soft sand. Other shellfish found along the county’s shoreline include shrimp, crab and oysters. Dungeness crab frequently associate with eelgrass beds, but red rock crab prefer areas with rocky terrain and less silt.

As shown in **Figure A-NS-11**, most of Kitsap County’s shoreline provides shellfish habitat. Significant commercial and recreational shellfish harvest areas are listed in **Table A-NS-14**. Commercial and recreational shellfish harvesting is restricted or prohibited in Dyes Inlet, Sinclair Inlet and parts of Liberty Bay, Burley Lagoon and at the mouths of sewage treatment outfalls.

TABLE A-NS-14 Commercial and Recreational Shellfish Beaches in Kitsap County	
COMMERCIAL AREAS	RECREATIONAL BEACHES
Agate Pass, Big Beef Harbor, Liberty Bay, Misery Point, Nellita, Port Blakely, Port Gamble/Klallam Bay, Port Madison/Suquamish Reservation, Port Orchard Passage, Raft Island, Seabeck	Agate Pass, Anderson Cove, Fay Bainbridge State Park, Illahee State Park, Kitsap Memorial State Park, Miller Bay, Old Man House State Park, Point-No-Point, Point Southworth, Scenic Beach State Park

Source: Washington State Department of Ecology, Shellfish Protection Through Land Use Management, 1993

Herring and Smelt Spawning Areas. Herring and smelt are important to the survival of commercial and recreational fish species in Washington waters. According to the Department of Fish and Wildlife, herring spawn during the winter and early spring in low intertidal areas along Hood Canal, Dyes Inlet, Agate Passage, near Liberty Bay and around Port Gamble. Spawning occurs in eelgrass and seaweed in the low intertidal zone, and in some cases, in gravelly areas. Surf smelt spawn during the winter in sandy gravel beaches along Dyes Inlet, Sinclair Inlet and Liberty Bay. These areas are depicted in **Figure A-NS-11**.

Land Use Implications

Land use activities that influence marine water habitat can occur within the watershed or along the shoreline. Because of the elongated, narrow shape of Kitsap County and its 228 miles of saltwater shoreline, land use activities can seriously impact the marine environment. Watershed activities such as increased development or forest practices may increase the amount of suspended solids, pollutants or fresh water entering marine waters. Suspended solids reduce light penetration, increase sediment deposition, induce changes in water temperature and may affect dissolved oxygen and pH balance, thus affecting all forms of marine habitat.

Activities that cause slight increases in turbidity decrease light penetration and may result in a loss of kelp and eelgrass beds, while increased sedimentation can smother eelgrass beds at the shallow limits of their distribution.

Increased sedimentation from erosion or from the collapse of coastal bluffs can cover shellfish beds and fish spawning gravel. Shellfish beds are also susceptible to chemical and bacterial/viral contamination from certain agricultural practices, improperly installed and/or maintained septic drainfield systems, and stormwater runoff. USFDA rules require WDOH to maintain prohibited shell fishing areas around wastewater treatment plant outfalls as a precaution against failure of disinfection systems. Such contamination may not harm the shellfish. It does increase the risk of disease for the human and bird populations that feed off of the shellfish. Toxic contaminants from urban runoff or industrial discharges can poison the marine water column and sediments, resulting in tumors and concentrations of poisons in fish and invertebrate species.

Land use in the watershed can also impact wildlife species that play a critical role in the ecological balance of marine habitat, such as the great-blue heron or bald eagle. Construction of bulkheads or other shoreline activities can affect the rate of natural beach deposition or result in a loss of vegetation, thus contributing to a loss of herring and smelt spawning areas or other shoreline and intertidal habitat. Fish and wildlife habitat can be directly impacted by untreated sewage discharge, oil or toxic spills or litter from boats and marinas.

Terrestrial, freshwater and marine habitats in Kitsap County contribute to the overall biological diversity of the Puget Sound region and provide a number of additional functions and values. While some information exists about the needs of specific plant, animal and fish species, little research has been done on the location of critical habitat areas in Kitsap County and on the optimal sizes and locations of habitat areas.

Terrestrial and freshwater habitats can be directly affected by development and land use activities that remove vegetation and replace naturally functioning systems with impervious surfaces and invasive species. Land use activities can also indirectly impact freshwater and marine habitat by changing the quantity and quality of water entering these environments. There is constant interaction between the terrestrial, freshwater and marine environments, and many species depend upon the health of all three categories to survive.

As the county's human population grows, development will inevitably lead to loss of plant, fish and wildlife habitat. These impacts can be minimized by sensitive land use patterns, development design criteria, water quantity and quality controls and habitat restoration efforts.

VII. AIR QUALITY

Characteristics

Air pollution consists of a complex mixture of compounds that are often difficult to quantify. National and state standards have been established for six common pollutants that affect Washington state. These pollutants are carbon monoxide, particulate matter, ozone, sulfur dioxide, lead and nitrogen dioxide. The U.S. Environmental Protection Agency designates areas where violations of these standards occur as “nonattainment” areas. Kitsap County is currently outside of all such designated areas in the Puget Sound region.

The Puget Sound Air Pollution Control Agency enforces federal, state and local air quality regulations and oversees the monitoring and regulation of air pollution emissions from stationary (point) sources such as business and industry; area-wide sources such as wood stoves, fireplaces and outdoor fires; and trains and ships. The Department of Ecology retains primary responsibility for regulating on-road mobile sources like automobiles and trucks.

In Kitsap County, one permanent station at Fairgrounds Road monitors air quality. This station monitors particulate matter (lung-obstructing particles discharged into the air by traffic, industry and wood burning). The Washington State Department of Ecology does not monitor or enforce air quality regulations in the county, but the Puget Sound Air Pollution Control Agency oversees station maintenance and regularly collects data.

Local regulations in Puget Sound address a variety of contaminant sources including new construction permits, outdoor fire regulations, emission standards for opacity, sulfur dioxide, odors and fugitive dust, woodstove regulations and spray coating operations. Regulations also pertain to ozone emitting activities from gasoline stations, petroleum refineries, gasoline terminals, bulk plants, fiberglass/gelcoat, graphic arts, surface coaters and aerospace and auto body spray booths. Toxic contaminants from dry cleaners, asbestos renovation/demolition and other new or existing sources that exceed the allowable source impact levels for a toxic air contaminant are also regulated. Air pollutants in Kitsap County typically originate from one of three sources: industry, wood smoke or outdoor burning and traffic. These sources are discussed in more detail below.

Industrial Air Pollution

All air contaminating operations and equipment (sources other than on-road motor vehicles) are registered with and regularly inspected by the Puget Sound Air Pollution Control Agency (PSAPCA). These requirements are more stringent in areas that have been designated “nonattainment.” In a nonattainment area, new major polluters must provide a pollution offset of 1.1 times their proposed allowable emissions. They must work to reduce the pollution of another industry or purchase pollution credits from the PSAPCA.

The PSAPCA considers “major polluters” to be those sources emitting 10 tons or more of volatile organic compounds (VOC) or toxic air contaminants (TAC) per annum and sources emitting 25 tons or more of particulate matter (PM10), oxides of sulfur (SOX), oxides of nitrogen (NOX), or carbon monoxide (CO) per annum. At this time, the “major” sources for Kitsap County include the Naval

Submarine Base, Puget Sound Naval Shipyard, Navy Supply Center and the Navy Undersea Warfare Engineering facility. These sites are inspected at least once annually.

Wood Smoke and Outdoor Burning

Under the Puget Sound Air Pollution Control Agency's residential wood smoke control program, burning in woodstoves and fireplaces is allowed throughout Kitsap County, but excessive wood smoke is illegal and subject to fines. During the winter months, PSAPCA implements a state-mandated, two-stage wood smoke curtailment program that goes into effect when a burn ban is called. This curtailment program applies to areas delineated in **Figure A-NS-12**. In a Stage I impairment, PSAPCA prohibits the use of uncertified wood stoves, fireplaces and outdoor burning when locally monitored 24-hour particulate pollution levels reach 75 micrograms per cubic meter of air. In a Stage II impairment, PSAPCA extends the ban to all stoves, including pellet types, when 24-hour particulate levels reach 105 micrograms per cubic meter of air. Households with no other source of adequate heat are exempt from local bans.

Outdoor residential and commercial burning permits are administered through local fire departments. In Kitsap County, only natural vegetation can be burned outdoors. Burn barrels and burning of trash are prohibited. The Washington State Clean Air Act mandates that by the year 2001, all outdoor burning in designated urban growth areas shall be prohibited. To meet this requirement, local governments or private entrepreneurs will need to consider a variety of options, including curbside yard waste pick-up, yard waste recycling stations and portable wood waste chippers.

Transportation

At the present time, the County's attainment status excludes it from state carbon monoxide and ozone monitoring programs as well as from state vehicle inspection and maintenance programs. To demonstrate and assure air quality conformity of transportation plans, programs and projects, state or federally funded projects must **not**:

- # Cause or contribute to any new violation of federal air quality standards,
- # Increase the frequency or severity of any existing violation of these standards,
- # Delay the timely attainment of the standards.

The county's transportation plan, to be adopted as part of the countywide comprehensive plan, will be evaluated based on conformity with air quality regulations.

Land Use Implications and Conclusion

According to state and federal air quality regulations, Kitsap County is not currently considered a "non-attainment area." If increased population growth and development result in significant increases in traffic, outdoor burning, wood burning stoves and fireplaces, the county may eventually violate these regulations and become subject to the more stringent monitoring and control requirements of nonattainment areas.

Beyond the effect of poor air quality on human health and the environment, the implications of nonattainment area designation has economic implications. Local jurisdictions in nonattainment areas

must work with the state to develop an implementation plan illustrating how the area will meet state standards within a given time frame. These plans might identify existing industrial sources, future industrial sources, domestic smoke emissions or transportation and vehicle emissions as targets of stricter air quality requirements. The implementation of these plans can thus impact economic development strategies, require changes in business practices and the lifestyles of local residents and/or have financial impact on transportation agencies and local governments.

Nonattainment areas in Puget Sound include urbanized portions of Snohomish, King and Pierce counties. The PSAPCA has identified wood smoke from chimneys, fireplaces and outdoor burning as one of the biggest threats to Kitsap County's attainment status.

Careful land use and transportation planning can help to minimize air pollution hazards to local residents and minimize impacts on a regional and "global" scale. Higher-density development patterns in urban areas that are well served by public transportation, sidewalks and trails can contribute to a better jobs/housing balance and greater opportunities for alternative modes of transportation.

Alternative sources of fuel other than wood as a source of heat for residential developments can contribute to air quality preservation, as can wood waste recycling facilities that preclude the need to burn debris outside of no-burn zones. Land uses that create industrial pollution can harm the health of nearby neighborhoods and must be sited carefully. It is in the interest of Kitsap County residents and businesses to ensure that air quality is maintained.

ECONOMIC DEVELOPMENT APPENDIX

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

ECONOMIC DEVELOPMENT APPENDIX

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

ECONOMIC DEVELOPMENT APPENDIX

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

ECONOMIC DEVELOPMENT APPENDIX

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

ECONOMIC DEVELOPMENT APPENDIX

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

ECONOMIC DEVELOPMENT APPENDIX

TABLE A-ED-6

ECONOMIC DEVELOPMENT APPENDIX

ECONOMIC DEVELOPMENT APPENDIX

ECONOMIC DEVELOPMENT APPENDIX

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

ECONOMIC DEVELOPMENT APPENDIX

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

ECONOMIC DEVELOPMENT APPENDIX

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

ECONOMIC DEVELOPMENT APPENDIX

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.

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

ECONOMIC DEVELOPMENT APPENDIX

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

ECONOMIC DEVELOPMENT APPENDIX

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

ECONOMIC DEVELOPMENT APPENDIX

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

ECONOMIC DEVELOPMENT APPENDIX

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

ECONOMIC DEVELOPMENT APPENDIX

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.

HOUSING APPENDIX

I. INTRODUCTION

This section is an inventory and analysis of existing housing units, types and affordability in Kitsap County. Specifically, this analysis examines the characteristics of household and housing unit development, outlines existing housing conditions, reviews trends in Kitsap County housing, discusses housing affordability and identifies the existing and probable future housing needs of Kitsap County residents.

The primary source for the data used in the inventory came from the Housing Needs Assessment and Affordability Plan developed by The Phoenix Group for the Kitsap County Consolidated Housing Authority (KCCHA). The Plan was generated for Kitsap County and for the Cities of Bainbridge Island, Port Orchard and Poulsbo; it also discusses the City of Bremerton's housing needs. More detailed information on the topics contained in this section may be found in the 1993 Housing Needs Assessment & Affordability Plan and the associated Data Appendix developed by the Phoenix Group.

Additional information for this section has been collected from the 1980 U.S. Census, 1990 U.S. Census, Kitsap County Assessor's data, the U.S. Navy Housing Referral Office, Puget Sound Regional Council's 1995 Population and Employment Forecasts for the Central Puget Sound Region, the Office of Financial Management's 1995 Population Trends for Washington State, the 1996-2000 Kitsap County HOME Consortium Consolidated Plan, surveys conducted by The Phoenix Group and the Fall 1995 Kitsap County Real Estate Trends Report.

II. HOUSING INVENTORY

A. Population Trends

From 1980 to 1995, Kitsap County's population grew 49.9%, from 147,152 in 1980 to 220,600 in 1995 -- an increase of 73,448 people, representing an average annual increase of 3.33%. From 1990 to 1995, the county population grew another 16.3%, or 30,869 people, again, representing an average annual increase of 3.3%. In this five-year period, North Kitsap experienced the highest growth rate of the three subareas. Among the cities, Port Orchard increased 25%; Poulsbo, 19%; Bainbridge Island, 13% (primarily due to its incorporation); and Bremerton, 4%.

According to the Central Puget Sound Economic Development District, Kitsap County has been the fastest growing county (based on percentage increase) in the region since 1970 and growth is expected to continue at a comparable rate. Kitsap County's projected population for the year 2012 is 292,224, an increase of 71,624 persons from 1995.

B. Age Composition

Kitsap County has a relatively young population, with more than 44% of the populace under the age of 30. Only 15% of the population is over 65 years of age. In unincorporated Kitsap County, 28% of the population is comprised of residents under the age of 18. The proportion of persons in this age group is higher in unincorporated areas than in cities. Children comprise roughly 30% of the population in each subarea, but that figure drops to 25% in the cities.

Residents between the ages of 20 and 29 comprise 16% of the total county population. Bremerton has, by far, the highest percentage of persons in this group with 26%; it also has the largest actual number of persons in this age group. This reflects the strong Navy presence and proximity of jobs including the availability of lower priced housing units in the Bremerton area. Bainbridge Island has slightly more residents in this age group than Poulsbo or Port Orchard, yet they make up only 6% of its total population, compared to 19% for Port Orchard and 16% for Poulsbo.

Residents within this age bracket traditionally attempt to purchase their first home or rent apartments and are typically very mobile. The areas with a high proportion of residents in this age bracket (Bremerton and Port Orchard) may experience a higher-than-average demand for modestly priced entry-level homes or multi-family rentals in the future.

Cities have a higher percentage of seniors (65 and over) and potentially frail elderly (75 and over) than the rest of the county. Poulsbo and Port Orchard have the highest percentage of seniors and elderly, although Bremerton has the highest actual number of persons over 65 years of age. Higher levels of support services and reasonable housing are required in these areas in order to enable senior citizens to remain in their communities.

C. Household Size Trends

National social trends indicate a declining family size and show that fewer people are living together. These trends, combined with the county's population increases, signal a greater demand for housing units. In keeping with this demand, Kitsap County has experienced a 3.2% average annual increase in the number of households since 1980.

The average household size in Kitsap County declined from 2.78 in 1980 to 2.65 persons in 1990. According to the Puget Sound Regional Council's (PSRC) 1995 Population and Employment Forecasts for the Central Puget Sound Region, this trend is expected to continue, resulting in an average household size of 2.50 persons in 2010.

The trend of declining household size occurred everywhere in the county except in Bremerton, where the average household size increased from 2.56 in 1980 to 2.59 persons in 1990. In 1990, Poulsbo had the smallest household size among the four cities, possibly reflecting Poulsbo's high percentage of senior citizen households. Households tend to be smaller in cities than in rural areas.

The number of new *households* (occupied housing units) exceeded the number of new *housing units* (new single-family homes, apartments, mobile homes, condominiums, town homes, etc.) in several communities, both in absolute numbers and percentage increases. Bainbridge Island added 1,619 households, but only 1,506 housing units during the 1980's. The same pattern occurred in unincorporated North Kitsap and in the City of Port Orchard. The County as a whole experienced a 32% increase in households, but only a 29% increase in housing units. This indicates significant use of existing housing units, reduced supply of new housing units and results in a decline in the number of vacancies and a rise in home purchasing and rental costs.

D. Population Forecasts

In November 1991, the Kitsap Regional Planning Council (KRPC) adopted population forecasts for Kitsap County through the year 2010. This population forecast (indicating a population of 280,985 for 2010) was used by The Phoenix Group when developing the Housing Needs Assessment & Affordability Plan for Kitsap County. In July of 1994, KRPC extended these forecasts to 2014, accurately reflecting a 20-year planning period for Kitsap County. However, in June 1995, KRPC agreed to "roll back" the population numbers from 2014 to 2012 to coincide with the current State Office of Financial Management (OFM) projection period. In December 1995, the OFM issued revised population projections which establish a range from 271,892 to 317,654 persons for the year 2012 in Kitsap County. The adopted KRPC population forecast of 292,224 for 2012 is well within the range established by OFM. (See the Population Appendix for more information on population forecasting.)

E. Household Income

According to the OFM 1995 Population Trends Report for Washington State, median income in Kitsap County is currently \$39,582. The following ranges for income groupings are used throughout the Housing Chapter section:

- Extremely low income: below 30% of median income;
- Very low income: between 31% and 50% of median income;
- Low income: between 51% and 80% of median income;
- Moderate income: between 81% and 95% of median income; and
- Middle income: between 95% and 120% of median income.
- Upper income: above 120% of median income

Household income breakdown categories are provided by the federal department of Housing and Urban Development (HUD). In this section, all references to low-income include very low and extremely low-income households. In Kitsap County approximately 36% of households are low-income. Percentages in unincorporated areas are lower with 35% in South Kitsap, 28% in North Kitsap and 22% in Central Kitsap. Among the four cities, 49% of the households in Bremerton and Port Orchard and 41% of the households in Poulsbo are low-income. Bainbridge Island has the lowest percentage of low-income households (19%) and the highest percentage of upper-income households (63%). These patterns reveal a substantial difference in incomes between rural and urban Kitsap County and between North, Central and South Kitsap communities.

F. Housing Types and Tenure

The housing stock in Kitsap County has traditionally been comprised of single-family residences, although the countywide percentage of single-family households has decreased since 1980. The percentage dropped from 74% in 1980 to 70% in 1990. The proportion dropped again to 67% between 1990 and 1995.

Multi-family units comprised approximately 19.5% of the housing-unit share in the period from 1980 to 1990. Central Kitsap showed the largest increase in multi-family units -- from 2% to 13%. Meanwhile, in Bremerton, multi-family units dropped from a 43% share of housing units to 39%. Poulsbo showed a sharp rise in multi-family units, as several new buildings were completed in the late 1980's. Between 1990 and 1995, the countywide percentage of multi-family units increased slightly to 19.5%.

The housing market share of mobile homes increased sharply between 1980 and 1990, from 6% to 12% percent. The percentage increase continued between 1990 and 1995 at a much slower rate, from 12% to 13.5%.

Despite the continuing predominance of single-family housing in most parts of the county, homeownership is on the decline. In 1980, 33% of all single-family houses were renter-occupied. Countywide, this rose to 36% and higher by 1990; from 1% to 25% in Central Kitsap; from 18% to 28% in North Kitsap; 45% to 51% in Port Orchard; 48% to 54% in Poulsbo; and 57% to 61% in Bremerton.

The increase in number of single-family housing units has not matched the need for single-family housing units in several areas of the county. This is caused, in part, by a failure to add sufficient numbers of multi-family units to the housing inventory, and exacerbated by single-family housing conversions to rentals.

The fall 1995 *Kitsap County Real Estate Trends Report* shows a range of numbers for the distribution of housing stock that are similar to those from 1980 to 1990 Kitsap County building permit data. The *Trends Report* indicates single-family units currently comprise 67.4% of building permit totals, multi-family units comprise 19.1%, and mobile homes comprise 13.5%. Kitsap County building permit figures between 1980 and 1990 indicate that single-family permits comprise 69.1% of all permits issued, multi-family units comprise 18.9%, and mobile homes comprise 12%. Between 1990 and 1995, the percentage of single-family homes dropped to 58.8%, multi-family units increased to 21.7%, and mobile homes increased to 20.9%.

There was a significant decline in rental vacancy rates from 10% in 1985-86 to less than 2% in 1992. However, as of September 1995, the vacancy rate was slightly more than 4%. Vacancy rates in Kitsap County tend to fluctuate periodically primarily in response to the arrival and departure of Navy ships at the Puget Sound Naval Shipyard (PSNS). Rates also tend to vary throughout the different areas of the county; currently Kingston, Port Orchard and Poulsbo have the lowest rates and Silverdale has the highest.

G. Housing Conditions

Housing conditions were examined using the 1990 Census, the Kitsap County Assessor's records, and on-site surveys. Data from the 1990 Census includes the number of housing units built before 1950, the number of units with more than one person per room, and the number of units without complete plumbing. The County Assessor's staff appraises the condition of buildings on a scale from "good" to "very poor" -- 15% of existing Kitsap County housing inventory is rated "very poor" to "fair." Single-family houses in this report are rated "fair," "poor" or "very poor."

Overall, 24% of the housing units in the county were built before 1950. Among the unincorporated areas, South Kitsap has the highest percentage of older houses and single-family homes rated "fair" to "very poor." The percentages of overcrowding and incomplete plumbing are very low in all locations. Bremerton and South Kitsap have the most overcrowding; Bainbridge Island, with 1%, has the most units with incomplete plumbing.

H. Homelessness and Emergency Housing

The number of persons requiring shelter in Kitsap County fluctuates greatly from night to night. However, based on figures for the number of households and individuals who have to be turned away from Kitsap shelters, it is estimated that at least 160 adult and family "shelter beds" are currently needed. The shelter needs of youth (individuals under 18 years of age) are currently estimated at an additional 41 beds.

Shelter providers find it difficult to adequately serve everyone in need primarily because of the increasing number of large families seeking assistance. While adults can share an emergency shelter unit, large families often need a unit to themselves. Therefore, childless couples and individuals seeking shelter are turned away from family shelters and sent to shelters for same-sex, single adults. This results in temporary separations for the couples, and happens because historically, domestic violence has been the primary cause of adults seeking assistance in Kitsap County.

1. Emergency Shelters

As of March 1993, there were 100 emergency adult and family shelter beds in Kitsap County facilities for the homeless. Kitsap County facilities are operated by five agencies; four of which use Emergency Shelter Assistance Program (ESAP) funds administered by the State Department of Community Development. The Kitsap Community Action Program (KCAP) is the local lead agency. (Numbers for each type of client are summarized in **Table A-HS-1**. The number and type of households and individuals served by these shelters between 1990-93 is summarized in **Table A-HS-2**.)

- Kitsap Community Action Program operates a single men's shelter with 10 beds in Bremerton. Families in need of shelter are housed in 10 units leased by KCAP from the Bremerton Housing Authority. Families and individuals in KCAP housing are allowed to stay up to two weeks; extensions are negotiable.
- The YWCA Alive shelter serves the women and children victims of domestic violence. The shelter has a total of 17 beds and allows a two-week stay. (Further discussion is included in the section on Supportive Housing.)

HOUSING APPENDIX

- The Society of St. Vincent de Paul operates a six-bed shelter in Bremerton for women and, under certain circumstances, young children.
- South Kitsap Helpline operates the Alameda Family Emergency Shelter in Sunnyslope. This is a five-bedroom, three-bath house with 16 beds, one of which is reserved for a physically disabled person. A normal stay is six to nine weeks.
- The Salvation Army leases two privately owned apartments in Bremerton and make them available to homeless families and individuals. They allow a stay of two weeks.

TABLE A-HS-1 Emergency and Transitional Housing Facilities and Needs*

Housing Type	Current Facilities	Estimated Needs
Emergency Shelter Beds:		160 beds
KCAP		
Single Men	10 beds	
Families	10 units	
South Kitsap Helpline		
Families with children	16 beds	
St. Vincent de Paul		
Single women's shelter	6 beds	
Salvation Army		
Families	2 beds	
Transitional Housing (2 to 24 month stay):		
Families		
Bainbridge Island Housing Resources	10 units	
KCAP	4 units	
Single adults	0 beds	
Victims of domestic violence	0 beds	
Recovering drug and alcohol dependent youth	0 beds	

*These figures duplicate some of the figures listed in the Groups With Special Housing Needs section.

Source: Kitsap County Housing Needs Assessment

2. Transitional Housing

The purpose of transitional housing is to give families time to stabilize their financial situation, save the money they need for deposits and utilities, seek jobs or training, and attend to other family needs before moving into permanent housing. Individual case management services are often important supplements to transitional housing.

There is very little transitional housing in Kitsap County. KCAP leases four transitional housing units from Kitsap Consolidated Housing Authority and makes these available to needy families. The families are selected from those receiving emergency shelter and are allowed to stay up to one year, paying a flat fee of \$100 per month. A stay of six to eight months is typical. South Kitsap Helpline provides eight two-bedroom apartments in Port Orchard for families with children.

Bainbridge Island Housing Resources operates Islandhome in the City of Bainbridge Island. This is a transitional, 10-family housing facility located in five, recently-constructed duplex units. All families are enrolled in the Stepping Stones program operated by Bainbridge Island Helpline House. This is an intensive case management program that includes support groups, job skills workshops and other services tailored to the needs of each family. Families may stay at Islandhome for a maximum of two years.

Agape' Unlimited operates two, 15-bed transitional facilities for recovering substance abusers. These are discussed in the section on supportive housing.

3. Trends in Homelessness

While assessing the reasons for homelessness is very difficult, an analysis of recent data from the shelters funded by the ESAP may help us better understand homelessness trends and shelter needs in the county. **Table A-HS-2** below is drawn from monthly and annual reports completed by KCAP. The number of homeless who are sheltered, turned away or assisted in homeless prevention programs is largely a product of funding levels and program priorities. Therefore, the counts may not accurately reflect the number and kinds of homeless individuals and families in the county.

Several trends that shelter and social service providers reported to The Phoenix Group during interviews are confirmed by the data in **Table A-HS-2** and include:

- The shelters appear to be operating near capacity and current needs exceed that capacity. This is supported by observing that the number of "bed nights" provided by shelters has remained fairly constant between 1990-93. Bed nights provided in the first seven months of 1993 averaged 2,375 per month. When projected at this rate, bed nights will equal approximately 28,500 per year; a figure consistent with the average for the previous two years.
- There appears to be a decline in the number of households seeking shelter because of evictions, and a rise in the number of individuals escaping domestic violence. This may reflect a greater public awareness of domestic violence as an acceptable reason for leaving a dangerous relationship.
- In all three categories (Sheltered Households, Turned Away from Shelters, and Homeless Prevention Activities), the number of single women with children has increased.
- The number of individuals in the age group 21 to 44 has increased, while the number of individuals in younger and older age groups has decreased.

HOUSING APPENDIX

TABLE HS-2 Homeless Trends for Kitsap County: 1990 - 1993

Homeless Trends for Kitsap County: 1990 - 1993							
	7/1/90 to 6/30/91		7/1/91 to 6/30/92		7/1/92 to 1/31/93 (7 months)		Trends
	Number	Percent	Number	Percent	Number	Percent	
Sheltered Households							
Total client persons	1382		1250		706		
Bednights provided	27539		27291		16631		
Households sheltered	622		576		338		
Primary reason for needing shelter (households):							
Mental illness	4	0.6%	4	0.7%	3	0.9%	
Alcohol & substance abuse	21	3.4%	19	3.3%	13	3.8%	
Employment or Income	40	6.4%	38	6.6%	26	7.7%	
Eviction	156	25.1%	51	8.9%	34	10.1%	Decreasing
Domestic Violence	135	21.7%	179	31.1%	100	29.6%	Increasing
Family crisis	51	8.2%	30	5.2%	16	4.7%	
Runaway	0	0.0%	0	0.0%	0	0.0%	
New arrival	135	21.7%	102	17.7%	65	19.2%	
Transient	12	1.9%	10	1.7%	7	2.1%	
Natural disaster	6	1.0%	3	0.5%	0	0.0%	
Medical	4	0.6%	5	0.9%	2	0.6%	
Substandard housing	0	0.0%	12	2.1%	4	1.2%	
Living with others	0	0.0%	93	16.1%	50	14.8%	
Other	58	9.3%	30	5.2%	18	5.3%	
Household status:							
Single men, no children	193	31.0%	158	27.4%	91	26.8%	Decreasing
Single women, no children	104	16.7%	122	21.2%	68	20.0%	
Couples with no children	7	1.1%	3	0.5%	0	0.0%	
Single men with children	14	2.3%	7	1.2%	6	1.8%	
Single women with children	227	36.5%	226	39.2%	148	43.5%	Increasing
Couples with children	75	12.1%	59	10.2%	27	7.9%	
Unaccompanied youth	2	0.3%	1	0.2%	0	0.0%	
Gender (individuals):							
Male	651	47.1%	519	41.5%	290	41.1%	
Female	731	52.9%	731	58.5%	416	58.9%	Increasing
Age (individuals):							
0 - 5	400	28.9%	361	28.9%	201	28.5%	
6 - 10	190	13.7%	160	12.8%	89	12.6%	
11 - 17	133	9.6%	80	6.4%	50	7.1%	
18 - 20	90	6.5%	85	6.8%	47	6.7%	
21 - 44	496	35.9%	509	40.7%	302	42.8%	Increasing
45 - 59	57	4.1%	43	3.4%	11	1.6%	
60 - over	16	1.2%	12	1.0%	6	0.8%	

Table A-HS- 2 continued

Homeless Trends for Kitsap County: 1990 - 1993							
	7/1/90 to 6/30/91		7/1/91 to 6/30/92		7/1/92 to 1/31/93 (7 months)		Trends
	Number	Percent	Number	Percent	Number	Percent	
Turned Away from Shelters							
Households turned away	937		829		587		
Persons turned away	2042		1736		1262		
Turned away household status:							
Single men, no children	206	22.0%	174	21.0%	122	20.8%	Decreasing
Single women, no children	182	19.4%	183	22.1%	92	15.7%	
Couples with no children	51	5.4%	44	5.3%	31	5.3%	
Single men with children	22	2.3%	20	2.4%	14	2.4%	Increasing
Single women with children	316	33.7%	270	32.6%	242	41.2%	
Couples with children	125	13.3%	107	12.9%	82	14.0%	
Unaccompanied youth	35	3.7%	31	3.7%	4	0.7%	
Homeless prevention activities							
Households served	309		419		203		
Individuals served	740		1067		543		
Type of Prevention:							
Eviction prevention	36	13.4%	66	13.4%	4	1.8%	
First month's rent	160	59.5%	240	48.7%	182	82.0%	
Security deposit	73	27.1%	37	7.5%	4	1.8%	
Case management	0	0.0%	150	30.4%	32	14.4%	
Total prevention actions	269		493		222		
Household status:							
Single men, no children	67	21.7%	68	16.2%	28	13.8%	Decreasing
Single women, no children	47	15.2%	60	14.3%	22	10.8%	Decreasing
Couples with no children	21	6.8%	41	9.8%	10	4.9%	
Single men with children	10	3.2%	10	2.4%	7	3.4%	
Single women with children	103	33.3%	154	36.8%	90	44.3%	Increasing
Couples with children	61	19.7%	86	20.5%	46	22.7%	Increasing
Unaccompanied youth	0	0.0%	0	0.0%	0	0.0%	

Source: Kitsap Community Action Program ESAP client characteristics reports

4. Supportive Housing

Groups of people who need housing combined with supportive social and health services include: 1) elderly and frail elderly, 2) youth, 3) chronically mentally ill, 4) people recovering from substance abuse, and 5) victims of domestic violence. Surveys and interviews with 23 public, private and non-profit housing and social service organizations indicate that five operate emergency shelters, two operate transitional housing, 14 provide social services to low-income households, and five operate food banks. **Table A-HS- 3** below summarizes the existing facilities for supportive housing in Kitsap County.

TABLE A-HS-3 Supportive Housing: Existing Facilities and Estimated Needs		
Housing Type	Current Facilities	Additional Needs
Low Income Seniors, especially 75 & over: Congregate Living Facilities	75	2,000 homes 500 units
Youth Emergency Shelter Ages 14 to 16	6 units	16 units
Transitional Ages 16 to 18 Ages 18 to 25	2 beds 0 beds	50 beds 20 beds
Chronically Mentally Ill	92 beds	50 beds
Recovering drug and alcohol dependent Adults Youths	30 beds 0 beds	25 beds 25 beds
Victims of domestic violence	17 beds	35 beds

Source: Kitsap County Housing Needs Analysis

Some individuals 65 and older can be expected to need in-home assistance or institutional care. The 1990 Census reflected that 20,325 county residents were age 65 or older, and 8,361 of those were 75 or older. The 1990 Census also indicated there were 7,400 households in which the householder was 65 to 74, and 5,795 households in which the householder was 75 or over. The available census tables do not include income distribution by age, however, a conservative estimate of low income elderly may be made by applying the countywide proportion of low-income households (34%) to the total number of elderly households. This results in an estimated 2,500 low-income households with householders between the ages of 65 and 74 and about 2,000 low-income households with householders over age 75 in Kitsap County.

When elderly become frail, outside assistance or supportive housing is needed. Several private facilities offer supportive housing and services to the elderly and frail elderly in Kitsap County. Most of the facilities, however, are not affordable to low-income seniors. Only The Firs, operated by Bremerton Housing Authority with 60 one-bedroom units, and Golden Tides, operated by Kitsap County Consolidated Housing Authority with 15 units, are reserved for low-income elderly.

In April 1993, the Educational Service District (ESD) 114 completed a Housing Needs Analysis of 'homeless' students. School counselors counted 163 students attending Kitsap County schools who were in temporary or inappropriate living situations.

Little accurate data estimates exist of mentally ill people in Kitsap County. Kitsap Mental Health Services (KMHS) treats nearly 2,000 people each year and handles more than 900 contracts per month. KMHS estimates only about one-half of the people who ask for help receive it; and most of their clients are chronically mentally ill and low income.

People recovering from substance abuse are served by Agape' Unlimited in Bremerton, Agape' House, a men's facility, and Koinonia Inn, a women's facility. Those not served by a program include chemically dependent youth and borderline developmentally disabled people who need additional skilled supervision. Some providers of adult services estimate that approximately 25 beds are needed for these individuals.

Victims of domestic violence are served by the Kitsap County YWCA's ALIVE shelter, which recently grew from 10 to 17 beds. In 1992, the shelter provided nearly 3,000 bed nights, and now has the capacity to provide 5,000 to 6,000 bed nights per year. Services at the ALIVE shelter include food, clothing, household goods, children's activities, legal advocacy, and support groups. The shelter's 24-hour crisis line receives approximately 2,500 calls per year.

III. AFFORDABLE HOUSING

A. Housing Affordability

Since 1980, supplies of affordable housing both statewide and nationally have decreased. Population growth has led to a growing demand for housing, which in turn has led to a rise in housing prices. The dwindling supply and high costs of developable land, combined with rising costs for materials and labor, have contributed significantly to increases in new housing costs. In addition, incomes in most areas have not kept pace with inflation and escalating home prices.

Hopeful first-time home buyers earning moderate incomes (between 81% and 95% of median income) are finding it increasingly difficult to purchase a home without some form of assistance. Many people in this group are forced to remain in rental housing; as increasing rents make it difficult for moderate-income renters to save a down payment for a home. Across the U.S., 80% of young adults (between the ages of 25 and 34 do not have the 20% needed for a down payment on a starter home. Of those who have enough money for a down payment, 60% do not have incomes which are sufficient to meet monthly mortgage payments.

In Kitsap County, individuals with very-low incomes (50% of area median income) are particularly at risk; higher income groups are displacing these individuals by "buying down" into housing that previously served their needs. Extremely low-income families (less than 30% of median income) receiving public assistance are the least able to afford housing. The vast majority of these households rent, and typically pay more than 40% of their incomes in rental payments. For the poor who are not receiving public assistance, this figure is even greater -- amounting to 50% of their annual incomes.

Home prices and rents in Kitsap County have risen rapidly over the past 10 years. For both owners and renters, housing affordability presents more of a challenge in Kitsap County than in the past. Data from a variety of sources indicates that only families with incomes above 120% of the county median can afford homes in most parts of the county. Similarly, rents are consuming unreasonable proportions of income for at least one-third of the renters in the county. Such financial burdens mean that families have less income to spend on other needs.

B. Housing Costs

1. Purchasing Costs

Like the rest of the region and nation, Kitsap County has experienced an escalation of housing costs in recent years. Average prices are compiled from more than a decade of data, but are distorted by very expensive home sales. However, data does show that average prices more than doubled from \$67,491 in 1981 to \$150,911 in 1995.

Median price is a better indicator of actual home cost because it is less influenced by very expensive or very inexpensive homes. Median prices for the last five years both countywide and for the subareas of the county were obtained from the Kitsap County Multiple Listing Service. Overall, the median single-family home price increased 60% over the past five years, from \$79,500 to \$124,411. Areas with lower-priced homes experienced the most rapid price increases, indicating that more modestly priced homes are in greater demand. Unfortunately, low- and moderate-income families who might once have been able to afford these homes are now being priced out of the market, and lower-priced older homes are typically converted by their owners into rentals, further reducing the number of homes available for purchase by low- and moderate-income buyers.

The highest single-family home prices are found on Bainbridge Island and in Central Kitsap/Silverdale; lowest single-family home prices are found in Bremerton. The difference in home prices is partly due to the different kind of homes sold in each area. Many sales in Central Kitsap are of new homes, while sales in Bremerton are predominantly of older homes.

2. Rental Costs

Rental rates have increased in Kitsap County over the past five years. Rental increases have been highest on Bainbridge Island, followed by Silverdale.

In the 1990 Census, 34% of the families renting homes in Kitsap County reported paying more than 30% of their income for housing. The rent burden is higher in the cities than in the rural areas of the county; the burden is highest in Poulsbo (40%) and Port Orchard (48%) and lowest in unincorporated North Kitsap (26%). This is nearly the reverse of the sequence among cities and county subareas for home ownership cost burdens. **Table A-HS-4** shows approximate median rental costs in Kitsap County. The numbers reflect apartment rental rates from the 3rd quarter of 1995.

TABLE A-HS-4 Approximate Median Rents by Unit Size in 1995			
	1 Bedroom	2 Bedroom	3 Bedroom
Countywide	\$511	\$628	\$746
Bremerton	\$473	\$589	\$693
Port Orchard	\$498	\$603	\$723
Poulsbo	\$568	\$653	\$808
Bainbridge Isl.	Not reported*	\$813	Not reported*

Source: Fall 1995 Kitsap County Real Estate Trends Report

*Previous rental information indicated that rents on Bainbridge Island were significantly higher than in other areas of the county. Although current rents are not reported for one- and 3-bedroom apartments on the island, it is assumed that rates are still higher than in other locations in the County.

Rents in Kitsap County are no more affordable to many families than home ownership. Table A-HS-5 shows the affordable rents for various income levels and family sizes.

TABLE A-HS-5 Affordable Monthly Rents in 1993					
For Units Where Tenant Pays All Utilities					
Uses the average of 1992 HUD Section 8 utility allowances for all building types (18% of Fair Market Rents)					
Family size	1	2	3	4	5
Income Level					
Middle (120%)	\$690	\$789	\$887	\$986	\$1,065
Median	\$575	\$657	\$739	\$822	\$888
Moderate (95%)	\$547	\$624	\$702	\$781	\$844
Low (80%)	\$460	\$526	\$591	\$658	\$710
Very Low (50%)	\$288	\$329	\$370	\$411	\$448
Extreme Low (30%)	\$173	\$197	\$222	\$247	\$266

*Family income categories use HUD Section 8 income limits for 1993

Source: Kitsap County Housing Needs Analysis

C. Home Ownership

Home ownership is now out of reach for at least half the families who live in Kitsap County and it is completely beyond the reach of families making 50% to 80% of the county median income. Table A-HS-6 shows that a family must have an income of \$42,770 to afford a median-priced home. Also, the table outlines affordability gaps for families of three and four persons. Although these gaps are based on 1993 data, it is noted in the 1996-2000 Kitsap County HOME Consortium Consolidated Plan that the situation is not significantly different at this time.

HOUSING APPENDIX

TABLE A-HS-6 Home Ownership Affordability in Kitsap County in 1995*			
Housing Cost Analysis			
Purchasing Costs:			
Median home price in 1995			\$124,411
10% down payment			\$12,442
Mortgage principal			\$111,970
30 year fixed rate mortgage at 8.60%			\$869/month
Total annual payment			\$10,428
Additional annual costs for:			
Homeowner insurance			\$240
Property taxes @ 12.50/thousand			\$1,563
Allowance for maintenance and repairs			\$600
Total miscellaneous costs			\$2,403
Total annual housing costs			\$12,831
Gross income needed			\$42,770
Affordability Analysis*			
	Income	Gap	Index
Median income for family of 3 *	\$32,750	(\$7,239)	82%
Low income (80%)	\$26,200	(\$13,789)	66%
Very low income (50%)	\$16,375	(\$23,614)	41%
Median income for family of 4 *	\$36,375	(\$3,614)	91%
Low income (80%)	\$29,100	(\$10,889)	73%
Very low income (50%)	\$18,188	(\$21,802)	45%

**Source: HUD 1992 income limits for Bremerton MSA; Compiled by the Phoenix Group, Inc., 17791 Fjord Drive, N.E., Poulsbo, WA 98070 (360) 779-9511*

Table A-HS-7 illustrates the price of homes families of different sizes and income levels can afford. A comparison of Tables A-HS-6 and A-HS-7 makes it clear that families above the median income can afford homes in Bremerton in the \$74,300 to \$89,250 price range. Only families above 120% of median income can afford homes with prices over \$110,000.

TABLE A-HS-7 Affordable Home Prices in 1993

With a 30-year fixed rate mortgage at 8.6% for 90% of price

Family size:	1	2	3	4	5
Income Level*					
Middle (120%)	\$96,890	\$114,195	\$131,500	\$148,865	\$162,860
Median	\$76,656	\$91,077	\$105,497	\$120,053	\$131,635
Moderate (95%)	\$71,597	\$85,297	\$98,997	\$112,825	\$123,828
Low (80%)	\$56,422	\$67,958	\$79,495	\$91,212	\$100,405
Very Low (50%)	\$26,138	\$33,348	\$40,559	\$47,769	\$54,258
Extreme Low (30%)	\$5,836	\$10,162	\$14,488	\$18,855	\$22,330

Assumes fixed monthly costs of \$170 (homeowner insurance {\$20}, property taxes {\$100}, and home maintenance {\$50}).
 * Family income categories use HUD Section 8 income limits for 1993.

The 1990 Census gives another indication of the effect rising home ownership costs have on family budgets. HUD policy directs that 30% of gross income be the threshold used for determining excessive housing cost burden. When unincorporated county subareas and cities are compared, ownership cost burden is highest on Bainbridge Island (22%) and North Kitsap (20%), while Poulsbo has the lowest percentage (8%). The countywide average was 18%, with all other cities ranging between 16% and 18%.

Two-thirds of owner households earning less than \$10,000 and 40% of owner households earning between \$10,000 and \$20,000 are paying too much for housing. Bainbridge Island and North Kitsap again stand out as the areas with the most burdened, low-income owner households.

D. Barriers to Affordable Housing

According to the 1996-2000 Kitsap County HOME Consortium Consolidated Plan, the major impediment to producing affordable rental housing, promoting new ownership opportunities, alleviating overcrowding and meeting the needs of underserved population groups is the lack of decent, safe and sanitary housing throughout the county. Reasons for the shortage include:

- **Financing** - Due to the large percentage of Navy-dependent renter households, Kitsap County continues to experience difficulty obtaining permanent financing for multi-family projects. The Federal National Mortgage Association (Fannie Mae) requires that areas with military employment or tenancy above 20% (this is the case throughout most of Kitsap County), require more stringent underwriting criteria. In areas with military tenancy or employment above 40%, Fannie Mae will not purchase mortgages at all.

Facing an otherwise hostile financial market, the County and the KCCHA have been able to improve financing opportunities by guaranteeing purchase of units in advance so developers can get suitable construction financing.

- **Zoning:** Developers, contractors and others in the private housing industry report that differing zoning regulations between county and city jurisdictions create confusion, add to the time required to bring projects to market, and hamper production of affordable housing units. One of the issues to be addressed through the Kitsap County Regional Planning process will be the development of common terms and definitions for all zoning and land use designations.

The HOME Plan indicates that home affordability may be affected by large-lot size requirements, and large lots currently comprise a substantial portion of the county. Areas characterized by large-lot development typically do not have sewer service. Areas that do have sewer service generally permit a minimum of five units per acre outright, and up to 30 units per acre in a Planned Unit Development; densities more conducive to affordable housing. In general, county zoning does not appear to present major barriers to affordable housing, and the County is not aware of any exclusive, exclusionary, discriminatory or duplicated aspects of the policies, rules or regulations that may constitute barriers to affordability.

- **Building Codes:** State Law requires that the Uniform Building Code, Uniform Mechanical Code, National Electrical Code, and the State Energy Code in their latest versions be adopted by all municipal jurisdictions. While these codes affect housing costs, they are generally considered to be beneficial in that they insure that health and safety issues are positively addressed in housing construction. However, it is the need for consistent interpretation and enforcement of these codes that is most often mentioned by the private sector.
- **Property Taxes and Values:** Other than debt service, increasing property taxes are responsible for the largest portion of housing costs in Kitsap County. Rapidly-increasing property values have had the effect of raising property taxes throughout the county. While elderly homeowners enjoy some property tax relief, other low-income homeowners and renters feel the additional burden.
- **Fees and Charges:** Kitsap County has adopted an impact fee ordinance related to schools, roads and parks. Bainbridge Island is the only municipal jurisdiction that has adopted impact fees. Property owners, developers and contractors may be discouraged from developing in these areas or may pass the additional cost on to the owners or renter of the housing units compromising affordability.

E. Government's Role in Affordable Housing

The Cranston-Gonzalez National Affordable Housing Act (NAHA) of 1990 is the first major housing legislation passed in more than 10 years. The Act is intended to address affordable housing needs by promoting the production of low-income housing through federal/local partnerships and existing HUD programs, including the Community Development Block Grant (CDBG) program. The centerpiece of the Act is the HOME Investment Partnership Program. This program provides grants (allocated by formula) to state and local governments to develop and support affordable housing, rental housing and home ownership opportunities. This is accomplished through acquisition, construction, reconstruction, or rehabilitation of affordable housing. Kitsap County participates in the HOME Investment Partnership Program.

There are a number of non-federal public resources available to aid in the development and maintenance of moderate- and low-income housing projects at a local level. These include the Washington State Housing Assistance Program, the Emergency Shelter Grant Program, the Emergency Shelter Assistance Program, the Weatherization/Energy Assistance Program, the Washington State Housing Finance Commission and the Kitsap County Consolidated Housing Authority.

Although local governments have little control over many of the influences that affect housing prices, including national and international economic trends, private lending practices, interest rates, and labor/materials costs, they do exercise control in setting local land use and development regulations. These actions can -- and do -- have impacts on housing development costs, most notably in the areas of land acquisition, site development and construction. Population growth, migration patterns, and shifting demographics can have an affect on the demand for land and housing, but are also factors largely out of the realm of local government's control and influence.

IV. HOUSING UNITS NEEDED

Additional housing needs by the year 2012 have been estimated using straight-line projections from OFM and the Kitsap Regional Planning Council's countywide population forecasts. The projected population growth was applied to 1994 OFM percentage estimates of housing units and housing types. Where OFM breakdowns were not available (by tenure and income level), percentages were applied to each category using housing type estimates from the 1990 census. It is important to note that these calculations assume no change in average household size (2.5 persons per household), even though the trend has been downward for several decades. Therefore, these projections may be slightly conservative since shrinking households would generate housing needs greater than the figures projected. The estimates of additional housing needs assume a constant mix of renters and owners; single-family, multi-family and mobile home units; and levels of household income. The figures do not make up for current shortages of rental, multi-family and affordable housing.

Subtracting the 1995 population of 220,600 from the 2012 population forecast of 292,224 persons results in a growth of 71,624 persons in Kitsap County. Assuming 2.5 persons per household, approximately 28,650 new housing units will be needed by the year 2012 (71,624 persons divided by 2.5 persons per household equals 28,650 households). Of this amount, approximately 18,336 units will be owner-occupied, and approximately 10,314 units will be renter-occupied. New single-family units will total nearly 20,055; new multi-family units will total approximately 5,157; and new mobile home units will total slightly more than 3,438. **Table A-HS-8** summarizes projected housing needs.

HOUSING APPENDIX

TABLE A-HS-8 2012 Projected Housing Needs	
Total New Units	28,650
Owner Occupied	18,336
Tenant Occupied	10,314
Single-family Units	20,055
Multi-family Units	5,157
Mobile Home Units	3,438

Source: data compiled from KRPC, OFM and 1990 Census information.

Approximately 9,740 of the 28,650 new units for the year 2012 will be low-income (80% below median income). Moderate-income households (120% of median income or below) will account for 6,590 new units, and high-income households (above 120% of median income) will account for 12,320 new units. **Table A-HS-9** summarizes housing units needed by income distribution.

TABLE A-HS-9 New Housing Units Needed by Income Distribution	
Low Income (80% or below)	9,740
Moderate Income (120% or below)	6,590
High Income (above 120%)	12,320
Total New Housing Units	28,650

Source: data compiled from KRPC, OFM and 1990 Census information

The projected new housing units have been allocated to subareas and cities. The following numbers (depicted in **Table A-HS-10**) were derived based on the following assumptions: 1) distribution of households in each city and subarea remain the same as they were in the 1990 Census; and 2) population grows at the projected rate.

TABLE A-HS-10 New Housing Units Needed by Subarea and City	
North Kitsap	8,022
Central Kitsap	3,725
South Kitsap	6,876
Bainbridge Island	2,292
Bremerton	6,303
Port Orchard	573
Poulsbo	859
Total New Housing Units	28,650

Distributing low-income housing units countywide is the goal of both the Growth Management Act and the Kitsap County Planning Policy. In the past, the market has directed affordable, low-income housing units into incorporated cities. While this is appropriate because of accessible public services, housing units tend to become concentrated into small geographic areas. For example; in 1990, 49% of the City of Bremerton’s housing units were occupied by households earning less than 80% of the County’s median income.

If future low-income housing units are proportionally allocated to where low-income families currently live, most new units would be assigned to Bremerton, Port Orchard and Poulsbo. However, if these units were allocated equally at the current countywide percentage of low-income families (34% everywhere), most of the units would go into the unincorporated areas of the county and on Bainbridge Island. These two scenarios have different results because unincorporated Kitsap and Bainbridge Island have lower proportions of low-income households than the county as a whole.

The following table (Table A-HS-11) illustrates the number of new units per location for the year 2012 based on an equal-share distribution:

- The Historical Income Distribution column reflects the low-income housing unit distribution for 2012 if future disbursements follow trends noted in the 1990 Census.
- The percentages that follow each of the numbers reflect the proportion of low-income units per subarea/city (these numbers match the percentages found in the 1990 Census).
- The Equal-Shares Distribution column reflects the number of new units needed by location if the units were to be distributed equally to each location; 34% of the projected new housing units in each subarea/city would be low-income.

TABLE A-HS-11 Low income Household Distribution in 2012		
Location	Historical Income Distribution	Equal Shares Distribution (34% for each location)
North Kitsap	2,246 (28%)	2,727
Central Kitsap	820 (22%)	1,267
South Kitsap	2,407 (35%)	2,338
Port Orchard	287 (50%)	195
Poulsbo	404 (47%)	292
Bainbridge Island	527 (23%)	779
Bremerton	3,152 (50%)	2,143

HOUSING APPENDIX

To achieve equal-share, low-income household distribution, the Cities of Port Orchard, Poulsbo, Bremerton and South Kitsap will need to add low-income housing units to their housing stock. The following table (Table A-HS-12) illustrates how much each subarea/city will need to increase or decrease their low income housing units to achieve equal shares.

North Kitsap	+481
Central Kitsap	+447
South Kitsap	-65
Port Orchard	-91
Poulsbo	-112
Bainbridge Island	+252
Bremerton	-1,009

To achieve equal shares of low-income housing units countywide, efforts will need to be made at all levels of development and in all jurisdictions. Kitsap County will direct the Kitsap County Consolidated Housing Authority to focus attention on providing low-income housing units in North and Central Kitsap as well as on Bainbridge Island. Conversely, the Cities of Port Orchard, Poulsbo and Bremerton will slow down development of low income housing units.

UTILITIES APPENDIX

I. INTRODUCTION

This appendix is an inventory of current facilities and conditions and future needs of the various public utilities that serve Kitsap County, but are not managed directly by the Kitsap County government. The utilities discussed include natural gas, electricity, telecommunications and the larger private water purveyors (which number more than 100 connections). Service areas, facility locations, existing capacity, and planned improvements are discussed. Water and sewer districts managed by municipalities (e.g., Silverdale Water District) are discussed in the Capital Facilities Element of this plan.

II. NATURAL GAS

Background

The Pacific Northwest receives its natural gas from the southwest United States and Canada. Natural gas is supplied to the entire region via two interstate pipeline systems. The Pacific Gas Transmission Company and Northwest Pipeline Corporation each own and operate their respective regional pipeline networks, which supply natural gas to Washington, Oregon, and Idaho.

Cascade Natural Gas Corporation (CNG), builds, operates, and maintains natural gas facilities serving Kitsap County. CNG is an investor-owned utility serving customers in sixteen counties in the State of Washington.

Natural gas is either stored as a gas under pressure, or cooled to -258 degrees F and stored as a liquid. Underground gas storage is provided at Jackson Prairie Gas Storage located south of Chehalis. Cold liquid storage is provided at a facility in Plymouth, Washington.

Existing Locations and Capacity

CNG's service area includes all of the City of Bremerton and adjacent unincorporated areas; the City of Port Orchard; the majority of South Kitsap, Silverdale, and Central Kitsap; and the City of Poulsbo. **Figure A-UT-1** shows CNG's current service area. Note that service is not currently provided to all areas inside the service area. Connections are initiated by customer demand and individual requests.

CNG has more than 17,000 residential, commercial, and industrial users as of January 1994. According to CNG, the current peak demand is approximately 1,950,000 therms per day.

Projected Locations and Capacity

CNG does not plan in advance for individual connections, rather connections are initiated by customer requests for new construction or conversion from electricity or oil. CNG expects to continue developing distribution systems and services to meet growth at lowest possible cost by maximizing capacity of the existing distribution system. This can be accomplished by one or more of the following:

UTILITIES APPENDIX

- # Increasing distribution and supply pressures in existing lines.
- # Adding district regulators from supply mains to provide additional intermediate pressure.
- # Adding new distribution and supply mains for reinforcement.
- # Replacing existing mains with larger sized lines.

CNG will pursue the aforementioned improvements throughout the existing service area. They have identified the following other specific improvements:

- # Adding 10-inch line in the Bremerton.
- # Adding eight miles of new line in Poulsbo.
- # Expanding services in Manchester.

Factors important in implementing expansion of the CNG system include right-of-way permitting, environmental impact assessments, coordination with other projects (e.g., road construction), and locations of other utilities.

III. ELECTRICAL

Background

Puget Sound Energy (formally Puget Sound Power & Light Company and Washington Natural Gas) is an investor-owned private utility responsible for providing electricity and gas service to more than 1,377,388 metered customers within the company's 6,000 square mile service territory, including Kitsap County. Puget Sound Energy is guided by many considerations, including protection of the performance, integrity, reliability and stability of the company's electrical system; the health, safety and service of its customers and employees; protection and preservation of the environment; and the affordability of electricity.

Once generated, electricity must be moved instantly to where it is needed. Utilities build networks of high-voltage (500 KV) transmission lines and substations to distribute this "bulk power" closer to the demand. The transmission substations transform the power, or "step-down" the power, to a lower voltage (230 KV, 115 KV) and route the power to local service areas. The power is further stepped down (to 5 to 35 KV) at distribution substations located in residential neighborhoods or at an industrial site. Distribution lines, or feeders, route the power from the distribution substation to pole-mounted transformers, just outside a home or business. The pole-mounted transformer steps the power down again to 240 volts. A service lateral line, or "service drop," then carries low-voltage power to the meter, fuse box or breaker panel in the home.

Existing Facilities

Power is supplied to Western Washington primarily from hydrogenerating stations along the mid-Columbia River and from Canada. Inter-regional 500 and 230 KV transmission lines carry power from the generating stations westerly to PSE's transmission switching stations and to transmission substations, operated by the Bonneville Power Administration (BPA) in the Puget Sound region. The

two main access points for receiving power in Kitsap County are at BPA Kitsap 230/115 KV Transmission switching station (north of Gorst) and Command Point cable station 115 KV Line (Fragaria). **Figure A-UT-2** shows the existing major electrical system facilities.

The existing electrical facilities inventory in unincorporated Kitsap County consist of:

- # Transmission Switching Stations — Foss Corner and Valley Junction
- # Transmission Substation — South Bremerton, Bremerton
- # Distribution Substations — Port Gamble, Christensen's Corner, Miller Bay, Silverdale, Central Kitsap, Bucklin Hill, Tracyton, McWilliams, Chico, Sinclair Inlet, South Keyport, Fernwood, Manchester, Long Lake, Fragaria, East Port Orchard, Sheridan, Rocky Point, Poulsbo, Bremerton, Port Madison, Murden Cove, and Winslow.
- # Transmission Lines 115 KV — Foss Corner-Salisbury Point, Foss Corner-Murden Cove, Bainbridge Tap-Foss Corner, Valley Junction-Foss Corner, Bremerton-Foss Corner, South Bremerton-Bremerton, South Bremerton-Valley Junction, O'Brien-South Bremerton, South Bremerton-Fernwood Tap
- # Other Facilities — Command Point Cable Station, Salisbury Point Cable Station
- # Other utilities with facilities in Kitsap County — Bonneville Power Administration and United States Navy.

PSE has divided Kitsap County into two subareas -- north and south -- for purposes of electric facilities planning. The North Kitsap subarea is defined by the shoreline with Sinclair Inlet to Hood Canal as the northern border. The South Kitsap subarea is defined by the shorelines, the county-line to the south, and Sinclair Inlet as the northern border.

The North subarea receives 115 KV power from BPA Kitsap station, routed to Puget Power's South Bremerton, Bremerton, and Valley Junction (east of Silverdale) 115 KV switching stations. Three 115 KV transmission lines carry power north into west Bremerton and Silverdale areas. Two of these lines -- the BPA Kitsap-Valley Junction and the South Bremerton-Valley Junction lines-- terminate at the Valley Junction switching station. The third line -- Bremerton-Foss Corner Line and Valley Junction - Foss Corner line -- continues north to the Foss Corner switching substation (northeast of Poulsbo). Three radial lines tap off this system to serve the northern section of the county, including Bainbridge Island.

The South Kitsap subarea is divided into two sections. The City of Port Orchard and the southwestern half of the subarea receive power from the South Bremerton transmission station (originating from BPA Kitsap). The eastern half of the subarea receives power from Command Point station (originating from O'Brien station via the Vashon Submarine Cable).

Existing Capacity

The analysis of the existing system has indicated that the 230/115 KV transformers at the BPA Kitsap switching stations are approaching their capacity, as measured by their capability to meet the power utilization of the distribution substations in north and south Kitsap. The power utilization factor is a comparison of current peak system load in Kitsap County during the winter heating season, divided by the design capacity of the substations in

Kitsap County. The power utilization factor is at 70.5% in north Kitsap and 75% in south Kitsap. **Table A-UT-1** lists the capacity and the peak winter usage measured in mega volt amperes (MVA) at the distribution substations located throughout the county (including incorporated areas). Peak winter usage is shown for January 30, 1996, at 9 a.m., when the average temperature was 23 degrees F.

Since only two 230-115 KV, 280 MVA transformers at the BPA Kitsap Switching Station serve most of Kitsap County, the capacity of these transformers is a measure of their ability to serve the connected load. Using planning guidelines from PSE, the system is designed so one of these large transformers can be taken out-of-service without causing customer outage during normal winter conditions.

Projected Needs Capacity

Long-range plans are developed by PSE’s Planning Group . The plans are based on electrical growth projections anticipated for the years 2010/2020 and beyond. County population projections produced by the state Office of Financial Management (OFM) are used to determine new load growth for the next 20 years. For load growth beyond 20 years, Puget Sound Regional Council (PSRC) population and employment forecasts are used. Projected load is calculated as the existing load, minus conservation reductions, minus demand side management, plus the forecast of new load. **Table A-UT-2** shows the projected estimated loads in 2020.

UTILITIES APPENDIX

Table A-UT-1. Electric Power Capacity and Usage		
Distribution Substations	Capacity (MVA)	Winter Load (MVA) (Jan. 30, 1996)
North Kitsap subarea		
Bremerton		
Bucklin Hill		
Central Kitsap		
Chico	50	22.1
Christensen's Corner	20	19.6
McWilliams	20	14.6
	20	20.0
Miller Bay	20	17.1
Murden Cove	20	14.3
Port Gamble	20	20.5
Port Madison	25	24.3
Poulsbo	20	16.7
Rocky Point No. 1	25	17.5
	20	22.7
Rocky Point No. 2	20	15.2
Sheridan No. 1	20	14.5
Sheridan #2	20	18.4
Silverdale	20	14.2
	20	20.2
South Keyport	20	18.7
Tracyton	20	18.3
U.S. Navy Keyport	20	10.0
Winslow	20	19.4
Total Loads Utilization Factor = 80.5 percent	445	358.3
South Kitsap subarea		
East Port Orchard		
Fernwood	25	18.5
Fragaria	25	26.6
Long Lake	25	22.1
Manchester	25	18.4
Sinclair Inlet	25	20.7
	20	11.4
Total Loads Utilization Factor = 81.2 percent	145	117.7

Table A-UT-2. Projected Estimated Electrical Load in 2020	
North Kitsap Subarea Existing Load	358.3 MVA
<u>Plus Total Expected Load</u> 2020 Projected Load Level (MVA)	*135 493.3
South Kitsap Subarea Existing Load	117.7
<u>Plus Total Expected Load</u> 2020 Projected Load Level (MVA)	45.2 162.9
	*Adjusted for Conservation and Demand Side Management Effects

System Improvements to Meet Projected Demand

Puget Sound Energy’s 2020 electrical facilities plan is based on an estimated peak winter load of 493.3 MVA for North Kitsap and 162.9 MVA for South Kitsap. PSE plans to construct additional transmission and distribution facilities to meet this demand. The construction projects planned by the year 2020 are described below and shown in **Figure A-UT_3**. The exact timing of individual projects will be determined by the rate of load growth in specific areas.

1. Bainbridge Transmission Reliability Improvement

This project will connect the substations so that power can automatically be restored following most transmission-related outages. Presently, each substation (and all the customers to which it provides electricity) is served by a separate 115 KV transmission line (a single source) from the north across Agate Pass.

If there is a failure anywhere along the transmission line, everyone served by that substation loses power until repairs can be made. By connecting (or "looping") the Murden Cove and Winslow substations, a second supply source will be available to each substation. This project will be proceeded by reliability improvement projects at Keyport and Port Madison Substations.

2. BPA Transmission Improvements

PSE and BPA are working towards adding a third 230-115 KV transformer in South Bremerton. This project will resolve the projected capacity shortage in the county.

3. Serwold Substation

This project provides for construction of a new distribution substation in northeast Poulsbo. This station will provide the necessary capacity to serve the new customer load and provide back-up power for adjacent substations.

UTILITIES APPENDIX

4. Bangor and Foss Corner Right-of-Way Acquisition

Puget Sound Energy is exploring alternatives to improve the capacity and reliability of the electric system serving Kitsap County. One such alternative is to construct a new transmission line between Bangor and Foss Corner switching stations. PSE is pursuing negotiations with the U.S. Navy Submarine Base Bangor and BPA to implement this alternative. If those negotiations are successful, PSE will begin the permitting process to acquire the rights-of-way for the transmission line rather than construct the submarine cable. This project would also involve acquiring right-of-way segments between the South Bremerton switching station and Bangor.

5. Helena Substation

This project provides for construction of a new distribution substation which will provide additional capacity in the area southwest and southeast of Fernwood. This project will also improve reliability by providing load transfer capability with the adjacent substations in Fernwood, Long Lake and Fragaria.

6. Colby Substation

This project provides for construction of a new distribution substation in northeast Port Orchard. This substation will provide a link between the Manchester and East Port Orchard substations and improve reliability as a result.

7. Foss Corner Salisbury #2 115/230 KV Line

This project will provide service to a future Sunset substation, which would serve future development in that area. This project will also provide for a future 230 KV transmission system link between Salisbury cable station and Foss Corner switching station.

8. South Bremerton-Foss Corner 230 KV Line

This project will provide for the construction of a 230 KV transmission line between South Bremerton and the Foss Corner Switching Station. The major portion of this line will be constructed on a right-of-way parallel to the Kitsap-Bangor BPA line. This 230 KV transmission line will ultimately link the South Bremerton switching station to the BPA Fairmount transmission substation (Jefferson County) via the Foss Corner switching station.

9. North Kitsap 230 KV Plan

This project will extend 230 KV lines northward throughout the Kitsap region.

10. Sedgwick Switching Station

This project will provide additional reliability for the distribution substations that are served from the O'Brien-South Bremerton.

11. Sedgwick-South Bremerton #3 115/230 Transmission Line

This project will serve the Sunnyslope Substation.

12. Distribution Substations

Several new distribution substations are planned to serve the forecasted load. In North Kitsap, distribution substations are proposed in Serwold, Tower, Sunset, Eglon, Newberry, Werner, Brownsville and Fletcher. In South Kitsap, distribution substations are proposed in Helena, Colby, Phillips, and Sunnyslope. These substations are shown in **Figure A-UT-3**.

A 20 MVA transformer is anticipated at each of the North Kitsap subarea substations, except at Fletcher where a 25 MVA transformer would be installed. This would provide an additional approximately 165 MVA capacity to the North Kitsap subarea. A 25 MVA transformer is anticipated at each of the South Kitsap subarea proposed substations, providing approximately 100 MVA of additional capacity to this subarea. Based on this added capacity and the predicted year 2020 load levels, the new utilization factors for residential and commercial use would be as shown in **Table A-UT-3**.

Table A-UT-3. Estimated Electrical Capacity Utilization Factors in 2020	
North Kitsap	= 493.3 MVA / 610 MVA
Total 2020 load / nameplate rating	= 80.8% utilization factor
South Kitsap	= 162.9 MVA / 245 MVA
Total 2020 load / nameplate rating	= 66.5% utilization factor

IV. TELECOMMUNICATIONS

Telecommunications is the transmission of information by wire, radio, optical cable, electromagnetic, or other similar means. The telecommunications utilities discussed in this section include telephone, radio communication, cellular telephone and cable television. Telecommunications is often referred to as the medium for the “information superhighway.”

Telecommunication service is regulated by the WUTC, and is subject to various federal laws and regulations administered by the FCC. Telecommunication providers must also comply with local regulations such as land use and public rights-of-way.

Telephone Service

Kitsap County is served by US West Communications, United Telephone Northwest, and PTI. Telephone service is initiated by customer demand and requests. Telephone service providers are required to provide adequate telecommunications service on demand (RCW 80.36.090). Accordingly, telephone service providers will provide facilities to accommodate whatever growth patterns occur. Since telephone service providers do not generally conduct detailed long range planning activities, no specific projects have been identified by any of the carriers. General improvements to expand service to meet the projected future demand include constructing additional fiber optic cable, copper cable, and switching stations.

US West

UTILITIES APPENDIX

US West has the largest service area in Kitsap County, encompassing a majority of South Kitsap, Silverdale and the City of Port Orchard. The US West service area extends northward through the City of Bremerton east to Port Orchard Bay, west to Hood Canal. The northern boundary of the US West service area is approximately in the middle of Ridgetop Boulevard.

US West has approximately 77,000 access lines in Kitsap County. The projected growth rate for the next three years is approximately 4% per year. US West does not forecast beyond three years because of the volatility in the telecommunications market. US West initiates planning activities to provide additional capacity when usage exceeds 85% of the total available capacity. US West regularly evaluates the capacity of their facilities and seeks to maintain operation of the system at 85% of total capacity.

United Telephone Company

The United Telephone service area begins at the northern boundary of the US West service area and extends east-west from near the shoreline of Hood Canal to Liberty Bay. United Telephone provides service to the City of Poulsbo and the areas between Poulsbo and Indianola and Port Gamble.

United Telephone Company currently provides approximately 20,000 phone lines in its service area. United Telephone is planning for an average growth rate in service lines of approximately 5% per year, and a total of approximately 25,000 access lines are expected by the year 1999. United Telephone Company plans to maintain the system operating at approximately 90% capacity while meeting the requested demand.

PTI

PTI serves the balance of the county not served by US West or United Telephone Northwest. PTI's service area includes Indianola, Kingston, Port Gamble, Hansville, and the Suquamish and Port Gamble S'Klallam Tribes. The PTI service area includes a region north of Fragaria, west to near Long Lake, and south to the county line.

PTI currently provides approximately 5,200 access lines in the Kingston-Hansville area and approximately 2,000 lines in the southern portion of the county. PTI maintains their operating system at approximately 80% capacity. No specific projections for future service have been provided by PTI.

Radio Communications

Radio communication forms an integral part of an established communications system within Kitsap County. Public sector communications provides services for law enforcement agencies, municipalities, interagencies, fire departments, search and rescue organizations, the American Red Cross, departments of emergency management, Puget Power, medical administration, and maritime.

Alternative emergency communications exist which are designed to supplement or replace existing public safety communications systems during times of emergencies or disasters. Emergency communications may include the use of local radio stations and HAM operators who provide a link to federal and state emergency management personnel during emergencies or disasters. Links are established throughout the county. Kitsap County recognizes the value of these facilities as part of an emergency broadcast network which has been in place for many years.

Cellular

Kitsap County is served by several cellular providers. The FCC regulates the cellular industry.

Cellular calls are routed by a series of low-powered transmitting antennas through a central computer called the mobile telephone switching office, or MTSO, which connects the call to its destination. The transmitting antennas are located at “cell sites” and coverage areas are known as “cells.” Strategic placement of the antennas allows a mobile cellular signal to be relayed as the carrier of the phone travels.

Additional antennas are planned when capacity overload is expected. The cellular system will expand in response to several factors: customer growth within a designated area, shift in distribution patterns, and/or a decrease in service quality or reliability (measured by the record of dropped calls or complaints of poor sound quality). In general, cellular system growth follows trends in population density along the higher volume transportation corridors.

Cable Television

Kitsap County is served by four cable television providers: TCI, Falcon, Northstar and Northland. Both TCI and Falcon Cable have franchised with Kitsap County to serve the entire county. Northstar Cable serves the Kingston and Hansville area. Northland serves Suquamish, Indianola, Bainbridge Island, and the greater north Poulsbo area.

A central collection point, a “headend,” receives signals by satellite, microwave or broadcast antennas and converts them to VHF frequencies that correspond to those in the tuner of a television set. The signals are conveyed to customers through miles of cable installed throughout the community. When a cable system carries more than 12 channels, a non “cable-ready” television cannot tune into the frequencies for channels higher than 13. The cable company then provides the customer with a converter to receive all of the frequencies and convert them back to a signal the television can accept. Converters also can descramble signals for optional premium services such as HBO.

Cable television companies are regulated under the Cable Television Consumer Protection and Competition Act of 1992 enforced by the FCC. Cable companies must enter franchise agreements with local governments to regulate service rates according to FCC guidelines. Kitsap County’s master ordinance specifies that cable coverage shall be available to all residents within county where there are at least 32 dwelling units per street mile. This ordinance also states that the franchisee with the nearest service facility and/or distribution line will be responsible to furnish cable service in areas which are adjacent to an unbuilt area.

TCI Cable

TCI’s service area includes the entire county and has the potential to serve 15,156 households. TCI plans for an approximate 4% annual growth rate. The franchise agreement with Kitsap County states that TCI will upgrade the system to 54 channels, as well as additional improvements to the existing system such as laying new optical fiber for increased capabilities.

Falcon Cable

UTILITIES APPENDIX

Falcon Cable service area includes the entire county and serves 17,700 subscriber households. Falcon Cable services are currently meeting demand. Falcon Cable has been providing cable service for less than two years and currently does not have a specific growth plan. Falcon Cable is currently negotiating with Kitsap County to renew their franchise agreement. Planning for system improvements will be identified in the final agreement.

North Star

North Star Cable serves the communities of Kingston and Hansville, with 950 and 300 subscribers respectively. North Star has experienced an average of 4% to 5% annual growth rate. North Star intends to meet demand but does not have a specific plan for expanding services.

Northland Cable

Northland provides cable television service to Suquamish, Indianola, parts of Bainbridge Island, and the greater north Poulsbo area. Currently, Northland has 980 subscribers in unincorporated Kitsap County. Northland has experienced an annual growth rate of approximately 6%. Northland Cable intends to meet their anticipated growth but does not have a specific plan for expanding services.

TRANSPORTATION APPENDIX

I. TRANSPORTATION INVENTORY

This section of the transportation element summarizes the existing transportation facilities and services currently in use in the unincorporated portions of Kitsap County. The inventory includes a variety of multimodal facilities and describes all travel modes used in the County for mobility.

A. Public Highways, Arterials, and Roadways

The Kitsap County peninsula is surrounded by water on three sides, and is connected to the mainland at the southern end of the county. The two main routes into Kitsap County from the south are SR 16, from Pierce County, and SR 3 from Mason County. SR 16 connects Kitsap County to Pierce County, including the City of Tacoma, via the Tacoma Narrows Bridge. The Tacoma Narrows Bridge also provides access to all points east of Puget Sound. In contrast, SR 3 leads to rural Mason County and to the Olympic Peninsula. **Figure TR-1**, in Part III, Fold Out Figures, of the Comprehensive Plan, indicates the major travel corridors in Kitsap County including both state routes and county/city routes. There are three main bridges serving Kitsap County: Tacoma Narrows (SR 16), Agate Pass (SR 305), and Hood Canal (SR 104). Access to the Olympic Peninsula from the northern half of the county is near Port Gamble via the Hood Canal Bridge, which crosses the Hood Canal into Jefferson County. All other access points to Kitsap County are by ferry on the eastern side of the County. These points include Bremerton and Bainbridge in central Kitsap; Southworth in south Kitsap; and Kingston in the north.

Just south of the community of Gorst, SR 16 meets with SR 3. SR 3 continues north through Kitsap County to the Hood Canal Bridge. Just north of the bridge, this route becomes SR 104, which travels through the community of Port Gamble and then heads south along the Port Gamble waterway to the juncture of SR 104 and Bond Road (SR 307). At this point SR 104 heads east to Kingston.

SR 307 (Bond Road) is an important connection between Kingston (SR 104) and SR 305. SR 305 is the only land-based access to the City of Bainbridge Island and the Bainbridge Island ferry terminal. SR 305 connects with Bond Road, an important connection to Kingston (SR 104) and with SR 3 near Poulsbo, and runs south along Liberty Bay to Agate Passage. Here, the Agate Pass Bridge links Bainbridge Island to the remainder of Kitsap County. SR 305 then continues south to the Bainbridge Island ferry terminal.

The County's road system inventory in unincorporated areas, consists of 921 roadway miles and 24 County-owned bridges. Roadway miles by functional class and jurisdiction include:

Kitsap County:

Major arterials; 11 miles,
 Minor arterials; 95 miles,
 Major collectors; 161 miles,
 Minor collectors; 64 miles, and
 Local access; 590 miles.

State:

Principal arterials; 44.7 miles,

TRANSPORTATION

Minor arterials; 53.5 miles,
Major collectors; 3.4 miles, and
State-owned bridges; 0.5 miles.

A list of each road in unincorporated areas of Kitsap County as well as existing daily roadway capacity, volume-to-capacity (V/C) ratio (level of service measure), and general location denoted by subarea (North, Central, or South) is included in the Kitsap County Comprehensive Plan Part II. Refer to KCCP Part III for Figures CF-TP-1, 2, & 3 which show geographic location of each roadway.

1. Classifying the Roads by Their Function

Classifying roadways by their function helps in system planning, maintenance and operations. The classification system is used in day-to-day decisions and long-range planning for land use and transportation purposes. All roadways exist to serve two functions: mobility and land access. "Mobility" refers to the movement of vehicles or people at a reasonable speed. "Access" refers to ability to get on the roadway, which includes driveways and parking and loading areas on the street. At times, these functions conflict with each other.

To minimize these conflicts, a system of classifying arterials, collectors and local streets have been established. Functional classifications are based on the following elements:

- # Average trip lengths;
- # Traffic characteristics such as volumes, design and posted speeds;
- # Roadway design characteristics such as right-of-way requirements, number of travel lanes, lane widths, shoulder widths, medians, sidewalks, turn lanes;
- # System continuity;
- # Degree of access control;
- # Operations, including parking and signal systems;
- # Ability to serve other travel modes, including buses, bicycles, pedestrians, and equestrians;
- # Reasonable spacing, depending upon population density;
- # Directness of travel and distance between points of economic importance; and
- # Connection of population centers.

Kitsap County has functional classification categories for principal arterials, minor arterials, collectors, minor collectors, and local streets. The balance of mobility to access is the major

difference between the classifications, which are described in detail in **Table TR-1.**

Figure A-TR-2, in Part III, Fold Out Figures, shows the County's existing functional classification

system.

2. How Roadway Functional Classification is Used

The county's functional classification system is used for transportation systems planning, financial planning and administrations, and to develop design criteria and standards for County and private-sector roadway improvements.

a. *Transportation Systems Planning*

Functional classification is a tool for building a transportation system that serves all types of travel needs. It helps in setting priorities and making evaluations for improvement projects. It helps jurisdictions coordinate their approaches to the transportation system, and it affects land use planning and zoning decisions.

b. *Financial Planning and Administration*

The classification system also helps in the allocation of funds for transportation system improvements and maintenance. Some funding sources, like ISTEA, STP(U), STP(R), and the Washington State Urban Arterial Board (UAB) fund, are reserved for specific types of facilities. The Washington State Department of Transportation distributes Federal Aid highway funds to cities and counties in the State. The classification system is used to determine which roads are eligible for certain state and federal funds.

c. *Design Issues*

The County has developed an extensive set of road design standards by functional classification. These standards guide the design of improvements for individual County roads. They also are used in the review of land development proposals to determine infrastructure requirements (e.g., right-of-way, pavement and sidewalk requirements) for both on-site and off-site roads. The standards, used with the functional classification system, are especially useful for longer range planning, helping to make sure that enough land is set aside for roadways in developing areas.

Table TR-1: Kitsap County Roadway Functional Classifications

<p>Principal Arterial. Provides either full or semi-controlled access and includes the freeway system and all State routes. Principal arterials form the backbone of the highway system and should be designed to provide as high a level of service as is practical. Principal arterials provide for movement between urban and rural intra-County population centers. As such, this roadway facility classification predominantly serves "through" traffic with minimum direct service to abutting land uses. In Kitsap County, the Washington State Ferry system routes act as principal arterials connecting one urban area within the Region to another.</p>
<p>Minor Arterial. Minor arterials provide access to the principal arterial and freeway systems. They provide a lower level of travel mobility than principal arterials to major communities within the County. They provide primary access to or through communities of high density residential, commercial or retail, or industrial land areas. They provide access to abutting properties at pre-determined locations. Trip lengths on minor arterials generally exceed five miles. Minor arterials provide routes for public transit systems between major communities within the County.</p>
<p>Collector. A collector provides the primary access to a minor arterial for one or more neighborhoods or non-residential areas. Collectors distribute trips to and from the arterial system. They provide a limited amount of travel through neighborhoods and non-residential areas which originates and terminates externally. Collectors provide direct connections to local roads and minor collectors. They provide collection and distribution routes for public transit systems. The basic trip length is generally between 2 and 10 miles.</p>
<p>Minor Collector. Minor collectors provide direct access to local roads and driveway access points to abutting properties. They provide for internal distribution of trips within a neighborhood or non-residential area, or part of a neighborhood or non-residential area. Minor collectors contain a limited amount of through traffic; traffic is primarily local in nature.</p>
<p>Local. A local access street provides access immediately to adjacent properties. Characteristics of local streets include: low traffic volumes, maximum of two travel lanes, no medians, no shoulders, no access control and no preference at signals. Sidewalks and parking may be permitted. Local streets should connect local properties to minor collector streets and in-turn, to higher class facilities. Fixed-bus routes along local streets should generally be discouraged.</p>

B. Public Transportation

Kitsap Transit is the public transportation provider in Kitsap County. Formally known as the Kitsap Public Transportation Authority, it was established by the voters in the fall of 1982. Its mission initially, was to provide public transportation services in the greater Bremerton and Port Orchard areas. Since then, Kitsap Transit has expanded three separate times through benefit area annexations, and now covers much of South, Central and North Kitsap as well. The Authority's boundaries now include approximately 189,000 of Kitsap County's 218,000 residents. Additionally, the Authority also provides paratransit service for the elderly and disabled as well as rideshare services for the general public within the county but outside the Authority's boundaries.

Kitsap Transit is a multi-program system which provides:

- # Traditional fixed-route transit services - regular full-day service as well as custom rush-hour service in the ferry terminal areas of the county,
- # Paratransit services for elderly and disabled people throughout the county, as well as for the general public in some parts of the district,
- # A very large rideshare program composed of worker/driver buses (subscription or bus pool service), vanpools, and a ride-matching service, and
- # A contract passenger ferry operation between Port Orchard and Bremerton.

Kitsap Transit also works actively with local governments and state agencies to promote its services and other alternatives to single-occupant vehicles (SOVs) including pedestrian/bicycle access, and the facilities and land-use patterns that support alternative modes. The transit system also advocates for TSM/TDM [*Transportation System Management/ Transportation Demand Management*] programs and overall land-use programs that will benefit the array of alternatives described above throughout the County. Finally, the Authority is the lead agency responsible for the implementation of Washington State's Commute Trip Reduction (CTR) Act requirements for major Kitsap employers.

Through the introduction of innovative public transportation options, Kitsap Transit has helped achieve the highest overall mode share in the Puget Sound region, with the rideshare segment especially strong due to a mixture of shortage of endpoint parking (terminal and employment center) and aggressive TDM and rideshare programs.

1. Rolling Stock and Supporting Capital Facilities

The type and number of passenger service vehicles in Kitsap Transit's 1997 fleet is presented in **Table TR-2**. Kitsap Transit recently received a federal grant to equip the remainder of its fixed-route fleet with bicycle racks.

Table TR-2: Kitsap Transit Passenger Service Vehicles

Equipment Type	Number	Vehicle Characteristics
Fixed-Route Transit Vehicles	91	All are bicycle and wheelchair lift equipped, 1983-1995 models, (40 '79's, 81's & 83's remanufactured in last 2-3 years).
Demand Response	46	34 are Wheelchair Lift-Equipped, year of purchase ranging from 1991 to 1995.
Vanpool	111	1 Wheelchair Lift-Equipped, year of purchase ranging from 1991 to 1995.
Worker/Driver Vehicles	32	16 of which are bicycle equipped, 1971 and 1974 models.

Kitsap Transit currently operates 39 fixed routes focusing on the more densely populated areas of the County. These routes connect populated areas to all four State ferry terminals in Kitsap county: Bremerton, Bainbridge Island, Kingston, and Southworth. Kitsap Transit also provides service to downtown Port Orchard and the contract passenger-only ferry service operating by a private carrier between Port Orchard and downtown Bremerton. Fixed-route transit service is most extensive in Bremerton, both in the central business district and in the more residential areas of west and east Bremerton.

For fixed-route transit services, passenger service hours have increased between 1993 and 1997, from approximately 115,000 hours to 137,000 hours. Passenger trips on the fixed route system grew from about 2.9 million riders in 1993 to 4.0 million riders in 1997. For demand-responsive service, service hours have increased slightly from about 56,000 hours in 1993 to 65,050 hours in 1997. Finally, vanpools and ridematching service passenger trips increased from 119,259 in 1993 to 282,898 in 1997.

TRANSPORTATION

There are currently seven transit centers in the Kitsap Transit system. At least one transit center is located in each major city, with three in Bremerton. The newest transit center is located at Kitsap Mall in Silverdale.

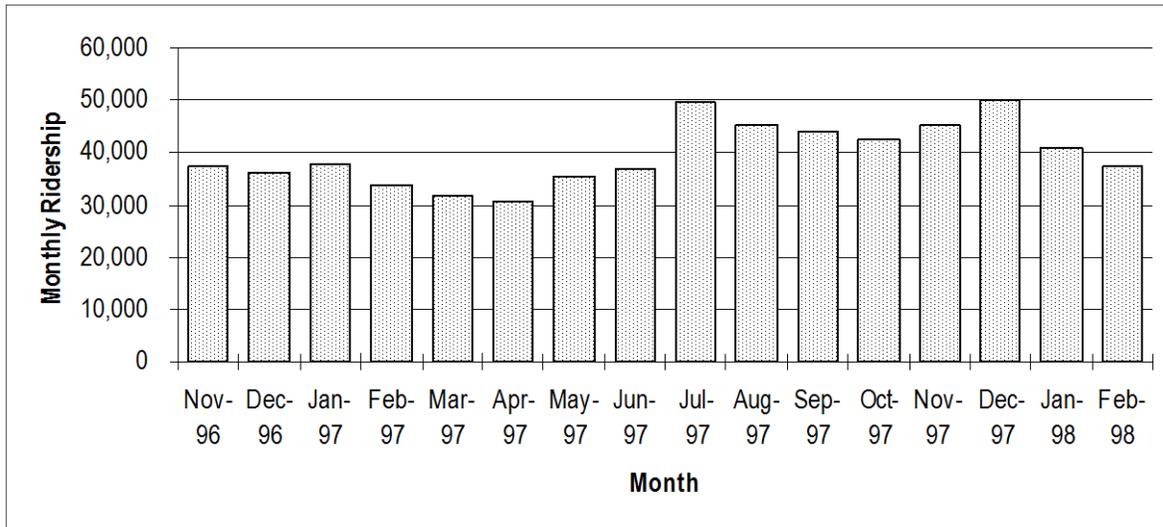
Table TR-3 summarizes the existing park-and-ride-spaces within Kitsap County. As shown, there are 21 lots that are either in use or are under design or construction. The 21 lots are scattered throughout the County and total about 1,950 spaces.

Table TR-3: Existing Park-and-Ride-Lots

Location	Capacity (Number of Spaces)
(1) Agate Pass, SR 305 & Agate Passage	67
(2) Bainbridge Alliance Church	75
(3) Bainbridge Island Ferry Terminal	165
(4) Bayside Church	30
(5) Bethany Lutheran, High School Road and Finch Road	50
(6) Bremerton Ferry Terminal	138
(7) Christ Memorial Church, 8th & Hostmark	99
(8) Full Gospel Assembly Church, SR 3 & Division	96
(9) Grace Bible Church, Bethel Burley SE	21
(10) Harper Evangelical, Sedgwick & Wilson Creek.	122
(11) Keyport Junction, SR 308 & Viking Way	30
(12) Kingston, SR 104 and Hansville Road	150
(13) Kingston Ferry Terminal, First (SR 104) and Ohio	73
(14) McWilliams, SR 303 & McWilliams	92
(15) Mullenix, SR 16 & Mullenix Road	90
(16) Port Orchard Armory, Mile High Drive & Karcher	72
(17) Poulsbo Church, of Nazarene, SR 3.	100
(18) Poulsbo Junction, Viking Ave. and Lindvig Way	31
(19) Rolling Bay Presbyterian, Sunrise and Valley	40
(20) Southworth Ferry Terminal, SR 160 and Southworth Dr.	345
(21) Suquamish, Geneva Street & Division Avenue	60
Total	1,946

Figure TR-3 summarizes monthly ridership statistics of the Horluck private ferry system operating between Port Orchard and Bremerton. Beginning in March of 1994, Kitsap Transit began a "fee for service" program that exempts patrons from paying an additional fare when they transfer from a transit coach to the private ferry. Currently Kitsap Transit reimburses Horluck \$0.90 per passenger trip for transit-private ferry patrons.

Figure TR-3: Monthly Ridership on Horluck Private Ferry



C. Washington State Ferry System

The Washington State Ferry System is an extremely important transportation provider in Kitsap County's transportation system. Ferry service between Kitsap County and the Seattle metropolitan area is provided by four state ferry routes. A description of each route follows. **Table TR-4** illustrates the specifications of the vessel which operate on each route.

Seattle/Bremerton. The Seattle-Bremerton route is 13.5 nautical miles, the longest of the central cross-sound routes. It has a running time of 60 minutes for the auto ferry and 50 minutes for the passenger-only ferry. Since Seattle and Bremerton are both major employment centers, commute patterns go both ways during the a.m. and p.m. peak periods, with lower ridership at midday. The *Kitsap* and the *Sealth* are used on the run. The *Kitsap* has an auto capacity of 130 vehicles, while the *Sealth* has a 100-vehicle capacity. Both carry 1,200 passengers. For passenger-only service, the 250-passenger *Tyee* is used.

Seattle/Bainbridge Island. This route is 7.5 nautical miles and requires a 35 minute ferry crossing. It connects downtown Seattle and areas east of the Puget Sound with north and central Kitsap County via the Agate Passage Bridge. The system's newest and largest vessel, the *Tacoma*, began service on the route in November 1997. This Jumbo Mark II vessel has an auto capacity of 218 vehicles and a passenger capacity of 2,500 persons. The second vessel serving the route is the *Spokane*, a Jumbo ferry that has an auto capacity of 206 vehicles and can accommodate 2,000 passengers.

Fauntleroy/Vashon/Southworth. This 4.1 nautical mile route connects South Kitsap County at Southworth to West Seattle via Vashon Island. The vessels used on this route are as follows: (1) *Issaquah* (an Issaquah-130 class) with a vehicle capacity of 130, and a passenger capacity of 1,200; (2) *Klahowya* (an Evergreen State class) with a vehicle capacity of 100, and a passenger capacity of 1,000; and (3) the *Quinault* (a Steel Electric class) with a vehicle capacity of 75 and a passenger capacity of 665.

TRANSPORTATION

Table TR-4: Washington State Ferry Vessel Specifications for Kitsap County Routes

Route	Vessel Assignment	Class	Year Built	Year Refurbished	Length (feet)	Beam (feet)	Speed (knots)	Auto Capacity	Passenger Capacity	Crew Size
Seattle/Bremerton										
	Kitsap	Issaquah	1981		328	78	16	130	1,200	10
	Sealth	Issaquah	1982		328	78	16	100	1,200	10
Seattle/Bainbridge Island										
	MV Tacoma	Jumbo Mark	1997		460	90	18	218	2,500	
	Spokane	Jumbo	1972		440	87	18	206	2,000	14
Edmonds/Kingston										
	Hyak	Super	1967		382	73	17	160	2,500	13
	Yakima	Super	1967		382	73	17	160	2,500	13
Fauntleroy/Vashon/Southworth										
	Issaquah	Issaquah	1979		328	78	16	130	1,200	10
	Klahowya	Evergreen	1954	1988	310	73	13	100	1,000	11
	Quinault	Steel	1927	1958/1987	256	73	12	75	665	8
Seattle/Bremerton Passenger Only										
	Tyee	Tyee	1985		86	31	25	N/A	250	4
Seattle/Vashon Passenger Only										
	Skagit	Skagit/Kala	1989		112	25	25	N/A	250	3
	Kalama	Skagit/Kala	1989		112	25	25	N/A	250	3

Source: WSDOT Marine Division.

Edmonds/Kingston: The Edmonds to Kingston route connects south Snohomish County and north King County with the northern Kitsap Peninsula and points west of the Olympic Peninsula via the Hood Canal Bridge. This route is 4.5 nautical miles with a 30 minute crossing time. Two Super-class vessels are used on this route: the *Hyak* and the *Yakima*. Each vessel can carry 160 vehicles and 2,500 passengers. The Jumbo class *Walla Walla* is expected to enter service on this run later in 1998, replacing one of the Super-class vessels.

1. Historical Ferry Utilization

Table TR-5 summarizes the historical average daily ferry ridership for vehicles and passengers in Kitsap County between 1980 and 1996. As shown, the Bainbridge Island ferry route is consistently the most popular service, with daily averages of approximately 6,200 vehicles and just over 12,600 passengers in 1996. The route has experienced increases in vehicle and passenger ridership each year between 1980 and 1996. In contrast, Bremerton saw ridership levels drop during the same time period, with approximately 500 fewer vehicles daily in 1996 than 1980. Daily passenger ridership on the Bremerton route has also dropped consistently since 1980, although 1996 did see a significant increase. Since 1985, however, frequency of service has remained relatively unchanged, and Bremerton vehicle ridership has remained relatively constant, at approximately 1,800 to 2,000 vehicles per day.

While the Bainbridge Island ferry run has the highest volumes, the ferry route from Kingston to Edmonds has had the highest percentage increase in ridership since 1990. Vehicle and passenger ridership has increased by almost 31 percent and 27 percent, respectively. Vehicle ridership for the Fauntleroy/Vashon/Southworth ferry route has increased by almost 43 percent since 1980; however, passenger ridership has decreased by 3 percent during this time period.

Table TR-5: Historical Ferry Traffic in Kitsap County (Average Daily)

Route		1980	1985	1990	1991	1992	1993	1994	1995	1996
Seattle/Bremerton										
	Vehicles	2,588	1,773	1,801	1,770	1,831	1,852	1,662	2,058	2,073
	Passengers	6,174	4,426	4,661	4,882	4,618	3,834	4,706	4,234	5,608
Seattle/Bainbridge Island										
	Vehicles	4,270	4,475	5,401	5,607	5,927	5,918	6,023	6,178	6,233
	Passengers	3,331	8,689	10,200	10,676	11,08	11,16	11,69	11,98	12,61
Fauntleroy/Vashon/Southworth										
	Vehicles	3,645	3,433	4,303	4,485	4,727	4,722	4,923	4,982	5,200
	Passengers	3,948	3,326	3,881	3,661	3,788	3,661	3,640	3,812	3,849
Edmonds/Kingston										
	Vehicles	1,945	3,046	4,416	4,579	5,108	5,246	5,528	5,162	5,810
	Passengers	2,317	3,461	4,654	4,768	5,214	5,187	5,380	5,244	5,890

Source: WSDOT Marine Division

D. Air Service

Kitsap County is served by Bremerton National Airport which can handle air carrier operations with more than 30 passenger seats. It is the County's major public airport, but Apex Airport in Silverdale is periodically used by local law enforcement and emergency aircraft. The Port Orchard Airport and several other small privately owned air strips, located throughout the county, serve small private planes.

The Bremerton National Airport is seven miles southwest of the City of Bremerton, and is owned and operated by the Port of Bremerton. Charter, rental, flight instruction, maintenance and avionics services are available at the airport. The airport has two runways, only one of which is now in use. This runway has the capacity of more than twice the current number of take-offs and landings. In addition, the runway is sufficiently long to handle planes that are larger than the current aircraft size using this facility; the Navy has expressed an interest in upgraded facilities to support even larger aircraft.

Seattle-Tacoma International Airport, located in King county, is the principal passenger air terminal serving Kitsap county residents and businesses. Access to the airport from Kitsap county is available via SR 16 and the Tacoma Narrows Bridge to Interstate 5, as well as via ferry service to Edmonds, Seattle and Fauntleroy and then ground transportation to the airport via SR 99 or Interstate 5. Travel time from Bremerton to Sea-Tac via Tacoma is just over one hour during non-peak travel times. An airport shuttle service operates from Bremerton and other points in Kitsap county to the airport every one to two hours.

E. Rail Service

Rail service in Kitsap County is provided by Burlington Northern-Santa Fe Railroad (BNSF), but its use is restricted to the U.S. Military. The Navy owns the rail lines from Shelton to the Puget Sound Naval Shipyard (PSNS) and from Gorst north to the Bangor Submarine Base. Under an agreement with the US Navy, BNSF operates and maintains the lines, with major improvements funded by the Navy.

The railroad in Kitsap County is maintained at Federal Railway Administration Class 3. There are six classes of track conditions with 6 being the highest. Currently, one train per day serves Kitsap County five days a week. Freight movement to non-military businesses and institutions is provided by trucks.

Passenger rail service in the region is operated by Amtrak. The nearest station locations are in Edmonds, Seattle and Tacoma. The Edmonds station is located immediately adjacent to the Edmonds Ferry terminal and has four trains per day -- one to Spokane and Chicago, one to Vancouver B.C. and two to Seattle. King Street Station in Seattle is located less than one mile from Colman Dock and has daily service to Vancouver, Chicago, Portland (3 times daily) and a through train to Los Angeles. The Tacoma station is located near the Tacoma Dome about 45 minutes from Bremerton. Service from Tacoma includes three daily trains to Seattle and Portland, with one through train to Los Angeles.

F. Nonmotorized Facilities

Nonmotorized modes include all transportation with a power source other than a motor. In Kitsap County, the main nonmotorized modes are walking and bicycling. In addition, equestrian transportation is included in nonmotorized modes.

For more than 20 years, the County has had planning programs for nonmotorized modes, including several trails plans. Currently, nonmotorized facilities remain for the most part undeveloped in Kitsap County. Sidewalks are found in the urbanized areas of Kingston and Silverdale on most major arterials. However, none of the rural roadways in the County have sidewalks. Separate facilities for pedestrians include approximately 25 various hiking trails throughout the County, and are classified as regional facilities.

Several years ago, a system of designated bike routes was developed by the Kitsap County DCD. This system identified roadways on which bicycle travel would be encouraged, but no attempt was made to improve roadways to standards that would safely permit vehicles and bicycles to travel. Due to potential legal action, this route system was never formally adopted, and therefore, there are currently no existing designated county bike paths or lanes.

Existing equestrian trails are owned and maintained by the Department of Natural Resources (DNR) on Green Mountain and Gold Mountain in the Tahuya State Forest west of Bremerton.

All nonmotorized modes of transportation are currently being documented and evaluated in the context of the Kitsap County Greenways Plan. This plan will provide Kitsap County with a comprehensive review and recommendation list for all types of nonmotorized travel, including; separated walking and hiking facilities, multipurpose trails, separated bike facilities, and equestrian

trails. The plan will integrate nonmotorized facilities into the existing and future roadway network.

G. Goods Movement

Freight and goods movement within Kitsap County and the Puget Sound region is an integral part of the transportation system and local economy. It provides for the flow of products and materials from suppliers and manufacturers, to a host of wholesalers, retailers, and customers. The maintenance of high mobility in the transportation system of Kitsap County will reduce the cost of manufacturing and distributing goods, and contribute to the economic growth and creation of jobs. Key transportation components in Kitsap County related to goods movement include the state highway and arterial roadway system, and the ferry system which provides a critical link to the Seattle metropolitan area. Kitsap County and WSF are working together to enhance freight mobility on the Bremerton and Kingston routes and are open to exploring privately operated freight ferries.

The metropolitan freight transportation system operates simultaneously at the local, regional, state, national and international level. A high proportion of goods movement in the region occurs on the eastern side of Puget Sound where deep water sea ports, intermodal train stations, and airport systems have been built to support the region. A vast majority of goods movement within Kitsap County, however, is limited to local or Peninsula origins and destinations. National and international goods movement in Kitsap County is mainly limited to Federal Government operations to/from the numerous military bases and installations.

Table TR-6 shows the inbound and outbound truckload equivalents (TLEs) per day in Kitsap County for the Puget Sound Region. The total number of truckload equivalents inbound and outbound include freight movements by all modes and from all points.

Table TR-6: Kitsap County Inbound/Outbound TLEs per day for the Puget Sound Region

	Mining	Construct.	Manufact.	Wholesale	Retail	Person Consump	Gross Investment	Govt. Expend	Total per day
Inbound	-	21	98	29	780	40	26	11	175
Outbound	44	72	64	-	67	-	-	-	108

*Source: Analysis of Freight Movements in the Puget Sound Region by the Puget Sound Regional Council (PSRC).
 Note: Inbound and outbound totals do not sum in every column because this would double count some movement.*

Commercial vehicle movement is measured by the following:

- # Choice of suppliers;
- # Minimize delivered costs of goods;
- # Provide for the safety of all drivers; and
- # Reliable shipment of goods.

II. LAND USE AND TRANSPORTATION

There are today a variety of issues surrounding new and existing development, and how public facilities are planned, designed, and built to support the cities and communities we live in. Transportation planning for Kitsap County is an integral part of its overall long range planning efforts. As such, long range land use and transportation planning have evolved into an integrated forecasting approach to satisfy the requirements of the Washington State GMA and ensure mobility for the people who live, work, and visit Kitsap County.

Since growing traffic congestion in the Puget Sound Region was a major impetus for more land use regulation under GMA, the Act mandated a strong linkage between development approvals and a community's ability to provide "adequate" transportation infrastructure to serve that development. As such, "concurrency" monitoring and enforcement systems become an important component of the transportation element of any GMA plan and of the permitting processes.

Transportation concurrency from a policy standpoint is logical in its approach to ensure that adequate public facilities within the transportation system are built concurrently with planned growth. To test and measure transportation concurrency and to establish the "link" between land use and transportation needs, Kitsap County, as part of their long range comprehensive planning efforts, has developed and implemented a travel demand forecasting model using EMME/2. This county-wide model is based on a regional database and forecasting process in coordination with the PSRC, King, Pierce, and Snohomish Counties, and Kitsap Transit. In addition, due to the geographical location of Kitsap County, its reliance on the WSF system for transportation mobility is significant. The coordination of transportation improvements in Kitsap County has also been an integral part of the planning process with Jefferson and Clallam counties, the Peninsula Regional Transportation Planning Organization (PRTPO), and WSF. As such, the Kitsap County Travel Demand Model incorporates a sophisticated mode-choice capability to address such multimodal components as auto ferry, passenger-only ferry, and park-and-ride needs.

This report section describes the land use-transportation modeling process and includes a discussion of existing land uses in Kitsap and future growth scenarios for the year 2012, and summarizes the resulting travel patterns and demand for transportation facilities by travel mode.

A. Existing and Future Land Use in Kitsap County

Kitsap County's population has been growing in spurts since World War II. The heavy Navy employment base for the war helped to nearly double population from 44,387 in 1940 to 75,724 in 1950. After the war ended the County population continued to grow although at a slower rate. Growth remained fairly constant until the 1970's, when population increased from 101,732 in 1970 to 147,152 in 1980, a 45 percent increase. Most of this population increase is attributed to the establishment of the Trident submarine base at the Bangor Naval Base.

1. Existing Land Uses

Table TR-7 gives details on the population growth from 1980 through 1997. Kitsap County's resident population increased from 101,732 in 1970 to 189,731 by 1990, an increase of almost 87 percent. By comparison, the State population grew 42.6 percent over the same period. Kitsap County population increased by 42,579 (or 29 percent) between 1980 and 1990, slightly less than the 45,520 person increase during the decade of the 1970's.

During the period between 1990 and 1994, Kitsap County population increased by 25,404 persons (or 13.3 percent). From 1994 to 1997, the County grew by an additional 14,265 persons, which represents an average annual population increase of 6.6 percent.

While the Land Use element of the Kitsap County Comprehensive Plan uses 1997 as its base year for documenting existing conditions, the transportation element was developed based upon the year 1994. As such, the Kitsap County Travel Demand Model estimates travel demand in 1994 and the year 2012 to remain consistent with the Land Use element of this comprehensive plan. Year 2012 population and employment forecasts used in the Kitsap County Travel Demand Model are consistent with the Land Use, Population, and Economic Development elements found within this document.

Updates to the Kitsap County Travel Demand Model began in early 1995 to refine and calibrate this regional analysis tool to 1994 traffic and land use conditions. Major adjustments were made in the network and zone structure to better reflect localized conditions in the Silverdale and Port Orchard areas. Land use data (population and employment) used in the assessment of travel demand was obtained by Kitsap County from the Washington State Office of Financial Management (OFM).

Table TR-7: Historical Population Trends in Kitsap County

Year	Total Population	% Annual Growth Rate
1940	44,387	n/a
1950	75,724	7.1
1960	84,176	1.1
1970	101,732	2.1
1980	147,152	4.5
1990	189,731	2.9
1991	196,500	3.6
1992	205,600	4.6
1993	210,000	2.1
1994	215,135	2.4
1995	220,600	2.5
1996	224,700	1.9
1997	229,400	2.1

Source: Kitsap County DCD, Puget Sound Regional Council.

2. Future Land Uses

Population and employment forecasts for the year 2012 have been developed by Kitsap County and the Puget Sound Regional Council. The demographic and land use forecasts are the primary inputs into future travel forecasts. The forecasts are needed to identify future transportation needs, and evaluate potential transportation solutions. While the forecasts are not exact predictions they do reveal important insight into the way the County will grow.

Table TR-8 provides 1994 and 2012 forecasts for population and employment in Kitsap County. Due to the inconsistent boundary definitions of urban areas, incorporated cities, and KTAZ's, there is not a direct correlation between KTAZ values and urban or rural areas.

By the year 2012, an estimated 292,224 persons will reside in Kitsap County. This results in an increase of 77,000 persons (a 36 percent increase) between 1994 and 2012. North and Central county subareas are expected to increase by 54 and 36 percent over 1994 levels. Existing and future population distribution within and outside of urban growth boundaries is also found in the Population Appendix of this document.

County employment is forecast to increase by about 37,000 between 1994 and 2012, a 40 percent increase. The largest employment growth is forecast for the Central subarea which is expected to gain roughly 18,000 new jobs. The North and South county areas will increase by 9,300 to 9,600 new jobs, nearly doubling the employment base in these subareas.

Table TR-8: 1994 to 2012 Population and Employment Forecasts

Area	Population		Employment	
	1994	2012	1994	2012
North	48,955	75,434	11,175	20,450
Central	110,811	150,306	71,267	89,379
South	55,097	66,484	9,646	19,275
County Total	214,863	292,224	92,089	129,104

B. Travel Demand Forecasts

1. Existing Travel Demand

Table TR-9 shows the 1994 internal and external distribution of Kitsap County person trips estimated by the Kitsap County Travel Demand Model. As shown, approximately 908,700 daily person trips were generated by Kitsap County residents in 1994, and 92 percent (764,900 daily person trips) of all trips are considered "internal," with both origins and destinations in the County. In contrast, 8 percent (about 70,000) of all daily person trips are considered "external," which means that one end of the trip, either the origin or destination, is outside Kitsap County.

Table TR-9: 1994 Internal and External Travel Patterns

Internal Travel		
<i>Origin-Destination</i>	<i>1994 Trips</i>	<i>Percent of Total</i>
North-North	191,028	25.0%
North-Central/Central-North	117,694	15.4%
North-South/South-North	16,428	2.1%
Central-Central	199,401	26.1%
Central-South/South-Central	90,812	11.9%
South-South	<u>149,524</u>	<u>19.5%</u>
Total Internal County Trips	764,887	91.6%
North County External Travel		
<i>Origin-Destination</i>	<i>1994 Trips</i>	<i>Percent of Total</i>
North to Pierce County	1,731	7.5%
North to Seattle	11,899	51.4%
North to King County	1,246	5.4%
North to Mason County	638	2.8%
North to Jefferson County	6,433	27.8%
North to Snohomish County	1,167	5.0%
North to Other Locations	<u>35</u>	<u>0.0%</u>
Total North to All External Locations	23,150	33.1
Central County External Travel		
<i>Origin-Destination</i>	<i>1994 Trips</i>	<i>Percent of Total</i>
Central to Pierce County	7,862	52.9%
Central to Seattle	1,524	10.3%
Central to King County	960	6.5%
Central to Mason County	3,104	20.9%
Central to Jefferson County	1,247	8.4%
Central to Snohomish County	85	1.0%
Central to Other Locations	<u>73</u>	<u>0.0%</u>
Total Central to All External Locations	14,855	21.2%
South County External Travel		
<i>Origin-Destination</i>	<i>1994 Trips</i>	<i>Percent of Total</i>
South to Pierce County	20,996	65.8%
South to Seattle	3,298	10.3%
South to King County	2,630	8.2%
South to Mason County	4,519	14.2%
South to Jefferson County	188	0.6%
South to Snohomish County	70	0.0%
South to Other Locations	<u>224</u>	<u>1.0%</u>
Total South to All External Locations	31,926	45.7%
Total External Trips	69,930	8.4%
Total Trip Generation	908,681	100.0%

TRANSPORTATION

a. Internal Travel

Internal travel occurs mostly within the central county at approximately 26 percent. The remaining internal travel within each subarea (north to north and south to south) is approximately 20 to 25 percent of all person trips. Very few internal trips are between the North and South County subareas.

b. Internal to External Travel (by Subarea)

Approximately 57 percent of the external person trips originating in the north subarea had King County/Seattle destinations in 1994. About 3 of every 10 trips occur between the north subarea and Jefferson County. From the north subarea, less than 3 percent is headed to Mason County and only 5 percent is headed to Snohomish County.

Approximately 74 percent of the external person trips travel from the central subarea heads to Pierce and Mason counties. Trips to Seattle and King County make up about 17 percent of all external person trips from the central subarea. Approximately 1 of every 10 trips from the central subarea travels to Jefferson County, Snohomish County, and other locations.

The majority of external person trips from the south subarea are oriented towards Pierce County (approximately 66 percent of total external trips). Most of the remainder of the external person trips from the South subarea are headed to Seattle, King County and Mason County (8 to 14 percent each of total external trips).

c. Mode Split

Mode split describes how the total trips break down into different modes such as transit, auto, ferry, or bicycle. Mode split is also tied to the kind of trip, or trip purpose, which would be commuting, recreation or shipping, among others. **Table TR-10** summarizes the mode split by trip purpose in 1994. As shown, three-quarters of the home-based work trips are made by auto drivers while approximately 20 percent are made by auto passengers. The 1994 transit/walk-on ferry market share for home-based work trips is 4.3 percent while transit's market share for all trip purposes is at 1.0 percent.

Table TR-10: 1994 Mode Split by Purpose

Trip Purpose	HBW	HBO	NHB	CMV	Total	% Total	% Total
Auto Drivers	126,721	276,738	182,184	80,873	666,516	73.7%	75.3%
Auto	34,337	139,115	55,561	-	229,013	25.3%	20.4%
Transit (2)	7,216	1,367	636	-	9,219	1.0%	4.3%
Total	168,274	417,220	238,381	80,873	904,748	100%	100%

Notes: (1) Includes Drive-on Ferry vehicles.

(2) Includes internal County transit trips and walk-on ferry trips.

Table TR-11 further disaggregates the modal split in order that the number of ferry trips can be evaluated. As shown, approximately 69 percent (8,678 of 12,609) of the drive-on ferry trips are considered commuter or home-based work trips, while 76 percent (7,648 of 10,077) of the walk-on ferry trips have a commuter trip purpose. The goal for the Year 2012 mode split would be to reduce the proportion of drive-on ferry trips with a home-based work trip purpose. Pure intra-County transit trips account for a 4.3 percent market share for the home-based work trip purpose and a 1.0 percent market share for all trip purposes combined.

Table TR-11: 1994 Mode Split

Trip Purpose	HBW	HBO	NHB	CMV	Total	% Total	% Total
NFV (Auto	118,043	276,466	180,037	79,361	653,907	72.3%	70.1%
Auto Passengers	26,689	138,897	53,350	-	218,936	24.2%	15.9%
Non-Ferry	7,216	1,367	636	-	9,219	1.0%	4.3%
Drive-on Ferry	8,678	272	2,147	1,512	12,609	1.4%	5.2%
Walk-on Ferry	7,648	218	2,211	-	10,077	74.8%	4.5%
Total	168,274	417,220	238,381	80,873	904,748	100%	100%

2. Future Travel Demand

Table TR-12 shows the 1994 to 2012 internal and external travel patterns. Approximately 1,290,000 daily person trips will be generated by Kitsap County residents in 2012; 91 percent (about 1,175,000 person trips) of all trips considered internal and 9 percent (about 112,000) of all daily person trips will be external. The 2012 internal trips would experience a decrease in trips by 1 percent, while external trips would increase by 1 percent from 1994. Cross-Sound travel (travel to Pierce and King Counties, including Seattle) would comprise 73 percent of all external trips in 2012. About 26 percent of external trips would be oriented to Jefferson County (12 percent), Mason County (12 percent), and Snohomish County (2 percent).

Table TR-12: 1994 to 2012 Internal and External Travel Patterns

Internal Travel				
Origin-Destination	1994 Trips	Percent Of Total	2012 Trips	Percent Of Total
North-North	191,028	25.0%	343,536	29%
North-Central/Central-North	117,694	15.4%	183,570	16%
North-South/South-North	16,428	2.1%	21,402	2%
Central-Central	199,401	26.1%	283,767	24%
Central-South/South-Central	90,812	11.9%	112,746	10%
South-South	149,524	19.5%	233,819	20%
Total Internal County Trips	764,887	91.6%	1,178,839	91%
North County External Travel				
Origin-Destination	1994 Trips	Percent Of Total	2012 Trips	Percent Of Total
North to Pierce County	1,731	7.5%	2,721	7%
North to Seattle	11,899	51.4%	18,864	49%
North to King County	1,246	5.4%	2,196	6%
North to Mason County	638	2.8%	1,013	3%
North to Jefferson County	6,433	27.8%	11,175	29%
North to Snohomish County	1,167	5.0%	2,072	5%
North to Other Locations	35	0.0%	73	0%
Total North to All External Locations	23,150	33.1	38,115	34%
Central County External Travel				
Origin-Destination	1994 Trips	Percent Of Total	2012 Trips	Percent Of Total
Central to Pierce County	7,862	52.9%	11,249	50%
Central to Seattle	1,524	10.3%	2,674	12%
Central to King County	960	6.5%	1,677	7%
Central to Mason County	3,104	20.9%	4,642	21%
Central to Jefferson County	1,247	8.4%	1,937	9%
Central to Snohomish County	85	1.0%	141	1%
Central to Other Locations	73	0.0%	172	1%
Total Central to All External Locations	14,855	21.2%	22,491	20%
South County External Travel				
Origin-Destination	1994 Trips	Percent Of Total	2012 Trips	Percent Of Total
South to Pierce County	20,996	65.8%	34,981	67%
South to Seattle	3,298	10.3%	3,915	7%
South to King County	2,630	8.2%	4,208	8%
South to Mason County	4,519	14.2%	8,342	16%
South to Jefferson County	188	0.6%	278	1%
South to Snohomish County	70	0.0%	103	0%
South to Other Locations	224	1.0%	394	1%
Total South to All External Locations	31,926	45.7%	52,220	46%
Total External Trips	69,930	8.4	112,825	8.7%
Total Trip Generation	908,681	100.0%	1,291,664	100.0%

a. Internal Travel

For 2012, internal trips (i.e., trips that begin and end within Kitsap County) account for 91 percent of all daily person trips. Trips that remain within each subarea varies from 20 to 29 percent of all trips and trips between adjacent subareas accounts for another 10 to 16 percent of the total; this means that most residents make relatively short trips each day. Very few internal trips are between the North and South County subareas.

b. Internal to External Travel

External trips, those trips with only one end in Kitsap County, account for only 9 percent of total daily person travel. About 55 percent of the external person trips originating in the north subarea would have King County/Seattle destinations in 2012. About 3 of every 10 trips occur between the north subarea and Jefferson County. From the north subarea, 14 percent of all trips are headed to Mason, Pierce, or Snohomish Counties.

Approximately 72 percent of the external person trips generated in the central subarea go to or from Pierce and Mason counties; this is largely the result of the large employment concentrations in the central county area. Trips to Seattle and King County make up about 19 percent of all external person trips from the central subarea. External trips in this subarea to Snohomish County account for only 1 percent.

The majority of external person trips to and from the south subarea are oriented towards Pierce County (approximately 67 percent of total trips). Most of the remainder of the external person trips from the South subarea are headed to Seattle, King County and Mason County (7 to 16 percent of all trips).

c. Mode Split

Table TR-13 summarizes the mode split by trip purpose in 2012 for the existing plus committed network. As shown, almost three-quarters of the home-based work trips are made by auto drivers while approximately 16 percent are made by auto passengers. The 2012 transit/walk-on ferry market share for home-based work trips is 8.7 percent while transit's market share for all trip purposes is at 1.0 percent.

Table TR-13: 2012 E + C Mode Split by Purpose

<u>Trip Purpose</u>	<u>HBW</u>	<u>HBO</u>	<u>NHB</u>	<u>CMV</u>	<u>Total</u>	<u>% Total</u>	<u>% Total</u>
						<u>All Trips</u>	<u>HBW</u>
<u>Auto Drivers</u>	<u>175,720</u>	<u>415,794</u>	<u>303,408</u>	<u>118,820</u>	<u>1,013,741</u>	<u>72.2%</u>	<u>69.3%</u>
<u>Auto Passengers</u>	<u>39,581</u>	<u>210,064</u>			<u>249,645</u>	<u>17.8%</u>	<u>15.6%</u>
<u>Transit</u>	<u>10,730</u>	<u>2,277</u>			<u>13,007</u>	<u>0.9%</u>	<u>4.2%</u>
<u>Drive-on Ferry</u>	<u>16,305</u>	<u>515</u>	<u>3,758</u>	<u>2,154</u>	<u>22,733</u>	<u>1.6%</u>	<u>6.4%</u>
<u>Walk-on Ferry</u>	<u>11,377</u>	<u>366</u>	<u>3,138</u>		<u>14,881</u>	<u>1.1%</u>	<u>4.5%</u>
<u>Total</u>	<u>253,713</u>	<u>629,015</u>	<u>400,787</u>	<u>120,974</u>	<u>1,404,489</u>	<u>100%</u>	<u>100%</u>

Notes: (1) Includes Drive-on Ferry vehicles.

(2) Includes internal County transit trips and walk-on ferry trips.

Table TR-14 summarizes the mode split by trip purpose for the 2012 recommended network. As

TRANSPORTATION

hown, approximately 69 percent of the home-based work trips are made by auto drivers while 15 percent are made by auto passengers. Transit and walk-on ferry passengers account for 10 percent of home based work trips. An additional 6 percent of these trips are made by drive-on ferry passengers.

Table TR-14: 2012 Recommended Mode Split

Trip Purpose	HBW	HBO	NHB	CMV	Total	% Total All	% Total HBW
Auto Drivers	175,533	415,790	303,360	118,820	1,013,501	72.2%	69.2%
Auto Passengers	37,999	209,863	90,110		337,972	24.1%	15.0%
Transit	10,730	2,277			13,007	0.9%	4.2%
Drive-on Ferry	15,086	420	3,454	2,154	21,114	1.5%	5.9%
Walk-on Ferry	14,365	666	3,863		18,894	1.3%	5.7%
Total	253,713	629,015	400,787	120,974	1,404,489	100%	100%

Notes: (1) Includes Drive-on Ferry vehicles.

(2) Includes internal County transit trips and walk-on ferry trips.

III. Transportation Needs and Deficiencies

This section summarizes the existing and future needs and deficiencies of the transportation system in Kitsap County. The needs and deficiencies include a variety of multimodal facilities and presents documentation for all travel modes in the County.

Washington's GMA requires service level standards for both highways and transit services. The WSDOT has extended this requirement to cover vehicle and passenger ferries, as well. The GMA requires that each jurisdiction's Level of Service (LOS) standards be coordinated within the region and be supported by local ordinance, but the standards and the methods used are up to the local jurisdictions. Under GMA, the focus is on the performance of the road system as a whole, not on individual intersections or roadways. The level of service standards are a tool to help keep the transportation system in balance with the needs of future population growth and development.

Kitsap County Transportation Plan's LOS standards for arterials, transit routes and ferries are discussed in the Capital Facilities Plan, Part II of the Comprehensive Plan. These standards will help determine the balance (i.e., concurrency) among the land use transportation and capital facilities elements of the county's Comprehensive Plan, as required by GMA. The needs analysis and recommended potential solutions discussed in the Transportation Element are only a first step toward actual project implementation. The county and other agencies will conduct corridor and service studies that will define the specific characteristics and location of a particular roadway improvement, transit/ferry route or facility, or travel demand management (TDM) strategy. At the project level, the State Environmental Policy Act (SEPA) process will continue to guide the more specific planning and analysis efforts.

Under GMA, the County has four choices if it finds the LOS standards cannot be met.

1. Modify the land use plan, placing tighter controls on the amount and type of development to minimize traffic.
2. Construct additional transportation facilities to support increased travel demand concurrent with growth.
3. TDM measures.
4. Relax the LOS standards. The County can accept lower levels of service in support of further growth and minimize the need for additional transportation facilities.

This chapter of the Appendix defines the long term transportation needs based on the recommended land use element of the comprehensive Plan, Chapter IV discusses a list of potential solutions to meet these needs in accord with the County's LOS standards, and Chapter V demonstrates the county's ability to fund these, or similar, solutions by the 2012 target year.

A. Use Of Level Of Service Standards

As measures of transportation system effectiveness, level of service standards can help jurisdictions identify where and when transportation improvements are needed, and when development or growth will affect system operation. Level of service provides a standard below which a transportation facility or system is not considered adequate.

Level of service standards can be used to evaluate the impact of proposed developments on the surrounding road system. They can assure that all developments are served by a safe, efficient and cost-effective road system. They can also be used to identify problems, suggest remedial actions, and apportion costs between public and private sources. LOS standards are a cornerstone in the development of equitable traffic impact fee systems, which makes new growth pay some of the costs for improvements to the transportation infrastructure.

B. Roadway LOS Standards

A complete discussion of level of service standards for the roadway transportation system is presented in the Kitsap County Comprehensive Plan Part II, "Transportation".

C. Los Standards For Other Transportation Modes

Nonmotorized Standards. The Kitsap County Greenways Plan identifies several travel patterns and issues regarding nonmotorized use within the County. Most nonmotorized uses will be for recreational purposes while a portion of these uses will be made by commuters. Thus, the nonmotorized system is designed to primarily access popular recreational destinations from both the urban areas of the county and the ferry terminals. Through connections will provide access for residents to neighboring counties and encourage bicycle touring on a regional level. Popular destinations points in Kitsap County attract a wide variety of recreational nonmotorized users such as hikers, mountain bikers, kayakers and other water travelers.

Although bike touring does produce longer trips, the majority of nonmotorized users will be making shorter trips from their homes to local recreation destinations.

While no level of service standards were defined in the Greenways Plan, the plan did outline a set of criteria used to locate the three types of bicycle facilities included in the system. A discussion of the criteria is presented in the Kitsap County Greenways Plan.

Transit Level of Service. A discussion of level of service standards for transit is presented in the Kitsap County Comprehensive Plan Part II, "Transportation".

Ferry Level of Service. A discussion of level of service standards for ferries is presented in the Kitsap County Comprehensive Plan Part II, "Transportation".

D. Relationship To Concurrency Management

The Growth Management Act requires that Kitsap County adopt and enforce ordinances “which prohibit development approval if the development causes the level of service on a transportation facility to decline below the standards adopted in the transportation element of the comprehensive plan, unless transportation improvements or strategies to accommodate the impacts of development are made concurrent with the development.” The purpose of concurrency management is to:

- # Provide adequate levels of service on transportation facilities for existing use as well as new development in unincorporated Kitsap County;
- # Provide adequate transportation facilities that achieve and maintain county standards for levels of service as provided in the comprehensive plan, as amended; and
- # Ensure that county level of service standards are achieved "concurrently" with development as required by the Growth Management Act.

The draft Concurrency Management Ordinance establishes a process for determining whether a development project will meet the purposes stated above. A concurrency test would be performed by the County for each new development proposal. Although the County's goal is to have no LOS deficiencies on any County road, the following performance allowance is proposed: 15 percent of the county road lane miles to temporarily exceed LOS/volume-to-capacity standards. Conversely, 85 percent of the lane miles in the transportation network must be at or better than the maximum LOS/volume-to-capacity standards. Although no LOS deficiencies on 100 percent of county road lane miles is the goal, an allowance of 85 percent temporarily is necessary to accommodate project development and project funding constraints. The 15 percent allowance shall be associated with individual development proposals and may not extend beyond 6 years from development approval.

If the level of service is equal to or better than the adopted standards, the concurrency test is passed, and the applicant would be issued a Capacity Reservation Certificate. In addition, the County would issue a draft transportation impact fee assessment for the development based on the list of improvements to the Committed Road Network that was used to determine concurrency. The list of improvements on the Capacity Reservation Certificate would be used to ensure that impact fees paid by the development shall be expended only on those improvements. Only improvements to County roads would be included in the list of improvements, unless interlocal agreements or Urban Growth Management Agreements are in place.

Upon action on the development proposal, a Certificate of Concurrency would be issued. For purposes of concurrency management, the County is divided into 264 analysis areas called Kitsap Traffic Analysis Zones (KTAZ). The KTAZ boundaries are shown on Figures A-TR-4 and A-TR-5 in Part II, Figure Book. For purposes of concurrency determination, the analysis of LOS adequacy would only be applied to County arterials and collectors in rural areas and urban areas under the County's jurisdiction.

A Certificate of Concurrency would not be issued to any proposed development if the standards in this section are not achieved and maintained within the six-year period allowed by GMA for transportation concurrency. The applicant would have the option of:

TRANSPORTATION

- # Accepting a ninety-day reservation of transportation facilities that are available, and within the same ninety-day period amend the application to reduce the need for transportation facilities to the capacity that is available, or voluntarily arrange for the transportation facilities or strategies needed to achieve concurrency, or
- # Accepting the denial of an application for a Certificate of Concurrency; or
- # Appealing the denial of the application for a Certificate of Concurrency, pursuant to the provisions of the county. The county shall reserve any available development units during the appeal. Acceptance of the ninety-day period shall not impair the applicant's future right to a formal appeal at a later time.

If a proposed development that is consistent with the zoning provided in the Comprehensive Plan fails the concurrency test, there should be a feedback loop from concurrency testing to zoning that indicates the underlying zoning may not be appropriate in a given area or that the transportation systems plan should be revised to provide more capacity in a given area to support the approved zoning.

E. Existing Deficiencies

This section describes the existing deficiencies (1994) on roadway, nonmotorized, transit and ferry systems.

1. How Much Travel Meets the Service Standards?

Table TR-15 shows how much of the vehicle miles of travel, by subarea, is made within the county's level of service standards. The amount and proportion of travel, or vehicle miles traveled (VMT), is given on state and non-state facilities in all areas. As shown, 17 percent of all roadway facilities, both State and non-State, in 1994 can be considered congested and are not in compliance with the County's LOS standards. State facilities have 24 percent congested VMT, and most non-State facilities have 8 percent.

The county subarea with *the least* congested VMT is the central subarea where 87 percent of all travel on both State and non-State facilities falls within the County's LOS standards. The north subarea has the most travel under congested conditions. Nineteen percent of all travel in that subarea is below standard. State roadways in the north subarea account for this congestion; 32 percent of the travel on state roadways is below standard while 0 percent of non-State roadways experience congested travel. In the south subarea, 82 percent of all facilities meet the County's LOS standards. Analysis of State and non-State facilities within the Central subarea indicates that 15 percent of State and 13 percent non-State facilities, fall below the adopted LOS standards.

Table TR-15: 1994 Level of Service Performance by Miles Traveled

By County Subarea	1994 VMT	% 1994 VMT at or Better than LOS Standard	% 1994 VMT Below LOS Standards
North	1,303,489	81%	19%
Urban Non-State Facilities	299,97	100%	0%
Rural Non-State Facilities	246.83	100%	0%
Subtotal Non-State	546.8	100%	0%
State Facilities	756.68	68%	32%
Central	1,046,3	87%	13%
Urban Non-State Facilities	463,87	86%	14%
Rural Non-State Facilities	91,949	100%	0%
Subtotal Non-State	561,8	87%	13%
State Facilities	490,47	85%	15%
South	1,395,4	82%	18%
Urban Non-State Facilities	339,05	80%	20%
Rural Non-State Facilities	244,38	100%	0%
Subtotal Non-State	583,4	88%	12%
State Facilities	811,98	78%	22%
Total State Facilities	2,059,1	76%	24%
Total Non-State Facilities	1,686,0	92%	8%
Total Urban Facilities	1,102,9	88%	12%
Total Rural Facilities	583,16	100%	0%
Total All Facilities	3,751,2	83%	17%

2. How Many Miles of Congested Roads Are There?

The number of miles congestion on the roads is a useful performance measure to evaluate: (1) the relative allocation of improvement costs between jurisdictions and/or agencies; and (2) the specific areas of the County where improvements may be required.

Table TR-16 shows the 1994 lane miles which meet or do not meet the County's LOS standards. The south subarea contains the lowest percentage of lane miles not meeting the County's LOS standards. About 5 percent of all roadway facilities in the south subarea do not meet the LOS standards while seven percent are below in both the north and central subareas.

TRANSPORTATION

Congestion is found on 18 percent of all State facility lane miles, while non-State facilities have congestion on two percent of all lane miles. Most of the congestion occurs on State facilities in the north subarea, where 24 percent of the lane miles are considered "congested." Fifteen percent and 13 percent of the state facility lane miles are congested in the central and south subareas, respectively. Countywide, congestion on non-State facilities is 2 percent. This average congestion level for non-State facilities is relatively consistent between each of the three county subareas where congested facilities total 0 percent for the north, 5 percent for the central, and 3 percent for the south subarea.

Table TR-16: 1994 Level of Service Performance by Lane Miles

By County Subarea	1994 Lane Miles	% 1994 Lane Miles at or Better than LOS Standard	% 1994 Lane Miles Below LOS Standards
<u>North</u>	<u>465</u>	<u>93%</u>	<u>7%</u>
<u>Urban Non-State Facilities</u>	<u>169</u>	<u>100%</u>	<u>0%</u>
<u>Rural Non-State Facilities</u>	<u>171</u>	<u>100%</u>	<u>0%</u>
<u>Subtotal Non-State</u>	<u>340</u>	<u>100%</u>	<u>0%</u>
<u>State Facilities</u>	<u>124</u>	<u>76%</u>	<u>24%</u>
<u>Central</u>	<u>261</u>	<u>93%</u>	<u>7%</u>
<u>Urban Non-State Facilities</u>	<u>147</u>	<u>93%</u>	<u>7%</u>
<u>Rural Non-State Facilities</u>	<u>54</u>	<u>100%</u>	<u>0%</u>
<u>Subtotal Non-State</u>	<u>201</u>	<u>95%</u>	<u>5%</u>
<u>State Facilities</u>	<u>60</u>	<u>85%</u>	<u>15%</u>
<u>South</u>	<u>431</u>	<u>95%</u>	<u>5%</u>
<u>Urban Non-State Facilities</u>	<u>116</u>	<u>91%</u>	<u>9%</u>
<u>Rural Non-State Facilities</u>	<u>214</u>	<u>100%</u>	<u>0%</u>
<u>Subtotal Non-State</u>	<u>330</u>	<u>97%</u>	<u>3%</u>
<u>State Facilities</u>	<u>101</u>	<u>87%</u>	<u>13%</u>
<u>Total State Facilities</u>	<u>286</u>	<u>82%</u>	<u>18%</u>
<u>Total Non-State Facilities</u>	<u>871</u>	<u>98%</u>	<u>2%</u>
<u>Total Urban Facilities</u>	<u>432</u>	<u>95%</u>	<u>5%</u>
<u>Total Rural Facilities</u>	<u>439</u>	<u>100%</u>	<u>0%</u>
<u>Total All Facilities</u>	<u>1157</u>	<u>94%</u>	<u>6%</u>

3. Nonmotorized Deficiencies

Nonmotorized Standards. The Kitsap County Parks and Recreation Plan notes that the county's linear trails have standards less than those suggested by the National Recreation and Park Association (NRPA). It concluded that there were not enough walking trails located within local park trails, backpacking trails are not suitable for its specialized type of activity and bike routes need improvements. Equestrian trails were also found to be "isolated from the rest of the county and require trailering - at least until these trails are extended into the more urban areas." Although these uses peak during the summer season, there are no existing congestion deficiencies regarding nonmotorized uses.

4. Transit Service Performance Measures

Table TR-17 shows the 1997 usage of the Kitsap Transit System. As shown, the majority of ridership (8 out of every ten passengers) is on fixed-route services. About 1 of 10 passengers used the specialized work-related transit programs. In comparison with other similar transit systems throughout the State of Washington (Seattle's METRO system excluded), Kitsap Transit's routed and subscription bus services lead the State in terms of passenger per hour efficiency and for costs per passenger (for the urban area systems).

Table TR-17: 1997 Kitsap Transit Usage

<u>Program Type</u>	<u>Number</u>	<u>Percent Total</u>	<u>Average Daily Riders*</u>
Fixed Route Service	4,003,582	79.8%	10,969
Access	284,182	5.7%	779
Worker/Driver	406,947	8.1%	1850
Vanpools	282,898	5.6%	1286
Special Service	38,464	0.8%	105
<u>TOTAL</u>	<u>5,016,073</u>	<u>100.0%</u>	

**For Routed Service, Access, and Special Service, 365 days are assumed in the average; for Worker/Driver and Vanpool programs, 220 work days are assumed.*

TRANSPORTATION

Table TR-18 summarizes the existing fixed route service levels provided by Kitsap Transit.

Table TR-18: Kitsap Transit Existing Service Programs

<u>Program</u>	<u>Existing Service Levels</u>	<u>Program</u>	<u>Existing Service Levels</u>
<i>Urban Area Services</i>		<i>Urban Area Services cont.</i>	
<u>Route 4 - Bransonwood</u>	<u>60-min (7-days per week)</u>	<u>Route 36 - Ridgetop Shuttle</u>	<u>60-min (7-days per week)</u>
<u>Route 5 - Cedar Heights</u>	<u>60-min (7-days per week)</u>	<u>Route 41 - Lincoln Drive</u>	<u>60-min (7-days per week)</u>
<u>Route 6 - Bethel</u>	<u>60-min (7-days per week)</u>	<u>Route 42 - Front Street</u>	<u>60-min (7-days per week)</u>
<u>Route 7 - South Park</u>	<u>60-min (7-days per week)</u>	<u>Route 63 - Point Jefferson</u>	<u>60-min (peak periods on weekdays only)</u>
<u>Route 11 - Crosstown Express</u>	<u>60-min (7-days per week)</u>	<u>Route 66 - Hansville</u>	<u>Timed to peak ferry sailings at Bainbridge</u>
<u>Route 12 - Silverdale West</u>	<u>60-min (7-days per week)</u>	<u>Route 81 - Annapolis Commuter</u>	<u>Timed to peak ferry sailings at Port Orchard</u>
<u>Route 13 - Silverdale East</u>	<u>60-min (7-days per week)</u>	<u>Route 85 - Mullenix Express</u>	<u>45-min (peak periods on weekdays only)</u>
<u>Route 15 - McWilliams Shuttle</u>	<u>30-60 min (peak periods on weekdays only)</u>	<u>Route 86 - Southworth Shuttle</u>	<u>10-60 min (weekdays & Saturdays)</u>
<u>Route 17 - Kitsap Mall</u>	<u>60-min (7-days per week)</u>	<u>Route 87 - Purdy Express</u>	<u>30-60 min (weekdays)</u>
<u>Route 20 - Navy Yard City</u>	<u>60-min (7-days per week)</u>	<u>Route 90 - Poulsbo/ Bainbridge</u>	<u>Timed to ferry sailings at Bainbridge</u>
<u>Route 21 - Perry Avenue</u>	<u>60-min (7-days per week)</u>	<u>Route 91 - Kingston/ Bainbridge</u>	<u>Timed to peak ferry sailings at Kingston</u>
<u>Route 23 - Kariotis/ Tracyton</u>	<u>120 min (weekdays only)</u>	<u>Route 92 - Poulsbo/ Kingston/ Suguamish</u>	<u>40-120 min (weekdays & Saturdays)</u>
<u>Route 24 - Olympic College</u>	<u>60-min (7-days per week)</u>	<u>Route 93 - Manzanita</u>	<u>45-min (peak periods on weekdays only)</u>
<u>Route 25 - East Park</u>	<u>30-60 min (7-days per week)</u>	<u>Route 94 - Agate Point</u>	<u>Timed to peak ferry sailings at Bainbridge</u>
<u>Route 26 - West Park</u>	<u>60-min (7-days per week)</u>	<u>Route 95 - Battle Point Manzanita</u>	<u>Timed to peak ferry sailings at Bainbridge</u>
<u>Route 29 - Trenton Avenue</u>	<u>15-60 min (7-days per week)</u>	<u>Route 96 - Sunrise</u>	<u>Timed to peak ferry sailings at Bainbridge</u>
<u>Route 32 - Poulsbo/ Silverdale</u>	<u>60-min (7-days per week)</u>	<u>Route 97 - Crystal Springs</u>	<u>Timed to peak ferry sailings at Bainbridge</u>
<u>Route 33 - Silverdale/ Bainbridge</u>	<u>Timed to peak ferry sailings at Bainbridge</u>	<u>Route 98 - Fort Ward</u>	<u>Timed to peak ferry sailings at Bainbridge</u>
<u>Route 34 - Bangor Commuter & Shuttle</u>	<u>60 min (weekdays & Saturday)</u>	<u>Route 99 - Bill Point</u>	<u>Timed to peak ferry sailings at Bainbridge</u>
<u>Route 35 - Old Town Shuttle</u>	<u>60-min (7-days per week)</u>		

5. Ferry System Levels of Service

Table TR-19 summarizes the 1996 levels of service for WSF routes serving Kitsap County. Ferry level of service is expressed in terms of the average extra delay, if any, a patron experiences waiting to board a ferry. Levels of service are reported for weekday peak time periods. Below, is a summary of the ferry system LOS for each Kitsap route.

Seattle/Bremerton: There is a one-boat (one hour) delay during weekday peak time periods.

Seattle/Bainbridge Island: During weekday peak time periods, there is a one-boat delay (45 minutes).

Edmonds/Kingston: There is a one-boat delay (40 minute wait) during weekday peak time periods.

Fauntleroy/Vashon: There is a one-boat wait (45 minute delay) during weekday peak time periods.

Fauntleroy/Southworth: During weekday peak travel periods, there is a one-boat delay (45 minutes).

Vashon/Southworth: There is no delay for this route during weekday peak travel periods.

Table TR-19: 1996 WSF Ferry System Levels of Service

Route	1996 Existing LOS (Boat Delay)
Seattle/Bremerton	1
Seattle/Bainbridge	1
Edmonds/Kingston	1
Fauntleroy/Vashon	1
Fauntleroy/Southworth	1
Vashon/Southworth	0

F. Planned Improvements (1995 to 2000)

The basis for this Transportation Element was the Capital Facilities Element (CFP), Part II of the Comprehensive Plan. This element of the comprehensive plan outlines all capital improvements that would occur during the next 6 years, including transportation improvements. In addition, Kitsap County develops an annual Transportation Improvement Program (TIP) to address existing deficiencies and to plan for short-range transportation improvements.

Transportation Capital Improvements. Funded transportation improvements between 1995 and 2000 are summarized in the Capital Facilities Element of the Kitsap County Comprehensive Plan Part II. A total of 100 specific transportation improvements are identified throughout Kitsap County. The total estimated cost of the improvements is \$38,654,400.

Nonmotorized Improvements. The Kitsap County Greenways Plan was created to address the needs of nonmotorized users in regards to transportation and recreational uses and scenic and natural resources. These elements link together destinations such as parks, schools, places of employment,

TRANSPORTATION

shopping areas and transit facilities as well as provide access to a variety of scenic, educational and interpretive resources, as depicted in Part III, Figure Book. Thus, the Plan was separated into four specific areas: Bicycle Facilities Plan, Off-Road Trails Plan, Roadside Scenic Resource Corridors and the Wildlife Corridors Plan to accommodate the different resources available to all users. The multi-modal diversification needed for the transportation facilities will incorporate the Bicycle Facilities Plan along the county road right of way.

Table TR-20 summarizes the Bicycle Facilities Plan as identified in the 6 year Transportation Improvement Program (1995-2000). The 20-Year Priority Array for Bicycle Facilities Plan and the Off-Road Trails 20-Year Plan are identified in the Transportation System Improvements section of this report under Greenways (Nonmotorized Element). Table TR-20A summarizes the Bicycle Facilities Plan projects listed in the 2012 Proposed Roadway Solutions (Table TR-29).

Table TR-20: Six-Year Bicycle Facilities Plan (1995-2000)

<u>Project Identification</u>	<u>From / To</u>	<u>Project Location</u>
<u>1. Bucklin Hill Road (1)*</u>	<u>Silverdale Way E. to Tracyton Blvd. MP 0.25 to MP 1.06</u>	<u>Central</u>
<u>2. Holly Road West (2)*</u>	<u>Seabeck-Holly Rd. To Wildcat Lake MP 0.0 to MP 3.889</u>	<u>Central</u>
<u>3. Holly Road East (3)*</u>	<u>Wildcat Lake to Seabeck Hwy. MP 3.889 to 5.020</u>	<u>Central</u>
<u>4. Fairgrounds Road (4)*</u>	<u>Central Valley to Nelson</u>	<u>Central</u>
<u>5. West Kingston Road (11)*</u>	<u>Miller Bay to SR 104, MP 0.00 to MP 2.16</u>	<u>North</u>
<u>6. Gorst to Bremerton Ferry Study (12)*</u>	<u>2.5 miles, parallels State Routes 3 and 304</u>	<u>South</u>
<u>7. Suquamish Pedestrian Walkways (15)*</u>	<u>Suquamish Elementary School</u>	<u>North</u>
<u>8. Illahee Road NE (24)*</u>	<u>MP 1.237 to MP 1.587</u>	<u>Central</u>
<u>9. Indianola Road (34)*</u>	<u>MP 0.921 to MP 1.838</u>	<u>North</u>
<u>10. County Wide Safety Improvements (38)*</u>	<u>NA</u>	<u>NA</u>
<u>11. County Wide Greenways (40)*</u>	<u>NA</u>	<u>NA</u>
<u>12. SE Cedar Road East (44)*</u>	<u>Bethel to Converse, MP 0.25 to MP 0.60</u>	<u>South</u>
<u>13. Lakeway Blvd SE (45)*</u>	<u>Fairview to Triviere, MP 0.54 to MP 1.04</u>	<u>South</u>
<u>14. Hansville Road NE (46)*</u>	<u>SR 104 to Old Hansville, MP 0.00 to MP 2.60</u>	<u>North</u>
<u>15. Seabeck Hwy (49)*</u>	<u>Seabeck Rd. to Miami Beach Road</u>	<u>Central</u>
<u>16. Jackson Ave (50)*</u>	<u>Shoulder Improvements MP 0.197 to MP 0.897</u>	<u>South</u>
<u>17. Beach Drive Trail (51)*</u>	<u>P.O. City Limits to Hilldale</u>	<u>South</u>
<u>18. McWilliams Rd/SR 303 (55)*</u>	<u>Intersection</u>	<u>Central</u>
<u>19. Redwing Trail (56)*</u>	<u>Vicinity of school</u>	<u>Central</u>
<u>20. Barber Cut-Off Rd. (29)*</u>	<u>Vicinity of school</u>	<u>North</u>
<u>21. Gold Creek Rd. (65)*</u>	<u>NA</u>	<u>Central</u>
<u>22. Carney Lake Rd. (69)*</u>	<u>J.M. Dickenson Rd. to Co. Line MP 0.0 to MP 1.84</u>	<u>South</u>
<u>23. Mile Hill Dr. (74)*</u>	<u>Long Lake Rd. To Colchester</u>	<u>South</u>
<u>24. Jackson Ave SE (75)*</u>	<u>Lund Ave to Mile Hill Drive</u>	<u>South</u>
<u>25. Salmonberry Road (76)*</u>	<u>Phillips Rd. to Long Lake</u>	<u>South</u>
<u>26. Lund Ave SE (78)*</u>	<u>Bethel Rd. to Hoover</u>	<u>South</u>
<u>27. Tracyton Blvd. (81)*</u>	<u>Allens Corner to Holland</u>	<u>Central</u>
<u>28. Hood Canal Dr. (84)*</u>	<u>Cliffside Rd. To Hood Canal Place</u>	<u>North</u>
<u>29. Little Boston Rd. NE (85)*</u>	<u>Cliffside Rd. to Hansville Rd.</u>	<u>North</u>
<u>30. Widme Road (86)*</u>	<u>Totten Rd. to Lincoln Rd.</u>	<u>North</u>
<u>31. Bethel- Burley Rd. SE (89)*</u>	<u>Burley-Olalla Rd. to Holman Rd.</u>	<u>South</u>
<u>32. Glenwood Road (90)*</u>	<u>Lake Flora Rd.to Lider Rd.</u>	<u>South</u>
<u>33. Glenwood Road (91)*</u>	<u>JH Rd. to Lake Flora Rd.</u>	<u>South</u>
<u>34. Sidney Road (92)*</u>	<u>County Line to Lakeway Blvd.</u>	<u>South</u>
<u>35. Glenwood Rd. (96)*</u>	<u>Pine Rd. To Christmas Tree Ln.</u>	<u>South</u>
<u>36. Carney Lake Rd. (97)*</u>	<u>Alta Vista Dr to J.M. Dickenson Rd.</u>	<u>South</u>

**Numbers in parenthesis coincide with CFP Projects and Financing Plan Table TR-27*

Table TR-20A: Bicycle Facilities Plan - Kitsap County 2012
 (Reference Table TR-29: 2012 Proposed Roadway Solutions)

<u>Project Identification</u>	<u>From / To</u>	<u>Project ID Code (Table TR-29)</u>
<u>Viking Way</u>	<u>SR-308 to SR-305</u>	<u>N1</u>
<u>Stottlemeyer Road</u>	<u>Lincoln Rd. to Gunderson Rd.</u>	<u>N12</u>
<u>Hansville Road</u>	<u>SR-104 to Eglon Rd.</u>	<u>N13</u>
<u>Silverdale Way</u>	<u>Schold Rd. to Mtn. View</u>	<u>N14</u>
<u>McWilliams Road</u>	<u>Old Military Rd. to Sunset Ave.</u>	<u>N15</u>
<u>Fairgrounds Road</u>	<u>Tracyton Blvd. to SR-303</u>	<u>C4</u>
<u>Tracyton Blvd.</u>	<u>Bucklin Hill Rd. to Fairgrounds Rd.</u>	<u>C12</u>
<u>Northlake Way</u>	<u>Seabeck Hwy. to Kitsap Way</u>	<u>C13</u>
<u>Ridgetop Blvd.</u>	<u>Silverdale Way to Waaga Way</u>	<u>C14</u>
<u>Bucklin Hill Road</u>	<u>Frontier Rd. to Silverdale Way</u>	<u>C15</u>
<u>Newberry Hill Road</u>	<u>SR-3 to Seabeck Hwy.</u>	<u>C16</u>
<u>Anderson Hill Road</u>	<u>SR-3 to Willamette Meridian Road</u>	<u>C17</u>
<u>Perry Avenue</u>	<u>Magnuson Way to Riddell Road</u>	<u>C18</u>
<u>Riddell Road</u>	<u>Pine Road to Perry Avenue</u>	<u>C19</u>
<u>Bethel Road</u>	<u>Mile Hill Dr. to Lund Ave.</u>	<u>S1</u>
<u>Mile Hill Drive</u>	<u>Long Lake Rd. to California Ave.</u>	<u>S6</u>
<u>Bay Street/Beach Drive</u>	<u>Ahlstrom to Retsil</u>	<u>S7</u>
<u>Lund Avenue</u>	<u>Bethel Rd. to Hoover St.</u>	<u>S8</u>
<u>Lund Avenue</u>	<u>Hoover St. to Jackson Ave.</u>	<u>S9</u>
<u>Glenwood Road</u>	<u>Lake Flora Dr. to SR-16</u>	<u>S11</u>

Transit Service Improvements. Some facility objectives outlined in Kitsap Transit’s 6-Year Capital Improvement Program (1997-2003) include maintaining existing facilities, securing additional parking spaces at certain park and ride lots, developing and/or expanding transit centers, and expanding the supply of bus shelter and bicycle lockers/racks. The total cost for these projects is estimated to be \$74,158,000.

Ferry Service Improvements. WSDOT has identified a number of ferry projects for Kitsap County in its Six-Year Capital Construction Program (1997-2003).

The Seattle to Bainbridge Island route will be obtaining an additional Jumbo Mark II Class vessel in 1998 to compliment the *Tacoma*, which began service in November of 1997. The Edmonds to Kingston route will be receiving two Jumbo Mark II Class Vessels in the following year, each with a vehicle capacity of 218 and passenger capacity of 2,500. This project is estimated to end in 1999 and cost \$78,087,000 (\$1997).

The new Passenger-Only Fast Ferry (POFF) *Chinook* will be begin service from Seattle to Bremerton in May of 1998. The boat has a passenger capacity of 350 and is expected to cut the Seattle/Bremerton commute down to approximately 30 minutes. With a price tag of \$9.6 million, the *Chinook* is the first of a series of Passenger-Only Fast Ferries that will serve the Central Sound. In addition to the Seattle-Bremerton run, the Passenger-Only Fast Ferries will serve the new Kingston-Seattle and Southworth-Seattle routes. The funded portion of the project runs through 1999, with a total cost of \$19,471,000 (\$1997).

G. Future Deficiencies

This section summarizes the needs and deficiencies for the transportation system in Kitsap County in the long term. The needs and deficiencies include a variety of multimodal facilities and presents documentation for all travel modes in the County.

1. Roadway System Performance Measures

a. 2012 Vehicle Miles of Travel

Two future scenarios were analyzed: 2012 Existing and Committed (E + C) Network and 2012 Improved Network. The 2012 E + C Network includes the existing roadway network system and all of the transportation improvements during the next 6-years identified in the previous section of this Appendix for roadways, transit and ferries. The 2012 Improved Network includes the list of 20-year transportation improvements as identified in Section IV of this Transportation Appendix.

Tables TR-21 and TR-22 show vehicle miles traveled in Kitsap County for 2012 with the E + C and Improved Networks by subarea with a percentage breakdown of travel on roads that meet or do not meet the county's LOS standards. Table TR-23 compares the 1994 and 2012 percentage of vehicle miles traveled (VMT) on roads that are below standard.

The main conclusion from these tables is that Kitsap County's roadway would be significantly more congested by the year 2012 if the expected growth occurs as projected under the Comprehensive Plan and no new transportation improvements are made beyond those already committed in the 6-year Capital Facilities Plan. A second conclusion is that most of the congestion would occur on state facilities, rather than county roads or city streets.

Overall, the amount of travel on congested roads would increase from 17 percent in 1994 to 35 percent in 2012 with the E +C Network. However, if the recommended solutions in Chapter IV, or similar improvements, are implemented, the overall travel on congested roadways would drop to 23 percent of all VMT. Table TR-23 also demonstrates that the percentage of congested VMT on State facilities is greater than on non-State facilities.

Table TR-23 also shows that urban roadways would experience more of the county's traffic congestion than rural roads. This finding is important because one goal of GMA is to concentrate growth and growth effects in urban rather than rural areas. As noted in Table TR-23, very few of the county's rural roads would fail to meet the County's rural LOS standards if recommended or similar solutions are implemented by 2012. However, if improvements are not made, rural roadways would experience an enormous increase in congestion (0 percent of VMT in 1994 to 19 percent VMT in 2012 E + C Network). This is due to a combination of some growth in rural areas, potentially heavy congestion on state routes through rural areas, spill over of urban travel congestion into adjacent rural areas if the urban area roadways are not improved, and urban growth generating increased travel between centers, which occurs on rural collectors and arterials.

TRANSPORTATION

Table TR-21: Amount of Miles Traveled by Level of Service Standards (2012 E+C Network)

By County Subarea	2012 VMT	% 2012 VMT at or better than LOS standard	% 2012 VMT below LOS Standards
North	1,790,084	54%	46%
<u>Urban Non-State Facilities</u>	<u>201,106</u>	<u>63%</u>	<u>37%</u>
<u>Rural Non-State Facilities</u>	<u>424,050</u>	<u>79%</u>	<u>21%</u>
<u>Subtotal Non-State Facilities</u>	<u>625,156</u>	<u>74%</u>	<u>26%</u>
<u>State Facilities</u>	<u>1,164,927</u>	<u>44%</u>	<u>56%</u>
Central	1,347,297	74%	26%
<u>Urban Non-State Facilities</u>	<u>408,128</u>	<u>61%</u>	<u>39%</u>
<u>Rural Non-State Facilities</u>	<u>222,952</u>	<u>59%</u>	<u>41%</u>
<u>Subtotal Non-State Facilities</u>	<u>631,080</u>	<u>60%</u>	<u>40%</u>
<u>State Facilities</u>	<u>716,217</u>	<u>87%</u>	<u>13%</u>
South	1,980,044	69%	31%
<u>Urban Non-State Facilities</u>	<u>313,149</u>	<u>53%</u>	<u>47%</u>
<u>Rural Non-State Facilities</u>	<u>521,685</u>	<u>92%</u>	<u>8%</u>
<u>Subtotal Non-State Facilities</u>	<u>834,835</u>	<u>78%</u>	<u>22%</u>
<u>State Facilities</u>	<u>1,145,210</u>	<u>63%</u>	<u>37%</u>
<u>Total State Facilities</u>	<u>3,026,354</u>	<u>61%</u>	<u>39%</u>
<u>Total Non-state Facilities</u>	<u>2,091,071</u>	<u>71%</u>	<u>29%</u>
<u>Total Urban Facilities</u>	<u>922,384</u>	<u>59%</u>	<u>41%</u>
<u>Total Rural Facilities</u>	<u>1,168,688</u>	<u>81%</u>	<u>19%</u>
<u>Total All Facilities</u>	<u>5,117,425</u>	<u>65%</u>	<u>35%</u>

Table TR-22: Amount of Miles Traveled by Level of Service Standards (2012 Improved Network)

TRANSPORTATION

By County Subarea	2012 VMT	% 2012 VMT at or better than LOS standard	%2012 VMT below LOS Standards
North	1,771,725	64%	36%
Urban Non-State Facilities	211,955	81%	19%
Rural Non-State Facilities	446,654	95%	5%
Subtotal Non-State Facilities	658,609	91%	9%
State Facilities	1,113,116	49%	51%
Central	1,340,654	84%	16%
Urban Non-State Facilities	415,948	78%	22%
Rural Non-State Facilities	219,195	84%	16%
Subtotal Non-State Facilities	635,143	80%	20%
State Facilities	705,511	88%	12%
South	1,969,908	84%	16%
Urban Non-State Facilities	348,945	76%	24%
Rural Non-State Facilities	500,210	96%	4%
Subtotal Non-State Facilities	849,155	88%	12%
State Facilities	1,120,753	81%	19%
Total State Facilities	2,939,381	71%	29%
Total Non-state Facilities	2,142,907	86%	14%
Total Urban Facilities	976,848	78%	22%
Total Rural Facilities	1,166,060	93%	7%
Total All Facilities	5,082,288	77%	23%

Table TR-23: Changes in Miles Traveled Below LOS Standards, 1994 to 2012

By County Subarea	1994 VMT NOT Meeting LOS Standards	% 1994 VMT NOT Meeting LOS Standards	2012 VMT (E+C) NOT Meeting LOS Standards	% 2012 VMT (E+C) NOT Meeting LOS Standards	2012 VMT (Improved) NOT Meeting LOS Stand.	% 2012 VMT (Improved) NOT Meeting LOS Stand.
North	241,460	19%	815,507	46%	633,431	36%
Urban Non-State	1,142	0%	74,706	37%	40,679	19%
Rural Non-State	0	0%	87,023	21%	20,373	5%
Subtotal Non-State	1,142	0%	161,7	26%	61,05	9%
State Facilities	240,318	34%	653,778	56%	572,380	51%
Central	138,568	13%	345,545	26%	213,736	16%
Urban Non-State	63,369	14%	160,949	39%	92,210	22%
Rural Non-State	0	0%	90,314	41%	35,288	16%
Subtotal Non-State	63,36	14%	251,2	40%	127,4	20%
State Facilities	75,199	15%	94,281	13%	86,238	12%
South	246,146	18%	608,283	31%	311,443	16%
Urban Non-State	69,031	20%	146,194	47%	83,313	24%
Rural Non-State	0	0%	40,937	8%	20,746	4%
Subtotal Non-State	69,03	20%	187,1	22%	104,0	12%
State Facilities	177,115	34%	421,152	37%	207,383	19%
Total State Facilities	492,632	24%	1,169,2	39%	866,001	29%
Total Non-state Facilities	133,542	8%	600,123	29%	292,609	14%
Total Urban Facilities	133,542	17%	381,849	41%	216,202	22%
Total Rural Facilities	0	0%	218,274	19%	76,407	7%
Total All Facilities	626,174	17%	1,769,3	35%	1,158,6	23%

2. 2012 Lane Miles of "Congested" Facilities

Tables TR-24 and TR-25 compare the Kitsap County lane miles that satisfy or fall below the County's LOS standards for both future year scenarios. The VMT summaries show how much actual travel is affected by congested roadways; the lane mile summaries indicate how much of the county's road system would be deficient under the various scenarios. Estimating lane miles of congestion allows the county to estimate the extent and costs of potential improvements required to meet the LOS standards on a countywide basis.

Table TR-26 shows the change in congested lane miles conditions from 1994 to the 2012 E + C and Improved Networks.

Table TR-24: Lane Miles of 2012 E + C Network by Level of Service Standard Performance

By County Subarea	2012 Lane Miles	2012 Lane Miles Meeting LOS Standards	2012 Lane Miles NOT Meeting LOS Standards	% 2012 Lane-Miles NOT Meeting LOS Standards
North	376	287	89	24%
Urban Non-State Facilities	61	49	12	19%
Rural Non-State Facilities	172	158	14	8%
Subtotal Non-State Facilities	23	207	26	11%
State Facilities	143	80	63	44%
Central	229	181	48	21%
Urban Non-State Facilities	91	68	23	25%
Rural Non-State Facilities	72	56	16	22%
Subtotal Non-State Facilities	16	125	39	24%
State Facilities	66	57	9	14%
South	412	348	64	16%
Urban Non-State Facilities	60	40	19	32%
Rural Non-State Facilities	244	237	7	3%
Subtotal Non-State Facilities	30	277	27	9%
State Facilities	108	71	37	35%
Total State Facilities	317	207	109	35%
Total Non-state Facilities	700	609	91	13%
Total Urban Facilities	212	158	54	25%
Total Rural Facilities	488	451	37	8%
Total All Facilities	1016	816	200	20%

Significant conclusions are as follows:

- # Congestion would get worse without improvements. Overall, about 20 percent (E + C Network) or 12 percent (Improved Network) of the system would be considered deficient in 2012.

- # Under the E + C system, all three subareas have comparable amounts of lanes miles falling below the established LOS standards. With the improved system, the north subarea would have the most lane miles below the standards of the three county subareas: North - 68 lane miles, Central - 27 lane miles, South - 36 lane miles.

- # The majority of congested roads within Kitsap county occur on State facilities (88 congested lane miles on state facilities versus 44 congested lane miles on non-State facilities).

TRANSPORTATION

Table TR-25: Lane Miles of 2012 Improved Network by Level of Service Standard Performance

By County Subarea	2012 Lane Miles	2012 Lane Miles Meeting LOS Standards	2012 Lane Miles NOT Meeting LOS Standards	% 2012 Lane-Miles NOT Meeting LOS Standards
North	<u>398</u>	<u>329</u>	<u>68</u>	<u>17%</u>
Urban Non-State Facilities	<u>69</u>	<u>63</u>	<u>6</u>	<u>9%</u>
Rural Non-State Facilities	<u>182</u>	<u>178</u>	<u>4</u>	<u>2%</u>
Subtotal Non-State Facilities	<u>25</u>	<u>241</u>	<u>10</u>	<u>4%</u>
State Facilities	<u>147</u>	<u>89</u>	<u>58</u>	<u>40%</u>
Central	<u>253</u>	<u>226</u>	<u>27</u>	<u>11%</u>
Urban Non-State Facilities	<u>104</u>	<u>92</u>	<u>12</u>	<u>11%</u>
Rural Non-State Facilities	<u>82</u>	<u>76</u>	<u>7</u>	<u>8%</u>
Subtotal Non-State Facilities	<u>18</u>	<u>168</u>	<u>19</u>	<u>10%</u>
State Facilities	<u>67</u>	<u>58</u>	<u>9</u>	<u>13%</u>
South	<u>451</u>	<u>414</u>	<u>36</u>	<u>8%</u>
Urban Non-State Facilities	<u>77</u>	<u>66</u>	<u>11</u>	<u>14%</u>
Rural Non-State Facilities	<u>263</u>	<u>259</u>	<u>4</u>	<u>1%</u>
Subtotal Non-State Facilities	<u>33</u>	<u>324</u>	<u>15</u>	<u>4%</u>
State Facilities	<u>111</u>	<u>90</u>	<u>21</u>	<u>19%</u>
Total State Facilities	<u>325</u>	<u>237</u>	<u>88</u>	<u>27%</u>
Total Non-state Facilities	<u>777</u>	<u>733</u>	<u>44</u>	<u>6%</u>
Total Urban Facilities	<u>250</u>	<u>221</u>	<u>29</u>	<u>12%</u>
Total Rural Facilities	<u>527</u>	<u>513</u>	<u>15</u>	<u>3%</u>
Total All Facilities	<u>110</u>	<u>970</u>	<u>132</u>	<u>12%</u>

Table TR-26: 1994-2012 Changes in Performance in Terms of Lane Miles

By County Subarea	1994 Lane Miles NOT Meeting LOS Standards	% 1994 Lane Miles NOT Meeting LOS Standards	2012 Lane Miles (E+C) NOT Meeting LOS Standards	% 2012 Lane Miles (E+C) NOT Meeting LOS Standards	2012 Lane Miles (Improved) NOT Meeting LOS Standards	% 2012 Lane Miles(Improved) NOT Meeting LOS Standards
North	30	7%	89	24%	68	17%
Urban Non-State	0	0%	12	19%	6	9%
Rural Non-State Facilities	0	0%	14	8%	4	2%
Subtotal Non-State	0	0%	26	11%	10	4%
State Facilities	30	27%	63	44%	58	40%
Central	19	7%	48	21%	27	11%
Urban Non-State	10	7%	23	25%	12	11%
Rural Non-State Facilities	0	0%	16	22%	7	8%
Subtotal Non-State	10	7%	39	24%	19	10%
State Facilities	9	11%	9	14%	9	13%
South	24	5%	64	16%	36	8%
Urban Non-State	11	9%	19	32%	11	14%
Rural Non-State Facilities	0	0%	7	3%	4	1%
Subtotal Non-State	11	9%	27	9%	15	4%
State Facilities	13	23%	37	35%	21	19%
Total State Facilities	52	18%	109	35%	88	27%
Total Non-State Facilities	21	10%	91	13%	44	6%
Total Urban Facilities	21	10%	54	25%	29	12%
Total Rural Facilities	0	0%	37	8%	15	3%
Total All Facilities	73	6%	200	20%	132	12%

3. 2010 Vehicle Hours of Travel

Table TR-27 compares the number of vehicle hours of travel (VHT) in Kitsap County that do not meet the County’s LOS standards. Significant conclusions are as follows:

The north subarea contains the greatest increase in the number of congested hours of travel. In 1994, over 6,000 vehicle hours are congested representing 18 percent of all vehicle travel. By 2012, this number will increase to over 24,000 vehicle hours of congested travel; representing 51 percent of all vehicle travel for the E+C Network or 18,500 congested vehicle hours (42 percent of all vehicle travel) for the Improved Network.

All subareas for the E+C Network will increase in vehicle hours of congested travel by at least 15 percent in the year 2012. For the Improved Network congested travel measured in vehicle hours will increase significantly only in the north subarea (22 percent).

TRANSPORTATION

Countywide, nearly 20 percent of all vehicle hours of travel in 1994 were spent on congested roads; by the year 2012 this number would increase to 42 percent for the E+C Network and fall to 28 percent for the Improved Network.

47 percent of congested vehicle hours of travel on the 2012 E+C Network and 37% on the 2012 Improved Network would occur on State facilities.

Table TR-27: Changes in Congested VHT, 1994-2012, in Terms of Vehicle Hours of Travel

By County Subarea	1994 VHT NOT Meeting LOS Standards	% 1994 VHT NOT Meeting LOS Standards	2012 VHT (E+C) NOT Meeting LOS Standards	% 2012 VHT (E+C) NOT Meeting LOS Standards	2012 VHT (Improved) NOT Meeting LOS Standards	% 2012 VHT (Improved) NOT Meeting LOS Standards
North	<u>6,096</u>	<u>18%</u>	<u>24,458</u>	<u>51%</u>	<u>18,567</u>	<u>40%</u>
Urban Non-State Facilities	<u>53</u>	<u>1%</u>	<u>2,563</u>	<u>38%</u>	<u>1,421</u>	<u>21%</u>
Rural Non-State Facilities	<u>0</u>	<u>0%</u>	<u>2,380</u>	<u>22%</u>	<u>529</u>	<u>5%</u>
Subtotal Non-State	<u>53</u>	<u>1%</u>	<u>4,943</u>	<u>28%</u>	<u>1,949</u>	<u>11%</u>
State Facilities	<u>6,043</u>	<u>38%</u>	<u>19,516</u>	<u>64%</u>	<u>16,618</u>	<u>58%</u>
Central	<u>5,407</u>	<u>18%</u>	<u>14,524</u>	<u>37%</u>	<u>8,902</u>	<u>24%</u>
Urban Non-State Facilities	<u>2,385</u>	<u>15%</u>	<u>7,084</u>	<u>46%</u>	<u>3,681</u>	<u>26%</u>
Rural Non-State Facilities	<u>0</u>	<u>0%</u>	<u>3,044</u>	<u>45%</u>	<u>1,286</u>	<u>20%</u>
Subtotal Non-State	<u>2,385</u>	<u>15%</u>	<u>10,12</u>	<u>46%</u>	<u>4,967</u>	<u>24%</u>
State Facilities	<u>3,022</u>	<u>27%</u>	<u>4,396</u>	<u>26%</u>	<u>3,935</u>	<u>23%</u>
South	<u>8,477</u>	<u>23%</u>	<u>21,409</u>	<u>39%</u>	<u>11,082</u>	<u>21%</u>
Urban Non-State Facilities	<u>3,110</u>	<u>26%</u>	<u>7,681</u>	<u>60%</u>	<u>3,753</u>	<u>32%</u>
Rural Non-State Facilities	<u>0</u>	<u>0%</u>	<u>1,193</u>	<u>9%</u>	<u>562</u>	<u>4%</u>
Subtotal Non-State	<u>3,110</u>	<u>26%</u>	<u>8,874</u>	<u>34%</u>	<u>4,315</u>	<u>17%</u>
State Facilities	<u>5,367</u>	<u>39%</u>	<u>12,535</u>	<u>43%</u>	<u>6,767</u>	<u>24%</u>
Total State Facilities	<u>14,432</u>	<u>30%</u>	<u>36,446</u>	<u>47%</u>	<u>27,320</u>	<u>37%</u>
Total Non-state Facilities	<u>5,548</u>	<u>11%</u>	<u>23,945</u>	<u>36%</u>	<u>11,231</u>	<u>18%</u>
Total Urban Facilities	<u>5548</u>	<u>21%</u>	<u>17,327</u>	<u>50%</u>	<u>8,854</u>	<u>27%</u>
Total Rural Facilities	<u>0</u>	<u>0%</u>	<u>6,618</u>	<u>21%</u>	<u>2,377</u>	<u>8%</u>
Total All Facilities	<u>19,980</u>	<u>20%</u>	<u>60,391</u>	<u>42%</u>	<u>38,551</u>	<u>28%</u>

IV. 2012 Transportation System Improvements

This section summarizes the transportation investments that will be required to maintain adequate levels of mobility for the projected increase in residents and jobs in Kitsap County by the year 2012. System improvements include everything from public transportation, nonmotorized facilities, ferries and roadways.

A. Alternatives Development and Project Identification Process

This updated Kitsap County Transportation Element is designed to achieve a balanced transportation system moving people and goods, not just more cars. In order to accomplish this goal, the County will still be planning, constructing and maintaining roadways. However, County transportation planning staff will continue to work with Kitsap Transit, the Washington State Ferry System, and the Washington State Department of Transportation to implement the County's transportation goals, objectives and policies, and to maintain acceptable levels of congestion through the adoption of the County's level of service standards and concurrency management system.

The Kitsap County Public Works Department will also be coordinating transportation projects and programs with the cities of Bremerton, Port Orchard, Bainbridge Island and Poulsbo, and with its own department of Community Development, as well as Kitsap Transit, WSDOT Highways, and WSF.

The long-range transportation strategy for the Kitsap County transportation plan attempts to:

- # have less reliance on single occupant automobiles,
- # provide enhanced multimodal opportunities in the form of accessible transit and park and ride facilities,
- # develop and enhance modes of travel that are time competitive with the automobile, and
- # integrate land use and transportation planning efforts.

These goals and ideals may be difficult to achieve immediately. It will be hard to change the life-long habit of using one's personal vehicle for all transportation needs.

However, by using a transportation strategy that reduces emphasis on road widening projects, the County may be able to modify travel mode choices in the future. Road widening projects and roadway capacity enhancement projects will still appear in the County's long-range transportation plan and associated six-year capital improvement programs. However, all projects will face these questions:

- # Does the project have a multimodal emphasis? Are there pedestrian and/or bicycle components of road projects that help achieve a balance in the use alternative modes?
- # Will the project assist in providing a competitive time advantage for transit vehicles?
- # Is this a multi-jurisdictional or multi-agency project that will provide an adequate level of service for regional traffic flows and goods movements?
- # Will the project enhance economic development in those areas of the County where the creation of jobs is desired?
- # Does the project have potential for, funding from sources other than Kitsap County?

TRANSPORTATION

Criticisms of past transportation planning efforts in Kitsap County were based on the belief that most transportation decisions focused on roads and roadway projects. The prior emphasis on completing roadway projects had its origins in the mission and purpose of a traditional county public works department, which was essentially to build roads.

Not all projects will be equally supported or needed by the jurisdictions in the County. In some instances, there will be direct conflicts in the defined transportation needs and priorities of the cities, state or tribes and the County. The County is determined to work with all other parties to find solutions that offer advantages to regionally important transportation facilities. Technical and policy staff from local jurisdictions, the Puget Sound Regional Council (PSRC) and the Peninsula Regional Transportation Planning Organization (PRTPO) may be consulted to negotiate regional solutions.

B. A Set of Choices

The development of the recommended transportation system plan involved the detailed testing and evaluation of four alternative systems, plus the recommended plan (five in all) to meet Kitsap County's future transportation needs. Each alternative consisted of a package of improvements including roadway capacity enhancements (widening and new roads), safety and operational improvements, transit priority treatments and ferry system improvements. Each alternative addressed the County's transportation needs in a different way. The alternatives have been formulated to:

- # test the differences among the number of projects, costs, and resulting roadway levels of service;
- # determine if specific widening projects are still needed if alternate transit and ferry improvements would be implemented; and
- # provide a range of projects that might be considered either feasible or infeasible based on technical or political constraints.

They each include elements of the following, in different combinations:

- # road capacity enhancements (e.g. widening);
- # new road linkages;
- # safety and operational improvements;
- # transit service and facility improvements; and
- # ferry system improvements.

Each of these elements is discussed below. They should be considered as "equal partners" in the County's overall transportation management strategy -- road improvements are only one part of addressing the County transportation needs in a comprehensive manner.

C. Proposed Roadway Plan

Table TR-28 summarizes the proposed long-range transportation solutions that may be necessary to support Kitsap County's Comprehensive Plan and address transportation deficiencies identified in the previous section of this appendix. It represents a "hybrid" list of transportation improvements that includes projects from the evaluation of alternatives by the KCTP citizen advisory committees, as well as from local and regional transportation agencies. These projects were modeled to determine potential solutions in transportation system performance relative to the 2012 "baseline" system, under future land use growth assumptions provided by Kitsap County Department of Community Development (DCD) and the PSRC.

The project code identifier in Table TR-28 relates to a location code identified in Figure TR-26. It should be noted that the project code numbers *do not signify any order of importance or prioritization*. They simply represent a numbering system to easily identify the project location and the number of projects within each county subarea and as a whole. The following paragraphs describe in detail each of the proposed transportation solutions and an explanation as to its purpose.

1. New Facilities

New roadway linkages throughout Kitsap County are a key component of the Transportation Element. These types of improvements enhance local circulation of developing activity centers and communities (e.g. Silverdale) and create alternative travel paths to congested or sensitive areas (e.g. Port Gamble).

In the North County subarea, almost half of the 10 recommended transportation improvements are new linkages. They are as follows:

Projects N-2: As an outcome of the Kingston Circulation Study and input from the North Citizens Advisory Committee Members, roadway extension of Lindvog Road is a proposed solution.

Project N-4: This new two-lane roadway is a proposed solution to improve general circulation in the South Kingston-Miller Bay area and to provide local access to approved residential development in the general vicinity.

Project N-5: This bypass roadway is proposed to alleviate congestion on August Avenue/Miller Bay Road through the Suquamish area and at the same time provide alternative access for residents northwest of the Suquamish area.

Project N-6: This new 2-lane roadway is a recommendation of the North CAC to construct a new roadway between Hansville Road and Hood Canal Drive and a potential solution to provide local access and eliminate circuitous routing in the general vicinity.

The following are proposed new linkage transportation solutions in the Central County subarea:

Project C-1: The extension of Waaga Way in a two-lane configuration is a proposed solution to improve accessibility to areas west side of SR 3 to SR 303 and to alleviate congestion in the Silverdale area.

Project C-2 and C-10: These two-lane extensions along Perry Avenue and Ahlmira Drive is a proposed solution to relieve congestion along SR-303, Riddell Road and McWilliams Road. In addition, these extensions could potentially provide additional access to local residential neighborhoods.

TRANSPORTATION

Table TR-28: Kitsap County 2012 Transportation Improvement Program

Facility	From	To	Improvement Description	Code	Lead Agency
Viking Way GC	SR-308	SR 305	Widen to 5L	N 1	KC
Lindvog Rd.	SR-104	W. Kingston Rd.	3L extension	N 2	KC
W. First St.	SR-104	W. Kingston Rd.	Widen to 3L	N 3	KC
South Kingston-Miller Bay Collector	S. Kingston Rd.	Miller Bay Rd.	New 2L road	N 4	Private / KC
Suquamish Bypass	Totten Rd.	Columbia St.	New 2L road	N 5	KC
Hansville Bypass	Hansville Rd.	Hood Canal Dr.	New 2L road	N 6	KC
Stottlemeyer Rd	Lincoln Rd	Gunderson Rd	Widen to 3L	N 7	KC
Hansville Rd	SR-104	Eglon Rd	Widen to 3L	N 8	KC
Silverdale Way	Schold Rd	Mt View	Widen to 3L	N 9	KC
McWilliams Road	Old Military Rd	Sunset Ave	Widen to 3L	N 10	KC
Waaga Way Ext.	Clear Cr. Rd.	Old Frontier Rd.	2L extension	C 1	KC
Perry Ave.	Riddell Rd.	McWilliams Rd.	2L extension	C 2	KC
Slyvan Way	SR 303	Trenton Avenue	Widen to 4L	C 3	KC
Fairgrounds Rd. GC	Tracyton Blvd.	SR-303	Add LT & RT pockets; IS	C 4	KC
Silverdale Way	Byron St.	Newberry Hill Rd.	Widen to 4L (5L @ IS)	C 5	KC
Newberry Hill Rd.	Silverdale Way	SR-3	Widen to 4L (5L @ IS)	C 6	KC
Newberry Hill Rd.	Provost Rd.	Dickey Rd.	Add WB truck climbing lane	C 7	KC
Sam Christopherson	Old Belfair Valley	Werner Rd.	New 2L road	C 8	KC
Willamette-Meridian	Terminus	Newberry Hill Rd.	New 2L road	C 9	KC
Almira Dr.	Riddell Rd.	McWilliams Rd.	2L extension	C 10	KC
Werner Rd.	Sam	SR-3	Widen to 4L	C 11	KC
Tracyton Blvd. GC	Bucklin Hill Rd.	Fairgrounds Rd.	Widen lanes/shoulders; access management.	C 12	KC
North Lake Way GC	Seabeck Hwy.	Kitsap Way	Widen to 4 Lanes	C 13	KC
Ridgetop Boulevard	Silverdale Way	Waaga Way	Widen to 5 Lanes	C 14	KC
Bucklin Hill Rd. GC	Frontier Rd.	Silverdale Way	Widen to 5 Lanes	C 15	KC
Newberry Hill Rd	Dickey Rd.	Seabeck Hwy	Widen to 3L; climbing lane	C 16	KC
Anderson Hill Rd	SR-3	Willamette	Widen to 3L	C 17	KC
Perry Avenue	Magnuson Way	Riddell Road	Widen to 3L	C 18	KC
Riddell Road	Pine Road	Perry Avenue	Widen to 3L	C 19	KC
Bethel Road GC	Mile Hill Rd.	Lund Ave.	Widen to 5L	S 1	KC
Caufield Lane	Terminus	Bethel-Burley Rd.	2L extension	S 2	KC
Jackson Ave.	Sedgwick Rd.	Mile Hill Dr.	Widen to 4L; signals	S 3	KC
Burley-Belfair	SR-16 @ B.O. IC	SR-3 @ Lk Flora	New 2L road	S 4	KC
Phillips Rd.	Mullenix Rd.	Burley-Ollala Rd.	2L extension	S 5	KC
Mile Hill Drive GC	Long Lake Rd.	California Rd.	Widen to 3 Lanes	S 6	KC
Bay Street/Beach	Retsil	Alhlstrum	Widen to 3 Lanes	S 7	KC
Lund Ave	Bethel Rd	Hoover St	Widen to 5 Lanes	S 8	KC
Lund Ave	Hoover St	Jackson Ave	Widen to 3L	S 9	KC
Glenwood Rd	Lake Flora Dr	SR-16	Widen to 3L	S 10	KC

*GC - Project included a Greenways Corridor in the Transportation Improvement Program

Project C-8: This new two-lane roadway is a proposed solution to make a local north-south connection between Central and South County subareas and improve local access; this proposed improvement should also alleviate congestion on SR 3/SR 16 in the Gorst area. The potential development of this roadway corridor was a result of forecasted congested conditions along SR 3/SR 16 and a recommendation from the Central and South Citizen Committee Members.

Project C-9: The proposed solution of extending the Willamette Meridian Road to Newberry Hill Road could potentially improve local access and circulation through the Silverdale area.

In the South County subarea, the following proposed transportation solutions are new linkages:

Project S-2: The proposed two-lane extension along Caufield Lane is a potential solution to improve east-west route accessibility between Sidney Road and Bethel Burley Road.

Project S-4: This proposed development of this new roadway corridor between SR 3 and SR 16 in South County could potentially provide a vital east-west regional link and improve local access between these major arterials.

Project S-5: The proposed two-lane roadway could potentially provide an new north-south route between Mullenix Road and Burley-Olalla Road in South County. It will also provide improved residential access in this area, and is a recommendation of the South CAC.

2. Widening and Improvements to Existing Facilities

Over half of the 10 projects recommended in the North County subarea are capacity-related improvements to existing roads. They are as follows:

Project N-1: Viking Way is to be widened to 5 lanes to alleviate congestion between SR 308 and SR 305.

Projects N-3: As an outcome of the Kingston Circulation Study, West First Street from SR 104 to West Kingston Road will be widened to alleviate congestion.

Project N-7: Stottlemeyer Road will be widened to 3 lanes to ease congestion from Lincoln Road to Gunderson Road.

Project N-8: Hansville Road will be widened to 3 lanes to accommodate congestion between SR 104 to Eglon Road.

Project N-9: Silverdale Way will be widened to 3 lanes to help alleviate congestion from Schold Road to Mt. View Road in the Silverdale area.

Project N-10: McWilliams Road will be widened to 3 lanes from Old Military Road to Sunset Avenue to alleviate congestion.

TRANSPORTATION

More than half of the 19 Central County subarea recommendations are related to capacity improvements on existing roads. They are as follows:

Project C-4: Left- and right-turning lanes and intersection signals will be added along Fairgrounds Road from Tracyton Boulevard to SR 303 to help relieve congestion and improve traffic flow on this roadway.

Project C-5 and C-6: Silverdale Way from Byron Street to Newberry Hill Road and Newberry Hill Road from Silverdale Way to SR 3 will be widened to four lanes, with five lanes at their intersections. These measures will help alleviate congestion along these roadways and at major intersections.

Project C-7: A westbound truck climbing lane will be constructed along Newberry Hill Road to improve traffic flow for both vehicles and trucks from SR 3 to Dickey Road.

Project C-11: The recommended improvement of widening Werner Road to four lanes is needed to accommodate increased traffic due to the new bypass roadway of Sam Christopherson Road between Old Belfair Valley Road and Werner Road in western Bremerton.

Project C-12: Lane and shoulder widening are recommended along Tracyton Boulevard to reduce congestion from Bucklin Hill Road to Fairgrounds Road.

Projects C-13: North Lake Way from Seabeck Highway to Kitsap Way is proposed to be widened to 4 lanes to ease traffic congestion along these roadways and accommodate the anticipated residential development in the area.

Projects C-14 and C-15: The roadway sections of Ridgetop Boulevard from Silverdale Way to Waaga Way and Bucklin Hill Road from Frontier Road to Silverdale Way are proposed to be widened to five lanes to alleviate congestion on these arterials due to increased commercial/retail development in Silverdale and residential development in these corridors.

Project C-16: Widen Newberry Hill Road to 3 lanes between Dickey Rd and Seabeck Highway to alleviate congestion.

Project C-17: Widen Anderson Hill Road to 3 lanes between SR 3 and Willamette Meridian Road to ease congestion.

Projects C-18 and C-19: Perry Avenue and Riddell Road will be widened to 3 lanes: Perry from Magnuson Way to Riddell Road and Riddell from Pine Road to Perry Avenue.

In the South County subarea, seven of the 10 recommended improvements including widening and improvements to existing facilities. They are as follows:

Project S-1: Bethel Road will be widened to five lanes to relieve traffic congestion from Mile Hill Road to Lund Avenue.

Project S-3: Signal improvements and expansion of Jackson Avenue to three lanes from Sedgwick Road to Mile Hill Drive are recommended for overall traffic flow improvement along this roadway.

Projects S-6 and S-7: The roadways of Mile Hill Drive from Long Lake Road to California Road

and Bay Street/Beach Drive from Ahlstrum to Retsil will be widened to three lanes to alleviate congestion on these roadways.

Projects S-8 and S-9: Lund Avenue will be widened to 5 lanes between Bethel Road and Hoover Street and to 4 lanes between Hoover and Jackson Avenue to ease traffic congestion.

Project S-10: Glenwood Road will be widened to 3 lanes to relieve congestion between Lake Flora Drive and SR 16.

D. Public Transportation

The primary change in Kitsap Transit's service strategy will be to redirect its focus between the basic original system, including ridesharing services, and the new high capacity corridor service plan. These new transit corridors will have tremendous facility requirements in the form of ferry terminals, remote bus transfer facilities, and HOV facilities. The cost on the capital side will be far in excess of anything experienced by Kitsap Transit in its past. A more detailed design of a 2020 system and feeding back the basic parameters into the current-term capital plan has begun with the opportunity presented by the Sinclair Landing and Bremerton Transportation Plaza proposed for the Bremerton waterfront. While it will boost near and mid-term capital budgets substantially, it should pay enormous dividends in quality of service and operating cost savings to the community over the long term.

The following paragraphs outline Kitsap Transit's long range service structure, facility requirements, and ancillary services.

1. Service Objectives

Sample service objectives in the transit element would include the following:

- ! Upgrading the trunk express service between Winslow, Poulsbo, Bremerton, Silverdale and Port Orchard to every half hour and the trunk service (County Line) connections with Pierce, Mason and Jefferson Transit to every one hour.
- X ! Creation of sub-trunk service, at 1-2 hour headways, integrated with paratransit feed service within smaller zones into communities such as Hansville, Seabeck, Indianola, Manchester/Southworth, Ollala and the Belfair Highway area.
- ! Initiation of higher capacity rush-hour routed service, at the level of 75-100 seat buses to rush-hour ferries between the Bainbridge Island ferry terminal and major park-and-ride lots in Poulsbo and beyond pursuant to the conclusion of the SR-305 Corridor Study.
- ! Initiation of local circulation service in Indianola partly on a routed basis, connecting with Kingston and the north-south trunk at Poulsbo, and partly on a call-in basis to feed the new passenger ferry service direct to Seattle
- ! Initiation of private passenger only ferry service between Lynnwood Center, on Bainbridge Island, Bremerton and the Port Orchard area on the South Kitsap mainland.

TRANSPORTATION

- ! Development of express service between Poulsbo and Bainbridge Island over a completely separated HOV lane, through the mixture of vanpools, small buses, and high capacity buses such that the HOV treatments and lane carries 100 percent more passengers than the "normal" auto traffic lane in half the number of vehicles.
- ! Service volumes in 25-30 bus range (50-50 large and small) at peak-hour ferries at the Bainbridge Island and Bremerton terminals, with 50-70 percent mode shares.
- ! Five to six small-bus neighborhood shuttles and an equal number of high capacity buses at each rush hour ferry at the Kingston and Southworth terminals, with these two the last to develop of the four major Kitsap ferry terminals, with per-ferry mode splits in the 30-40 percent range for auto ferries and 60-70 percent for passenger-only ferries.

2. Routed Service

It is anticipated that, outside the high capacity corridors, there would be little or no change in routed service patterns between the short term and the long term. It is anticipated however, that the basic routed frequency would be one half hour by 2005 with 15-minute service in the urban cores by 2012. Kitsap Transit's base express services and the mid-day sub-trunks would continued to be refined, and in the case of the sub-trunks, expanded.

3. Paratransit Services

The same comments that hold true for routed service apply to paratransit service. It is anticipated that the transit dependent population would be well-served by the basic system established and that the task in this area during the long term would be keeping up with the increasing demand among the elderly. Further, there may be supplementary paratransit opportunities in circulation services in the vicinity of new passenger-only ferry terminal sites, where the addition of passenger ferry service will create a bi-directional demand that would also flow back to the primary north-south trunk service within the County.

4. Rideshare Services

In the long-term plan, rideshare and alternate connection services such as shuttles at terminals such as Kingston and Southworth, where the major destinations on the other side of Puget Sound are not in the immediate vicinity of the terminal, will continue to experience considerable growth. As well, there will be a considerable increase in mini-rideshare opportunities, such as carpooling and small vanpools at the small park-and-ride lots in the HOV corridors. Finally, there should be rideshare growth in the form of carpools and vanpools, and, in some cases, even subscription buses to the new, smaller, passenger-only terminals as they are established along Kitsap County shorelines.

5. Service Standards

No degradation in level of service standards are anticipated in terms of service quality due to much of the focus on separate high capacity facilities where general congestion should have little or no impact on the levels or quality of service. It should be made clear, however, that the development of these high capacity separated services is crucial to Kitsap Transit's maintaining its utility to this community. Congestion will otherwise increase dramatically and in the areas where transit is not separated or "advantaged", the service quality will fall below an acceptable level. Regrettably,

people will switch back to the car under those circumstances. In addition to the full-fledged HOV lanes mentioned earlier, continued emphasis on signal control and other transit advantages at intersections (particularly queue-cuts) and left-(bus-only) turn opportunities will also be key to maintaining the quality of the non-high capacity services.

The only area where changes are proposed to the standards would be in terms of volume, especially on the high capacity portion, where, at rush hour 10-15 bus "caravans" or an alternative technology, would be envisioned simply to carry the volume of passengers provided by the 2,500 passenger capacity of the new auto ferries or the 350 to 650 passenger volumes of current and new passenger-only ferries.

6. Capital Needs for Transit

The long-term capital plan is dominated by major fixed facilities in the primary commuter corridors. Transit/ferry terminals will require enhancements to accommodate a separate second level above the car holding and car ramp areas for as many as 20 to 40 mixed (small, medium and high-capacity) buses at a time. Even more essential will be HOV treatments and lanes extending out to the end of the heavily congested corridors, large county line park-and-ride lots, and dozens of small co-op lots throughout the county, all designed to facilitate ease of entry and exit of the transit equipment onto the HOV lane system. The plan will also have to include incremental increases in the high-capacity fleet with provision for a major shift in bus technology keyed to HOV lane usage. Everything from double-decks to fixed guideway or light-weight tram-type multi-car equipment should be investigated prior to the final-stage of development of the HOV system to see if switching to a different rolling stock technology would optimize the service capabilities or reduce the expense of the combined fleet and roadway program. Preference should be shown here for lighter weight technologies wherever possible to reduce transit's portion of the wear both on the standard street and arterial network as well as the specially developed HOV elements of the system.

During this term the base fleets that have been assembled in the medium term (2001-2012) will have to be replaced once again, and the support facilities (from the earlier park-and-ride lots to the north-south operating bases) will undoubtedly have to be scaled up significantly to respond to the new levels of operation and service.

7. Financing and Fares

Since the long-term success of this plan on the scale envisioned here is entirely dependent on complete integration between land use, transit and street and road planning, it should come as no surprise that the financing of it would also have to follow a similar pattern. Existing transit financing could not in any way be stretched to encompass the enormous capital investment in terminal and transit facilities and equipment that are envisioned for the high capacity corridors. On the other hand if the community has made the commitment to an investment in transit up to this point (and received the benefits sufficient to warrant consensus on proceeding) then it is presumed that the combined funding would be feasible. Certainly, all recent plans for major additional funds for street and road improvements have clearly included a priority on transit facilities that maximize the people-carrying ability of these facilities. If that trend continues, major elements of the planned HOV network itself could probably be funded as a part of normal highway arterial and street construction. Certainly formulation of directions for long-range financing is an element here that should be fed back into the short range plan so that early success can be built on in the long term.

TRANSPORTATION

As transit becomes a primary player in the commuting market under the long-range plan rather than a supplementary one as at present, higher fares (again, following the market-based concept) would appear to be feasible. Much of the growth of transit service is likely to occur in peak-hour service and as such, it would seem reasonable to predict, based on these proportionate changes in ridership mix, that the fare box recovery ratio would rise to a service, from a convenience and comfort point-of-view, will remain very competitive. While it is odd to talk about commute trips as fast as or faster than a minimum of 30-40% during this term. This presumes, however, that transit private car, especially in the financing portion of a long-term transit plan, it is crucial that this qualitative element remain at this high level if the entire plan, including fare projections, is to come to pass.

8. Park-and-Ride

Kitsap Transit's Long-Range Plan calls for a number of major park-and-ride facilities located throughout Kitsap County. Kitsap Transit formulated this plan assuming that in the future, a greater balance between transit and the private automobile will occur. One of the ways this balance will be achieved is through an increase of combined commute trips where riders use their cars to travel to a park-and-ride lot. Currently, Kitsap Transit has approximately 1,300 available park-and-ride spaces throughout the County.

Kitsap Transit's park-and-ride system plan combines small neighborhood lots with collector lots in providing spaces. The smaller neighborhood park-and-ride lots (20 to 50 spaces) are distributed throughout the County; specific locations are not know at this time.

The major collector lots would contain between 300-400 parking stalls for vehicles. These lots are anticipated to be located at Kounty Korner outside of Kingston, in West Bremerton and East Bremerton (McWilliams), and outside of Southworth at the Harper Evangelical Church and at locations outside of Poulsbo. A collector lot is also anticipated for the Silverdale and Gorst areas in the distant future which will be designed more to capitalize the beginnings of HOV corridors rather than serve as an alternate or remote terminal.

For the remote terminal location at the church outside of Southworth, a co-op development or shared use appears appropriate. However, Kitsap Transit does not have plans at this time to actively seek any level of commercial development as a shared use or joint development feature for these sites, with the possible exception of child care services, which have been indicated as a high priority by a number of Kitsap Transit's current and potential riders.

Although the combination of highly distributed neighborhood co-op small lots combined with collector lots will shift to partly off-peak trip accommodation over time, it does not include the projected increases of commuters arriving from adjacent counties (Pierce, Mason, Jefferson, and Clallam Counties). Kitsap Transit is hoping that the adjacent Kitsap Peninsula transit systems and the PRTPO will plan and provide for the development of a distributed park-and-ride lot system.

E. Greenways (Nonmotorized Element)

As stated earlier, the Kitsap County Greenways Plan was created to address the needs of nonmotorized users in regards to transportation and recreational uses and scenic and natural resources. From the 20-Year Priority Array in the Bicycle Facilities Plan, there are 26 high priority projects along 81.2 miles of county road. There are also 15 medium priority projects for a length of 54.4 miles along county roads. Thirteen low priority projects were also identified in the 20-year plan for a total length of 44.2 miles. There are 43 additional projects that have not been prioritized for a length of 100.2 miles along county roads.

A more detailed description of these nonmotorized improvements is found in the Kitsap County Greenways Plan.

F. Commute Trip Reduction Plan

The Commute Trip Reduction (CTR) Act was passed in 1992 and requires counties with a population over 150,000 and cities within those counties with major employers develop a CTR plan that would reduce the number of single vehicle occupants (SOVs) and encourage alternative transportation modes during peak hours. Employers affected by the Act include those with 100 or more employees traveling to work between 6:00 and 9:00 a.m.

Kitsap Transit monitors the CTR program in Kitsap County and is aggressively committed to assisting the efforts of major employers' to meet their goals. Several successful services offered to the community have been established through the CTR program. "Smart Commuters" (registered vanpool or carpool riders, transit riders, walkers, and bicyclists) are offered special discounts off of merchandise and services from over 100 local merchants, and the Guaranteed Ride Home Program which promises a free ride home in case of an emergency. The Carpool Registration Program insures preferential parking spaces at work.

G. Ferry System Plan

The Washington State Ferries System is currently in the process of developing a long range systems plan. Once this plan is developed, recommendations to terminal and land-side access needs, auto and passenger-only ferry services will be incorporated into and coordinated with the Kitsap County Transportation Element. Throughout the development of the WSF Long Range Systems Plan, Kitsap County staff will be involved in the review and provide input into the planning process.

H. State Facilities

In identifying transportation needs, the Transportation Element of the Kitsap County Comprehensive Plan has addressed future needs on both State highways and the WSF routes and services. While definite, detailed strategies to address the transportation deficiencies have not yet been developed, WSDOT is committed to addressing these deficient sections of state highway within the 20-year period of the plan.

As a starting point for improvements to state facilities in Kitsap County to meet the long-range mobility needs of its residents, two sources were reviewed for information; the 1995 Metropolitan Transportation Plan (MTP) prepared by the Puget Sound Regional Council (PSRC), and the WSDOT's State Highways

TRANSPORTATION

System Plan, their 20 year plan for state highway facilities. WSDOT's Plan identifies 22 projects which will be implemented over the next 20 years if the underlying revenue assumptions associated with the Plan prove to be accurate. These projects are identified in **Table TR-29**.

Additional mobility needs were included in PSRC's Metropolitan Transportation Plan through year 2020 which increased the state's total needs to \$238 million. Since this time frame is beyond the target year for the Comprehensive Plan, these needs were not included in the Transportation Element.

Table TR-30 summarizes the transportation deficiencies that were identified by the long-range transportation assessment completed by Kitsap County based upon the recommended level of service standards. To adequately address the long-range transportation needs of Kitsap County, appropriate improvements were assumed in the travel demand modeling process from previous findings and recommendations of the Kitsap County Transportation Plan Citizen Advisory Members, the Kitsap County Transportation Plan published in 1996, the 1995 MTP, likely projects from WSDOT 20-Year Systems Plan that would be completed by 2012, and the recent long-range travel demand forecasting efforts with the recently approved land use element from the Planning Commission Recommended Draft Plan dated April 1998.

A total of 47 specific transportation *needs* were identified during the development of the Kitsap County Transportation Element to WSDOT facilities in Kitsap County. These needs have been identified to address deficient facilities, based upon Kitsap County's recommended transportation level of service standards, citizen input, and through coordination with local and regional agencies.

1. New Linkages

Through the long-range transportation planning completed during this comprehensive planning process, a number of the capacity *needs* on State facilities were identified that are likely to require the construction of new roadway linkages. These include the Port Gamble Bypass corridor along SR 104, the Bremerton-Tracyton Connector along the SR 303 corridor in Bremerton, and the Sinclair Inlet Bypass to the SR3/SR 16 freeway system at Gorst. The need for these new linkages have been identified previously in transportation planning efforts by Kitsap County to include the Citizen Advisory Committee and long-range travel modeling (i.e., capacity and congestion measures).

Table TR-29: State Highway System Plan (1998):

Project	Project Limits	Description of Improvement	Total Funds (1997 \$)
SR 3	<u>Mason/Kitsap County Line to SR 16 spur at Gorst</u>	<u>Widen from 2/3 lanes to 4 lanes, enhanced transit, access management</u>	<u>\$12.77M</u>
SR 3	<u>Gorst USG RR Bridge 3/105 Vicinity to SR 3/SR 304 Interchange</u>	<u>Widen from 4 lanes to 6 lanes creating HOV lanes</u>	<u>\$34.80M</u>
SR 3	<u>SR 3/SR 304 Interchange</u>	<u>Widen from 4 lanes to 6 lanes creating HOV lanes, ITS, interchange improvements, enhanced transit</u>	<u>\$20.30M</u>
SR 3	<u>SR 3/SR 303 Interchange Vicinity (Waaga Way)</u>	<u>Interchange improvements at Waaga Way</u>	<u>\$5.08M</u>
SR 3	<u>Finn Hill Rd U-xing Vicinity to NW Thompson Rd</u>	<u>SR 3/305 access improvements</u>	<u>\$0.58M</u>
SR 3	<u>SR 16 spur to RR bridge</u>	<u>Further study - widen to 4-6 lanes</u>	<u>\$5.95M</u>
SR 3	<u>Thompson Road to Lowfall Road</u>	<u>Widen to 4 lanes</u>	<u>\$11.68M</u>
SR 16	<u>SR 160 (Sedgwick Rd) Vicinity to SR 166</u>	<u>Widen from 4 lanes to 6 lanes creating HOV lanes, I/C improvements, TDM, ITS, enhanced transit.</u>	<u>\$39.12M</u>
SR 16	<u>SR 166 to SR 3</u>	<u>Widen from 6 lanes to 8 lanes creating HOV lanes and access management</u>	<u>\$20.60M</u>
SR 104	<u>SR 307 to Lindvog Rd</u>	<u>Widen from 2 lanes to 4/5 lanes, access management.</u>	<u>\$15.56M</u>
SR 104	<u>Lindvog Rd to Kingston Ferry and Couplet</u>	<u>Construct additional lanes and signals per SR 104</u>	<u>\$5.88M</u>
SR 104	<u>SR 101 to Kingston Ferry and Couplet</u>	<u>Further study pending MIS/EIS</u>	<u>\$0.11M</u>
SR 104	<u>Lindvog Rd to Kingston Ferry and Couplet</u>	<u>Further study pending regional and local discussion.</u>	<u>\$0.50M</u>
SR 160	<u>SR 160/SR 16 Interchange to Bethel Rd Vicinity</u>	<u>Widen from 2 lanes to 4 lanes, widen bridge 160/5 at interchange to 5/6 lanes.</u>	<u>\$11.56M</u>
SR 166	<u>Blackjack Creek to Bethell Burley Road</u>	<u>Further study - widen to 4-5 lanes</u>	<u>\$4.37M</u>
SR 303	<u>SR 304 to SR 3</u>	<u>Further study, MIS</u>	<u>\$0.40M</u>
SR 304	<u>SR 3 to Bremerton Ferry landing</u>	<u>Implement preferred alternative roadway improvements</u>	<u>\$8.40M</u>
SR 305	<u>Winslow Ferry Dock to end of Agate Pass Bridge</u>	<u>TSM/TDM treatments, intersection improvements</u>	<u>\$0.75M</u>
SR 305	<u>Winslow Ferry Dock to end of Agate Pass Bridge</u>	<u>Construct Core Area Bypass route</u>	<u>\$1.80M</u>
SR 305	<u>Poulsbo South corporate Limit Vicinity to Bond Road</u>	<u>Widen from 2/3 lanes to 4/5 lanes creating HOV lanes.</u>	<u>\$8.04M</u>
SR 307	<u>SR 305 to SR 104</u>	<u>Widen from 2 lanes to 4 lanes, access control</u>	<u>\$9.29M</u>
SR 310	<u>SR 3 to SR 304</u>	<u>Access management, TSM/TDM measures</u>	<u>\$2.06M</u>
TOTALS			\$219.6

TRANSPORTATION

In addition to these “linkage needs”, a regional discussion should be initiated to identify the most appropriate implementation of general arterial access and other transportation infrastructure needs between Central Kitsap County and the Seattle Urban Center. These could include the development of a regional ferry terminal and associated land-side access and roadway needs.

Table TR-30: 2012 Transportation Needs on State Facilities in Kitsap County

Facility	From	To	Project Type	Project Code	
SR 104	s/o Port Gamble	SR 104/SR 3 Wye	C/L	DOT-N	1
SR 104	Jefferson Co. Line	SR 3	C; NM	DOT-N	2
SR 3	SR 305 (53.00)	Scenic Dr. NE (58.00)	O/S	DOT-N	3
SR 3	SR 305 (53.01)	SR 104 (60.02)	C	DOT-N	4
SR 3	Bridge Way (59.84)	SR 104 (60.02)	NM	DOT-N	5
SR 104	SR 3 (15.54)	Hansville Rd. (22.00)	C	DOT-N	6
SR 104	Hansville Rd. (22.00)	Kingston FT (24.45)	C	DOT-N	7
SR 307(Bond Rd.)	SR 305	SR 104	C	DOT-N	8
SR 305	@ SR 307 (Bond Rd.)		O/S	DOT-N	9
SR 104	Kingston	Edmonds	C	DOT-N	10
SR 305	Bainbridge Island	Seattle	C	DOT-N	11
SR 305	Bainbridge Island	SR 3	C	DOT-N	12
SR 104	@ Georges Corner		C	DOT-N	13
SR 3	Luoto Rd. (SR 308)	SR 305	C	DOT-N	14
SR 3	At Kitsap Mall Blvd.		C; O/S	DOT-C	1
SR 303	Warren Bridge		C	DOT-C	2
SR 3	Newberry Hill Rd.	SR 308	S	DOT-C	3
SR 304	@ Manette Bridge		O/S; NM	DOT-C	4
SR 3	Newberry Hill Rd.	SR 304 (MP)	C	DOT-C	5
SR 3	Chico Way (40.40)	SR 304 (MP)	O/S	DOT-C	6
SR 303	6th St. (0.26)	Waaga Way (5.43)	O/S	DOT-C	7
SR 303	Riddell Rd. (3.00)	McWilliams Rd. (5.00)	O/S	DOT-C	8
SR 303	6.50	7.50	O/S	DOT-C	9
SR 303	8.50	8.73	C	DOT-C	10
SR 304	SR 3 (0.00)	Bremerton FT (3.51)	C; O/S	DOT-C	11
SR310(KitsapWy)	SR 3	SR 304	O/S	DOT-C	12
SR 3	SR 303		C/I	DOT-C	13
SR 16	@ Burley Ollala Rd.		C	DOT-S	1
SR 16	At Anderson Hill Rd.		O/S	DOT-S	2
SR 3	Division Rd. (33.72)	SR 16	C	DOT-S	3
SR 3	SR 304 IC (36.71)Chico	Chico Way (40.43)	C	DOT-S	4
SR 16	Tremont St	SR 3/SR 304 IC	C	DOT-S	5
SR 3	Mason Co. Line	Lk Flora Rd	O/S	DOT-S	6
SR 3	Lk. Flora Rd. (28.23)	Division Rd. (33.72)	C	DOT-S	7
SR 3	Imperial Way (31.00)	SR 16 IC (34.50)	O/S	DOT-S	8

TRANSPORTATION

SR 3	Riverside St. (34.17)	Sam Christopherson (34.31)	NM	DOT-S	9
SR 16	Pierce Co. LineSR 302 Spur	Bethel Rd. (23.80)	C	DOT-S	10
SR 16	Bethel Rd. (23.80)	Bay St. (28.16)Tremont	C	DOT-S	11
SR 16	Bay St. (28.16)	SR 3 IC (29.19)	C	DOT-S	12
SR 16	@ Sedgwick Rd.		O/S	DOT-S	13
SR 16	Sedgwick Rd. (26.00)	SR 3 IC (29.00)	O/S	DOT-S	14
SR 16	Tremont St. (26.72)	SR 3 IC (29.03)	NM	DOT-S	15
SR 166	SR 16 (0.00)	Mile Hill Road (4.95)	O/S, C	DOT-S	16
SR 160	SR 16 (0.00)	Jackson Ave. (4.50)	O/S, C	DOT-S	17
SR 16	SR 160	SR 3	C	DOT-S	18
SR 16	@ Mullenix Rd.		C	DOT-S	19
SR160(Sedgwick)	SR 16	Jackson Ave.	C	DOT-S	20

Project Types: C = Capacity,
L = Linkage,
O/S = Operations/Safety,
NM = Nonmotorized, S = Study, I = New Interchange

V. FINANCING AND IMPLEMENTATION OF THE TRANSPORTATION ELEMENT

A. Introduction

Kitsap County's ability to pay for the potential solutions recommended in the transportation Plan is a driving force in its implementation. Without adequate funding, the capital projects, programs, and policies that make up this plan will remain ideas, and will not become a reality. As discussed in the Capital Facilities Plan of the Comprehensive Plan, a funded and concurrent transportation system is required by GMA for the first six years of the planning period. Beyond this time frame, a "funded" list of potential transportation improvements is not required. However, costs of proposed transportation solutions, in addition to financing and implementation strategies, are keys to the success of the 2012 Comprehensive Plan and are summarized in this section.

1. Focus on the County's Responsibility

Kitsap County is responsible only for a portion of the overall system of transportation facilities and services in the county. The U.S. government, the State of Washington, the Cities of Bainbridge Island, Bremerton, Port Orchard, and Poulsbo all own, operate and maintain significant portions of the transportation system that serve travel into, out of, within and through the county.

The wide range of improvements and programs listed in this element to increase mobility throughout Kitsap County affect many facilities and services administered by other jurisdictions. The costs of the recommendations may be split between several jurisdictions, but the analysis of what could potentially be paid for is limited to Kitsap County's portion. Each of the other jurisdictions are invited to adopt the recommendations of this plan as their own, and are encouraged to find ways to implement them in support of Kitsap County and their GMA plans.

B. Financial Analysis and Forecasts

Transportation funding constitutes a major expenditure for Kitsap County. Transportation costs have grown from \$12.5 million in 1985 to almost \$18.6 million in 1992, an increase of about 49 percent. During this same period, Kitsap County's population grew about 23 percent.

1. Revenue Sources - Historical Trends

Kitsap County collects transportation revenue from a variety of sources. The most prominent sources are the unincorporated area road levy (property tax) and the state gas tax allocation to the County. **Figure TR-27** shows where and how much transportation-related revenues came from in 1992. In that year, the road levy made up about 41 percent of all transportation revenues received by the County. Kitsap County assessed \$1.65 per thousand dollar value on real property in unincorporated Kitsap County in that year, generating almost \$8 million in revenues. Between 1983 and 1992, the county road levy rate averaged \$1.36 per thousand dollars value.

Kitsap County's allocation from the state motor vehicle fuel tax ("gas tax") made up another 22 percent of transportation revenues in 1992. This translated into almost \$4 million in revenue for the County. Federal and state transportation grants made up about four percent of the County's transportation revenues that same year, totaling over one million dollars. Together, special assessments on road improvement districts (RIDs), investment interest, and over 20 other small county revenue sources generated the remaining 33 percent of transportation related revenues in 1992.

2. Transportation Expenditures (Operations, Maintenance, Construction)

Figure TR-28 shows how the County spent its transportation funds in 1992. Operating and maintaining the County's transportation facilities required almost a third of the annual transportation budget. Capital construction and administration each represent between a fifth and a quarter of the budget. Remaining costs were distributed between debt service (interest on loans, for example) and street expenditures such as facilities maintenance and contract work. In recent years, the expenditures for maintenance and operations have grown at a faster rate than spending on capital construction; maintenance and operations costs rose an average of 6.4 percent per year between 1985 and 1992, while during the same period, construction spending only grew at an average rate of 2.8 percent.

C. Project Implementation

The recommended transportation element includes 39 improvement projects to be implemented over 20 years, at a total estimated cost of \$118 million in 1997 dollars. These projects were distributed throughout the county as follows:

- # North County Sub-Area: 10 projects at a total estimated cost of \$37.1 million;
- # Central County Sub-Area: 19 projects at a total estimated cost of \$50.7 million;
- # South County Sub-Area: 10 projects at a total estimated cost of \$30.1 million.

Table TR-31 lists each project with its estimated costs allocated by urban and rural areas of the county. Project costs were estimated using cost factors approved by the Kitsap county Department of Public Works. Detailed breakdowns of project costs are available from the Public Works Department. Approximately 60 percent, 97 percent, and 56 percent of total transportation funds allocated by the plan are expected to be expended in urban areas in North, Central, And South county subareas, respectively. Countywide, 75 percent of all transportation dollars would be invested into urban areas and 25 percent into rural areas of Kitsap County.

Figure TR-27: 1992 Kitsap County Transportation Revenues

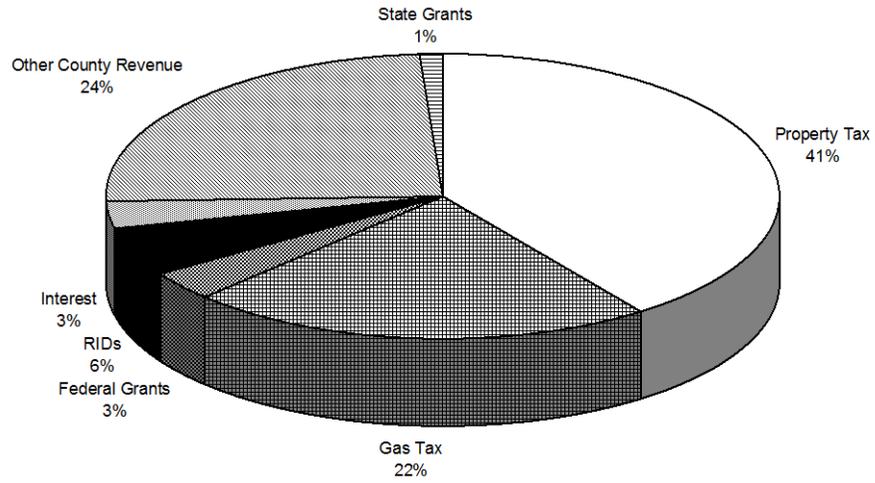
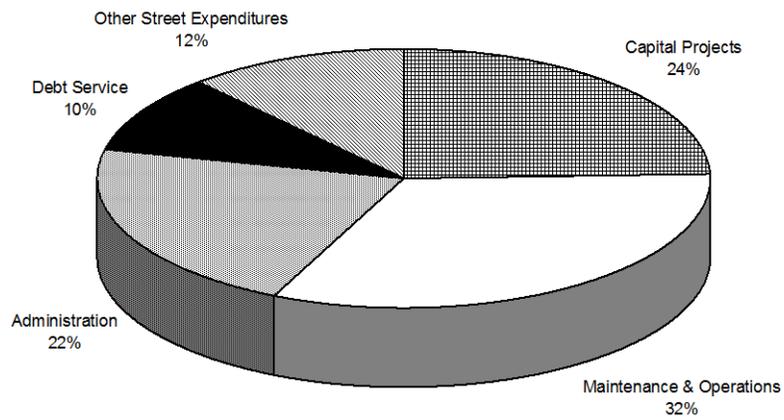


Figure TR-28: 1992 Kitsap County Transportation Expenditures



TRANSPORTATION

Table TR-31: Kitsap county 20-Year Project Costs, Urban vs Rural

Facility	From	To	Code	Estimated	Percent by Area		Cost by Area	
					Urban	Rural	Urban	Rural
Viking Way	SR-308	SR 305	N 1	\$9,571,731	70%	30%	\$6,700.21	\$2,871.51
Lindvog Rd.	SR-104	W. Kingston Rd.	N 2	\$1,823,700	100%	0%	\$1,823.70	\$0
W. First St.	SR-104	W. Kingston Rd.	N 3	\$563,713	100%	0%	\$563,713	\$0
South Kingston-Miller Bay Collector	S. Kingston Rd.	Miller Bay Rd.	N 4	\$3,920,293	0%	100%	\$0	\$3,920,293
Suquamish Bypass	Totten Rd.	Columbia St.	N 5	\$2,510,646	50%	50%	\$1,255.32	\$1,255.32
Hansville Bypass	Hansville Rd.	Hood Canal Dr.	N 6	\$7,780,000	0%	100%	\$0	\$7,780,000
Stottlemeyer Rd	Lincoln Rd	Gunderson Rd	N 7	\$1,807,508	0%	100%	\$0	\$1,807,508
Hansville Rd	SR-104	Eglon Rd	N 8	\$3,775,140	0%	100%	\$0	\$3,775,140
Silverdale Way	Schold Rd	Mt View	N 9	\$2,879,485	100%	0%	\$2,879.48	\$0
McWilliams Road	Old Military Rd	Sunset Ave	N 10	\$2,431,770	100%	0%	\$2,431.77	\$0
North County Subtotal				\$37,063,986				
Waaga Way Ext.	Clear Cr. Rd.	Old Frontier Rd.	C 1	\$1,151,086	100%	0%	\$1,151.08	\$0
Perry Ave.	Riddell Rd.	McWilliams Rd.	C 2	\$2,171,860	100%	0%	\$2,171.86	\$0
Slyvan Way	SR 303	Trenton Avenue	C 3	\$2,171,860	100%	0%	\$2,171.86	\$0
Fairgrounds Rd.	Tracyton Blvd.	SR-303	C 4	\$5,879,906	100%	0%	\$5,879.90	\$0
Silverdale Way	Byron St.	Newberry Hill Rd.	C 5	\$1,259,679	100%	0%	\$1,259.67	\$0
Newberry Hill Rd.	Silverdale Way	SR-3	C 6	\$586,402	100%	0%	\$586,402	\$0
Newberry Hill Rd.	Provost Rd.	Dickey Rd.	C 7	\$4,643,900	100%	0%	\$4,643.90	\$0
Sam Christopherson Rd.	Old Belfair Valley Rd.	Werner Rd.	C 8	\$6,856,109	100%	0%	\$6,856.10	\$0
Willamette-Meridian Rd.	terminus	Newberry Hill Rd.	C 9	\$2,135,159	100%	0%	\$2,135.15	\$0
Almira Dr.	Riddell Rd.	McWilliams Rd.	C 10	\$2,171,860	100%	0%	\$2,171.86	\$0
Werner Rd.	Sam Christopherson	SR-3	C 11	\$1,628,895	100%	0%	\$1,628.89	\$0
Tracyton Blvd.	Bucklin Hill Rd.	Fairgrounds Rd.	C 12	\$737,315	100%	0%	\$737,315	\$0
North Lake Way	Seabeck Hwy.	Kitsap Way	C 13	\$2,323,890	50%	50%	\$1,161.94	\$1,161.94
Ridgetop Boulevard	Silverdale Way	Waaga Way	C 14	\$2,475,920	100%	0%	\$2,475.92	\$0
Bucklin Hill Rd.	Frontier Rd.	Silverdale Way	C 15	\$1,342,068	100%	0%	\$1,342.06	\$0
Newberry Hill Rd	SR-3	Seabeck Hwy	C 16	\$4,908,869	30%	70%	\$1,472.66	\$3,436.20
Anderson Hill Rd	SR-3	Willamette	C 17	\$3,183,291	40%	60%	\$1,273.31	\$1,909.97
Perry Avenue	Magnuson Way	Riddell Road	C 18	\$2,783,546	100%	0%	\$2,783.54	\$0
Riddell Road	Pine Road	Perry Avenue	C 19	\$2,239,893	100%	0%	\$2,239.89	\$0
Central County Subtotal				\$50,651,508				
Bethel Road	Mile Hill Rd.	Lund Ave.	S 1	\$2,870,940	100%	0%	\$2,870.94	\$0
Caufield Lane	terminus	Bethel-Burley Rd.	S 2	\$825,307	0%	100%	\$0	\$825,307
Jackson Ave.	Sedgwick Rd.	Mile Hill Dr.	S 3	\$3,769,221	100%	0%	\$3,769.22	\$0
Burley-Belfair Connector	SR-16 @ B.O. IC	SR-3 @ Lk Flora	S 4	\$7,300,122	20%	80%	\$1,460.02	\$5,840.09
Phillips Rd.	Mullenix Rd.	Burley-Ollala Rd.	S 5	\$2,769,122	0%	0%	\$0	\$0
Mile Hill Drive	Long Lake Rd.	California Rd.	S 6	\$1,854,817	90%	10%	\$1,669.33	\$185,482
Bay Street/Beach Drive	Retsil	Alhllstrum	S 7	\$2,460,160	100%	0%	\$2,460.16	\$0
Lund Ave	Bethel Rd	Hoover St	S 8	\$345,000	100%	0%	\$345,000	\$0
Lund Ave	Hoover St	Jackson Ave	S 9	\$3,820,614	100%	0%	\$3,820.61	\$0
Glenwood Rd	Lake Flora Dr	SR-16	S 10	\$4,092,440	0%	100%	\$0	\$4,092,440
South County Subtotal				\$30,107,743				
Grand Total				\$117,823,237				

D. Transportation Revenue Forecasts

While there can be no definitive answer as to whether enough money will be available to fund the plan, it is possible to estimate revenue trends over the next 20 years, and compare the estimated transportation improvement costs to possible revenues.

1. Forecasting Approach

A great deal of uncertainty exists in forecasting revenues. Interest rates may change, a building boom or economic stagnation may effect road levy receipts, or the political climate may influence the availability of state and federal transportation funds. Without knowing what will happen to specific revenue sources in the future, more generic methods can help determine how much money the County will have available. The revenue and expenditure comparisons described here are based on a revenue forecasting methodology which assumes that any money left over after non-capital expenditures (i.e. administration, maintenance and operations, etc.) will be available for Kitsap County to spend on capital projects.

Since the rate of “real” growth (before inflation is factored) is speculative, this analysis views capital project revenue availability from a “what if” standpoint. For example, assuming that real growth in transportation revenues will average X percent between 1994 and 2012, and that the proportion of non-capital expenditures to revenue will remain constant, it is possible to estimate how much money would be left over in each year to pay for capital projects given the revenue growth assumptions.

The analysis was based on a “what-if” annual uninflated revenue growth of 4 percent per year. In contrast, average revenue growth from 1985 to 1992 was over 11 percent. However, this latter growth rate includes both “real” growth and the effects of inflation. Actual revenue growth is not apparent since annual reporting figures include the effects of inflation. For each scenario, it is assumed that the average proportion of non-capital expenditures to revenues between 1985 and 1992 (92 percent) will continue to hold true through the planning period.

The revenue and non-capital expenditure amounts that form the basis of the forecasts are the *average* amounts for each from 1985 to 1992. Using these average amounts helps to avoid overstating or understating revenues and non-capital expenditures based on a single year, as well as reducing the effects of inflation. Averaging historic revenue and non-capital expenditure trends over this period produces a more reliable “base” for generating forecasts.

2. 20-Year Annual Forecasts

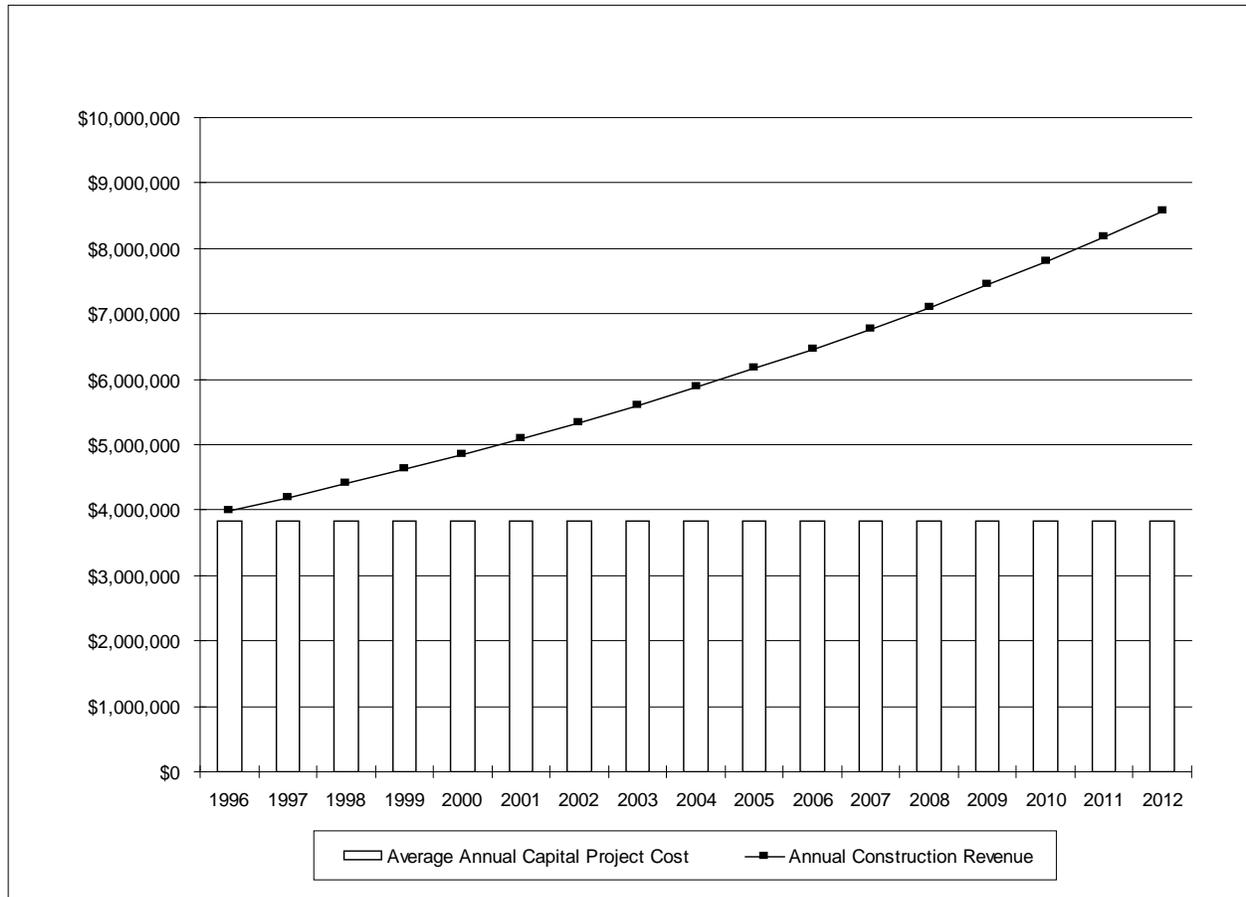
Figure TR-29 shows the amount of revenue available in each year between 1994 and 2014 for capital projects based on 4% annual growth. It also shows how revenue estimates relate to the estimated average Kitsap County capital costs for capacity projects in each year.

3. Financial Feasibility

Based on the results of the analysis, Kitsap County will have enough revenue on average to pay for its share of the capital projects. Average annual capital costs for capacity projects are estimated to be about \$5.1 million. If revenues available for capital construction activities grow at four percent

TRANSPORTATION

Figure TR-29: 1996-2014 Estimated Construction Revenue Versus Capital Project Costs



per year, approximately \$6.0 million is available for funding on average.

The funding situation is complicated, however, by the annual availability of funds. Though it appears that Kitsap County will have enough revenues available on average to pay for the recommended capital projects, actual availability in any one year differs.

Based on four percent annual growth, Kitsap County would be able to pay for all of its average annual commitment only after 1998. The shortfall in fund availability until that year can be addressed largely through "backloading" the project schedule—delaying the most expensive projects until near the end of the 20-year period, when more revenue is available to pay for them in specific years.

E. Implementation Guidelines

As mentioned above, it appears as though Kitsap County will have enough funds to pay for its projects, and any short fall in funds can be addressed by delaying large construction projects until the end of the 20-year period. However, if the revenue forecasts are overly optimistic, Kitsap County can access a number of transportation revenue sources to obtain additional revenue. These include existing sources that could be tapped for more money and new sources that the County does not currently use. Much of the following discussion of existing and potential revenue sources, and estimated potential receipts, is drawn from Cambridge Systematics, Inc.'s 1993 report to the Washington State Legislative Transportation Committee entitled "Task C: Transportation Capacity Demand and Evaluation of Demand Management and Revenue Tools."

1. Local Sources

Existing local transportation revenue sources that could provide more money for Kitsap County are limited to the road levy. Currently unused, but authorized, sources include the commercial parking tax, local option motor vehicle fuel tax, local option vehicle license fee, impact mitigation fees, and transportation benefit districts.

a. County Road Levy

Kitsap County currently levies property tax (road levy) on real and personal property in the unincorporated area. This levy is dedicated to the road fund. In 1992, this tax was levied at the rate of \$1.65 per one thousand dollars of assessed value. The Revised Code of Washington statutorily sets the maximum allowable road levy rate for counties at \$2.25 per thousand dollars assessed value. Kitsap County could generate additional road fund revenues by raising the road levy rate. If the road levy had been assessed at the maximum rate in 1992, Kitsap County could have increased its revenues from this source by 36 percent, from an estimated \$13 million to over \$18 million.

b. Commercial Parking Tax

Counties are authorized by state law to levy a tax on commercial parking businesses in unincorporated areas based on gross proceeds, on the number of stalls, or on the rate charged for parking. There are no rate restrictions, though certain rate setting parameters are required. The proceeds of the tax can only be used on any transportation projects approved as part of both regional and county transportation plans. This tax may be approved by the County Commission, but can be repealed or modified by voter referendum. To date, no counties have imposed this tax. No estimate of potential receipts from this

TRANSPORTATION

tax is available since the rate is variable.

c. Local Option Motor Vehicle Fuel Tax

This tax may be levied only by counties upon motor vehicle fuel sold within the county that is subject to state motor fuel tax ("gas tax"). The tax may be levied at a rate of 10 percent of the current state gas tax. Currently, the maximum rate would be 2.3 cents per gallon. Voter approval is required to impose this tax. Proceeds must be shared with cities within the county in proportion to population in each jurisdiction. Proceeds may be spent for the same purposes as the state gas tax. It may not be used for transit purposes. Potential 1993 revenues from this source, if approved, would have exceeded \$2 million. To date, no counties have imposed this tax.

d. Local Option Motor Vehicle License Fee

This tax may be levied only by counties, and represents a surcharge on the state vehicle registration fee. The maximum authorized fee is \$15. Proceeds are shared with cities within the county on the same proportional basis as the local option motor vehicle fuel tax. Like the commercial parking tax, this fee may be imposed by the County Commission, but is subject to repeal or modification by voter referendum. Use of proceeds is limited to projects included in both the regional and county transportation plans. To date, King, Pierce and Snohomish Counties have levied this tax. In counties with relatively high vehicle travel, and consequently high fuel consumption, this tax has the potential to generate significant additional funds. In 1993, Kitsap County could have generated an estimated additional \$1.7 million from this source, if it had been approved.

e. Impact Mitigation Fees

Kitsap County is willing to work with the WSDOT Highways and Ferries Divisions to develop interlocal agreements that provide a working arrangement for fund sharing on mutual projects. The agreements would address how impact fees related to local and regional growth should be applied to improvements on the State systems, in addition to the impact fees collected and applied to local roads.

The 1990 Growth Management Act (GMA) authorizes counties (and cities) to impose transportation impact mitigation fees to fund transportation improvements necessitated by the growth effects of new development. Counties must adopt an ordinance that contains an equitable formula for measuring the transportation impacts of development. Fees may be imposed on development in proportion to the level of transportation impact caused by the development. Fees can be assessed on both commercial and residential development, to be collected during the permitting process.

The GMA requires that the imposing jurisdiction have a comprehensive transportation plan that identifies transportation facilities that will be needed to accommodate future growth, based on level of service policies. The estimated costs of the needed facilities must be the basis for calculating the fees. Fees are specifically dedicated to transportation facilities being constructed by the levying jurisdiction.

Kitsap County should revise their existing impact fee ordinance and link it directly to the Capital Facilities Element in order to legally collect impact fees once the Comprehensive Plan is adopted. No estimate of potential receipts from these fees are available since fees have not yet been set. However, the estimates of proportional cost responsibility for the projects recommended in this plan. These estimates include assumptions about private sector participation in improvement funding, in part based on the assumption that impact fees will be imposed within the planning horizon of this plan.

f. Transportation Benefit Districts

The state legislature authorized transportation benefit districts (TBDs) in 1987. Counties (and cities) may create these districts to fund specific transportation needs. The district provides a mechanism for coordinating public and private funds on specific projects. TBDs are authorized to levy special property taxes for one year, or to fund bond issues, approved by the county's voters. Districts may also for a local improvement district (LID) to assess property owners within the LID boundaries a portion of the cost of transportation improvements. A TBD may also impose development impact fees on private development and on the subdivision of land.

A 60 percent majority of voters is required to form a TBD and levy special taxes or fund bond issues. To date, no TBD has been formed in Washington. Most of the financing options available under a TBD are already available to Kitsap County in other ways. The County regularly participates in voluntary road improvement districts (RIDs), which are LIDs within the unincorporated area. Impact fees are now authorized under the GMA, and can be applied to the whole county, not just within a TBD.

2. State and Federal Sources

There are two major categories of funding available to Kitsap County that are not under the County's control: federal and state grants. Federal transportation grants are now governed by the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA), which re-organized where federal transportation grant funds come from, what they may be used for, and how they are obtained. State transportation grants are available from several programs, but most are funded by a common source -- the state gas tax. Kitsap County also receives formula allocations of state gas tax revenues, but must rely on the legislature to authorize additional statutory gas tax allocations. Kitsap County must compete with other jurisdictions for federal and state grant funds.

a. Federal ISTEA Programs

ISTEA fundamentally changed the way federal transportation dollars are allocated to states, counties and local jurisdictions. The Act's "new philosophy" includes new emphases on the following:

- # Balancing all modes of transportation, creating a truly multimodal transportation system and reducing reliance on the automobile;
- # Allowing greater flexibility in how federal grants are spent, eliminating in some cases previous restrictions on the use of road funds for public transportation, and vice versa;
- # Making regional transportation decisions, and ensuring that local decisions complement regional goals and priorities;

TRANSPORTATION

- # Statewide and regional transportation planning;
- # Avoiding "wish lists" of solutions to transportation needs using clear regional and statewide prioritizing criteria, and ensuring that improvement programs are limited to what jurisdictions can afford;
- # Providing better information from transportation decisions through new information management systems;
- # Ensuring that sufficient opportunities are provided for meaningful public input during the planning process;
- # Achieving regional and statewide air quality goals; and
- # Finding new solutions to transportation problems through new and innovative technologies.

All of ISTEA's programs carry these new emphases. It will be particularly important for Kitsap County to develop strategies for addressing transportation problems that have the following attributes if the County is to be competitive for ISTEA funds in this region. Strategies should, among other things:

- # Address multiple transportation modes;
- # Include participation by multiple jurisdictions;
- # Reduce reliance on the single occupant automobile, and promote transportation demand management;
- # Improve air quality;
- # Maximize the cost effective use of innovative technologies; and
- # Minimize costs

b. State Gas Tax and Related Programs

The state motor vehicle fuel tax ("gas tax") provides significant transportation funding for counties. From 1984 to 1990, the state tax on gasoline and other motor fuels was 18 cents per gallon. Of that amount, 22.78 percent, or about 4.1 cents, was dedicated to counties for transportation uses. In 1990, the Washington State Legislature approved a five cent per gallon increase, phased in over two years. Eleven percent, or 0.55 cents, of that increase is allocated to counties. Another 0.70 cents is allocated to programs administered by the County Rural Arterial Board (CRAB), which allocates its funds to counties on a competitive basis. Another 1.5 cents of the increase is dedicated to the Transportation Improvement Board (TIB), which also provides state grants to local jurisdictions (cities, counties, and transit agencies) on a competitive basis.

As noted, counties receive a minimum of 4.1 cents per gallon of fuel as a formula allocation, which is not adjustable. Kitsap County must compete for the other gas tax grant funds. By and large, the TIB and CRAB prioritize grant applications using criteria and priorities similar to those required under ISTEA. By applying for grants for projects that engender these priorities, Kitsap County may be able to obtain additional transportation funds on a case-by-case basis in the future.

3. Coordinate with Other Agencies

Many of the projects identified in the plan are located adjacent to or partially within the incorporate cities in the county. In addition, many road improvements will benefit Kitsap Transit and/or future private sector development. These other beneficiaries will bear a portion of the total project cost along with the County. Poor coordination with these jurisdictions, agencies, and developers, however, may result in the County fronting the cost of a multi-jurisdictional project for several years until the other sources acquire matching shares. Kitsap County should attempt to coordinate the construction of such projects with the needs and schedule of these other jurisdictions and agencies to further aid in the funding process. If the County can minimize the amount of funds needed to front multi-jurisdictional projects, more money will be freed for other projects in the plan.

4. Integrate Land Use and Transportation Planning

As it continues to develop, Kitsap County can minimize the needs for infrastructure improvements by adopting a policy that links land use development with transportation planning. When these policies are interwoven, the County will be able to identify and plan for growth in certain areas and take steps to insure that the plans for long term growth have been included in the design of the short term transportation infrastructure (for example, purchasing right-of-way in areas that are currently undeveloped but are forecast for higher intensity land use in the long term). This will reduce the cost of the infrastructure development down the road. The County should also work with the private sector so that developers' plans include a road system that is consistent with the county's plans for that area.

5. Complete Follow-on Activities

To make the 20-year plan a reality, Kitsap County will need to continually update its 6-year TIP with projects from the 20-year plan. To this end, Kitsap County should continue working toward adopting a Concurrency Management System (CMS), which will not only control the location and ultimate use of development, but also the timing or pace at which undeveloped areas are filled to planned densities. CMS will also aid in selecting the appropriate projects from the 20-year plan for inclusion in the 6-year TIP so that the timing and location of public facilities matches the timing and location of development.

At the same time, the County should work toward adopting other ordinances and policies that are consistent with the goals of the plan, such as updating the current impact fee ordinance and/or adopting Travel Demand Management policies. These measures not only may increase the amount and sources of project funding, but also may help reduce the overall demand on the infrastructure.

F. Monitoring

Kitsap County should take steps to monitor the implementation of the system not only from a transportation needs viewpoint, but also a financial perspective. This may create problems at times, since sometimes the most pressing needs can be some of the more expensive construction items. As mentioned above, during the first few years of implementation, forecasted construction revenues will not be as great as during the later years of the plan. Particular care should be taken during this early period to avoid scheduling several high cost projects at or near the same time.

G. Conclusions

The 20 year list of transportation project represents a bold but expensive effort to ensure adequate transportation mobility throughout Kitsap County. Though the revenue estimation indicates it may be able to pay for its share of the recommended improvements, Kitsap County should explore new ways to fund transportation projects. None of the assumptions about existing sources in this analysis are guaranteed. The County must remain competitive for grant funds whenever and from wherever they become available. A key part of this strategy will be to convince the cities, Kitsap Transit, the State, the private sector, and any other players to share the costs of the necessary improvements.

Finally, reducing non-capital expenditures will enable the County to spend more on capital improvements. The County should explore ways to streamline its transportation functions, and reduce expenditures as much as possible without sacrificing transportation safety, efficiency or operations.

AREAS OF MORE INTENSIVE RURAL DEVELOPMENT
ISSUE PAPER

*Preliminary
Draft*

JANUARY 30, 1998
KITSAP COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT

TABLE OF CONTENTS

- Introduction
- I. Defining Rural Character
 - 1. Kitsap County Context
 - a. Prior Rural Planning Efforts
 - b. Rural Character
- II. Limited Areas of More Intensive Development
 - 1. Types of Areas Characterized by More Intensive Development
 - a. Predominantly Residential Areas
 - b. Mixed-Use Areas
 - c. Commercial/Industrial Areas
 - 2. Potential Candidate Areas
- III. Potential Criteria for Areas of More Intense Development
- IV. Attachments

INTRODUCTION

The purpose of this paper is to identify candidate rural areas within Kitsap County that meet the requirements of Engrossed Senate Bill (ESB) 6094, an amendment to the Growth Management Act. Candidate rural areas may, in some cases, recognize existing rural development patterns in Kitsap County and permit more intensive development within defined boundaries. The County wishes to solicit public input on potential criteria for defining these limited areas of more intensive rural development that are consistent with Kitsap County rural character. To that end, this paper is being coordinated with a number of presentations and workshops to discuss how the provisions of ESB 6094 could work in Kitsap County.

THE GROWTH MANAGEMENT HEARINGS BOARD DECISION

The Central Puget Sound Growth Management Hearings Board (GMHB) determined that Kitsap County’s 1996 Comprehensive Plan violated the Growth Management Act (GMA) in regard to allowed development, land use patterns, and densities in rural areas. The GMHB found that the Rural Element of the Plan, as adopted, perpetuated historical patterns of sprawl development in rural areas by allowing densities that were not considered “rural.” In essence, the Hearings Board concluded that the Plan permitted urban development to occur in rural areas contrary to the intent of the GMA.

The GMHB found specific provisions of the County’s Rural Element did not comply with the requirements of the Act. These provisions included plan and zoning designations that permitted 2.5-acre and 1-acre lots, and the “Grandfathering Clause” that permitted the subdivision of existing lots into parcels smaller than current zoning allowed. The decision of the GMHB found that these provisions were perpetuating urban sprawl, and would substantially interfere with the fulfillment of the GMA’s planning goals.

RURAL PROVISIONS OF ENGROSSED SENATE BILL 6094

On April 27, 1997 the Washington State Legislature enacted ESB 6094 as an Amendment to the Growth Management Act. ESB 6094 directs counties to adopt a Rural Element as a component of a Comprehensive Land Use Plan. The Amendment requires that the Rural Element address rural development and densities, and include lands that are not designated for urban growth, agriculture, forest, or mineral resources. It permits appropriate land uses that are compatible with the rural character of such lands, and provides for a variety of rural densities and uses. The Amendment also allows innovative techniques such as clustering and Transfer of Development Rights (TDRs), as long as they are in keeping with locally defined rural character. Counties should foster land use patterns and develop a local vision of rural character that will:

- X preserve rural-based economies and traditional rural lifestyles;
- X encourage the economic prosperity of rural residents;
- X foster opportunities for small scale, rural-based employment and self-employment;
- X permit the operation of rural-based agricultural, commercial, recreational, and tourist businesses that are consistent with existing and planned land use patterns;
- X foster the private stewardship of the land and the preservation of open space; and

RURAL ISSUE PAPER APPENDIX

enhance the rural sense of community and quality of life.

These and other rural provisions of the Act are summarized in Attachment A to this Issue Paper. The attachment contains information presented at a CTED-sponsored workshop in Silverdale on January 15, 1998. The Workshop was presented by the two members of the Land Use Study Commission who drafted the ESB 6094 amendments. These amendments have been codified in various sections of the GMA (RCW 36.70A).

ESB 6094 also permits counties to define “limited areas of more intensive development” subject to a number of guidelines and criteria (RCW 36.70A.070(5)(d)). In essence, these limited areas are exceptions to the types of development that are generally permitted in rural areas. The exceptions allow identification, recognition, and designation of existing areas with established (non-urban) development patterns. These existing areas may be permitted to accommodate limited additional growth through infill, new development or redevelopment. The types of growth permitted include intensification or new development of small-scale recreational or tourist uses that rely on a rural setting or location, and intensification of isolated small-scale businesses. The areas may contain public facilities and services, which must be limited to what is necessary to serve the limited area and which does not permit low-density sprawl.

“Limited areas of more intensive development” must have been in existence as of July 1, 1990. Each area must be defined and contained by a logical outer boundary that limits and contains the extent of more intensive development. The boundary must be delineated predominantly by the built environment (ie: existing development) but may include limited undeveloped land. Establishment of the boundary must address: the need to preserve the character of existing natural neighborhoods and communities; physical boundaries; prevention of abnormally irregular boundaries; and the ability to provide public facilities and services. Counties must adopt measures to ensure that these areas are limited and contained.

These requirements of the law will be used, along with local citizens’ definitions of rural character, to develop criteria for designating and controlling limited areas of more intensive development within Kitsap County’s rural areas. The information in this Issue Paper will be used by the public, at a series of workshops and at public hearings, and by elected officials to help identify and define these areas. Kitsap County will be one of the first jurisdictions in the state to apply the provisions of ESB 6094. It is felt that these provisions provide an opportunity to help reconcile the County’s historical land use pattern with the requirements of the GMA.

I. DEFINING RURAL CHARACTER

KITSAP COUNTY CONTEXT

The ‘70s ushered in a long period of rapid growth in Kitsap County, Washington. Between 1970 and 1990, the County absorbed an 87% increase in population, or more than twice the state’s growth rate of 42.6%. Protecting the rural character of Kitsap County quickly jumped to the forefront of land use issues, and the development of the 1977 Kitsap County Comprehensive Plan officially started the process. In the ensuing five years, the County continued to grow at a rate of 16% a year. Today, with a population of 229,400, Kitsap County is still considered predominantly rural by some people (suburban by others). It is the second-most-dense county in the state.

The term “rural” is difficult to define. Rural lands under the Growth Management Act (GMA) are “those areas not intended for urban-level development nor those lands that are set aside for their importance to the protection of agriculture, forest, and mining industries and resources.” Kitsap County’s “rural character” is defined by large areas of undeveloped land

and open space; scattered low-density, single-family homes; many acres of pasture and forest land; small part-time farms; and limited, low-intensity commercial uses.

Rural characteristics include the abundance of trees, access to recreation, views of water and mountains, and a quiet, unregimented atmosphere. The elements of rural character also include the dynamic natural systems abundant in Kitsap County which are vulnerable to human and natural change. This evolving landscape provides the framework for a rural vision in the Comprehensive Plan.

Kitsap County's rural character has been expressed in terms of landscape, visual qualities, and environmental and land use features. However, the term "rural" is more than a description of character of development or the area outside our urban growth areas. For the residents of Kitsap County, the term "rural" is also defined as a philosophy of living and a quality of life. It is this multifaceted character and lifestyle that residents of the county hope to maintain and enhance through the Comprehensive Plan.

Prior Rural Planning Efforts

Rural development must be guided by a larger vision of what needs to be preserved as well as what is permitted by the GMA. In Kitsap County, many visions have been expressed in numerous studies and public participation sessions on rural issues over the past eight years. These vision statements and definitions are summarized below.

Basic rural themes, first articulated in October of 1990 at the County-Wide Growth Management Act Symposium "The Next 100,000," include:

- X Preserve the rural character and moderate income lifestyle of Kitsap County -- farming, forestry, "unkempt charm," and individuality.

- X Actively protect the County's natural features and systems -- open space, water-related resources, and wildlife habitat.

RURAL ROUNDTABLE (JANUARY 26, 1993)

The Rural Roundtable Committee was created by the Board of County Commissioners to make recommendations on rural land-use issues. The committee recognized the natural environment and rural resources as the basis of rural character. They found that protecting the rural landscape was central to the vision of Kitsap County residents. Design standards were recommended to visually maintain "rural character" in Kitsap County. Recommendations also emphasized the need to maintain rural lifestyles and rural activities such as agriculture, farming, forestry, and self-sufficiency living. The Rural Roundtable Committee developed a set of value statements and objectives which included the following:

1. Natural systems shall be the primary determinant of all planning activity.
2. The rural quality of Kitsap County shall be maintained and enhanced. Appropriate infrastructure shall be provided to ensure environmental quality.
3. Kitsap County shall provide for the managed absorption of its share of projected Puget Sound growth, and shall provide housing which meets the full range of economic situations and needs.

SOUTH KITSAP RURAL COMMUNITY DESIGN STUDY (JULY, 1993)

The South Kitsap Rural Community Design Study was based upon the concept of retaining rural character in the context of permitted development. Ideas included incentives for the clustering of communities, villages, and hamlets to maintain large, continuous open spaces and critical areas; clearly-defined urban centers with boundaries influenced by natural systems; and infill of existing centers to provide an efficient use of public services. Rural character would be maintained by use of strict design standards. Areas with a strong sense of rural character included: pastures and meadows; shorelines; ridge lines and valley walls; and rural highways and public roadways.

SUQUAMISH COMMUNITY PLAN (MAY 17, 1993)

RURAL ISSUE PAPER APPENDIX

The plan created policies that would retain rural character and preserve the natural setting of this historic, waterfront community. The community was to remain compact; protected by its natural borders of water, streams, hills and forests.

KINGSTON COMMUNITY PLAN (SPRING 1993)

The plan addressed ways to maintain the old-town character and living environment of Kingston. The Plan featured a rural overlay zone in which a Planned Unit Development permit was required to develop three or more lots. All PUD applicants within this zone then had to meet regulations and design guidelines of the rural overlay zone. The proposed design guidelines would maintain rural character through screening, retention of open space, and maintaining scenic corridors and vistas.

HANSVILLE COMMUNITY PLAN (1993)

The plan addressed rural design guidelines. The main emphasis was to preserve rural character while meeting the needs of humans and wildlife. The plan listed four principal Community Goals:

- X Establish open space corridors to support diversity and continuity of natural systems;
- X Balance the creation of open space with the preservation of private property rights;
- X Establish mechanisms which preserve rural character; and
- X Interconnect the Hansville community with a network of both on-road and off-road pathways.

VOICES OF KITSAP (JANUARY, 1996)

The League of Women voters (LOWV) and the Bremerton Sun sponsored a series of community meetings to help generate public participation in the Growth Management Process. This effort addressed each of the 13 goals of the Growth Management Act. Each participant was asked to indicate the three top concerns for each goal. The results from these meetings were then summarized and presented to the Department of Community Development, Kitsap County Planning Commission and the Board of County Commissioners for consideration in the process for revising the Comprehensive Plan.

THE COUNTY GREENWAYS PLAN (JUNE, 1996)

The Kitsap County Greenways Plan committee included County staff and local citizens. The Greenways Plan addressed the following four elements:

- The Kitsap County Bicycle Facilities Plan;
- The Kitsap County Off-Road Trails Plan;
- The Roadside Scenic Resource Corridors Plan; and
- The Wildlife Corridors Plan.

The Plan links recreational trails, commuter bikeways, and heritage and wildlife corridors with parks, schools, places of employment, shopping areas, transit facilities, and a variety of scenic, educational, and interpretive resources, and identifies these corridors as "Greenways." Greenways will also include other undeveloped scenic and natural resource corridors. Once identified as a Greenway, these corridors are then protected from future development.

While the above documents pertain to differing geographic areas and have been implemented to varying degrees, they express several common themes, including preserving open space, and recognizing and preserving significant features of the rural landscape through planning and design.

Rural Character

We perceive rural character as we walk through our communities, drive along our public roadways and look across different

landscapes. Rural character is created by the way in which we use the land, and the relationship of uses to natural features and the landscape. It perhaps becomes most obvious when it is interrupted. The rural character of Kitsap County is the primary reason many residents decide to make their homes here. Defining this character is a necessary first step in deciding how to preserve it.

Kitsap County’s rural lands are characterized by large parcels of undeveloped land and open space, scattered low-density, single-family homes, acres of pasture and forest land, small part-time farms, and limited low-intensity commercial uses. These areas are not generally supplied with, nor intended to be supplied with, urban level services; development is generally served by individual wells and septic tanks. Commercial development generally consists of scattered pockets of small-scale grocery/convenience stores, and limited light industrial, forestry, or mineral extraction activities. The County’s rural areas also include extensive wetland areas and some of the region’s most productive salmon streams.

The natural components of rural character encompass: stream corridors including flood plains, wetlands and habitat area; critical areas; visually important areas; rolling fields and meadows; occasional vistas of the Olympics or Puget Sound; steep slopes; shorelines, ridge lines and valley walls; and stands of trees as a backdrop to open fields and meadows. Human-related components of rural character provide more than just scenic or visual value; they are reminders of the pioneer heritage of Kitsap County. These include:

- X Two-lane roadways with densely wooded edges;
- X Homes hidden in the woods with driveways disappearing into the forest;
- X Agricultural lands;
- X Farm buildings and equipment (including original farmhouses);
- X Rural fences (split rail, or steel post with field fence wire or barbed wire);
- X Clusters of houses along beaches or shorelines; and
- X Dense single-family home developments in community clusters (such as Hansville Village, Driftwood Key, Lake Symington, or Parkwood Estates.)

It is a fundamental objective of the Kitsap County Comprehensive Plan to maintain the character of designated rural areas. The challenge for the Comprehensive Plan is to weave together these various elements in a manner that complies with GMA and preserves the functions, appearance and lifestyle of the rural area.

II. LIMITED AREAS OF MORE INTENSIVE DEVELOPMENT

This section of the issue paper is intended to describe some existing rural areas in Kitsap County that are currently characterized by “more intensive development” either in terms of the types of land uses or density/intensity of activities. Areas of more intensive development may, for example, be developed at urban densities, possess urban services, and contain a mix of uses that are traditionally considered more urban than rural. Identification of these existing areas and agreement on their major characteristics is a first step in discussing where in Kitsap County it may be appropriate to recognize areas that are already developed in a pattern or for uses that are not “rural” as that term has been defined in GMA (prior to the amendments in ESB 6094). The hierarchy of rural places and the candidate areas described below reflect an initial attempt to identify these areas in Kitsap County. The examples provided are not intended to be definitive; additional locations or types of areas may be suggested in subsequent discussions, workshops and public hearings.

These characteristics of existing rural areas will also be used to help develop criteria for designating appropriate areas of more intensive development in the Comprehensive Plan, and to draft regulations, design guidelines and other appropriate

RURAL ISSUE PAPER APPENDIX

programs in the future to ensure that

the types and level of growth permitted is limited and contained consistent with the requirements of GMA. Geographical boundaries would also be defined for each area, again using the existing characteristics of these places.

TYPES OF EXISTING AREAS OF MORE INTENSIVE DEVELOPMENT

Existing areas in rural Kitsap County that may be considered to be characterized by urban patterns of development include the following:

Predominantly Residential Areas

These occur in different sizes and scales, with relatively small lots and a dense land-use pattern. These areas typically have a strong sense of identity and are commonly thought of as a distinct neighborhood or community. Some small-scale commercial and community services may be present. Most of these existing residential areas are located along the shores of Puget Sound or Hood Canal, surrounding lakes, or adjacent to ferry terminals. Many were originally platted as vacation or recreational subdivisions and, over time, developed into permanent residences and defined communities. Smaller residential/neighborhood areas may have community water systems and individual septic systems, while larger areas may be served by public or community water and/or water systems. Larger areas of this type may have a broader range of local commercial services, institutional facilities (schools, churches, meeting halls), and recreational services such as parks, boat launches and playgrounds.

Mixed-Use Areas

These unincorporated areas are characterized by a relatively broad mix of residential, commercial, community, recreational and often industrial activities. Land uses and densities are essentially urban in character and are typically served by public water and sewer. They are generally larger and more diverse than the predominantly residential areas described above. While these areas could also be considered for inclusion in Urban Growth Areas (based on existing densities and the presence of urban services), they are located some distance from the urbanized portion of the County and from existing development, and may have constraints to growth, eg., sewer facility limitations.

Commercial/Industrial Areas

These areas are dispersed throughout Kitsap County and include sites devoted to relative small-scale commercial or industrial uses. Examples include: crossroads commercial development (gas station, mini-mart or grocery store); neighborhood shopping centers; isolated commercial or industrial businesses; and small industrial parks. The uses are not typically "rural" in character (ie., supporting agriculture or other "traditional" rural activities), and may be served by public or on-site sewer and water.

For purposes of discussion, the areas described above may be categorized as follows:

- X Rural Neighborhood - small scale, predominately residential with limited services;
- X Rural Community - larger scale, predominately residential with some commercial and community services;
- X Rural Village - a mixed-use community with a broad mix of land use; and
- X Rural Commercial/Industrial - dispersed areas or small clusters of retail, commercial or industrial development, including isolated business activities in freestanding buildings or small industrial parks.

POTENTIAL CANDIDATE AREAS

Potential candidate areas meeting the categories of types of rural places are described below. The following descriptions are also

intended to suggest potential criteria for designation and for future development that is limited and contained.

Rural Neighborhood

Examples/Candidate Areas: Gamblewood, President Point Estates, Edgewater Estates, Lake Tahuya, and Lake Symington.

Gamblewood is located at the southern end of Port Gamble Bay at the road junction of Bond Road and SR-104. The community is a result of historical platting prior to zoning which resulted in a defined cluster of approximately 370 parcels with an average density of 3.5 units per acre. The majority of the lots are less than 10,000 s.f. in area. A convenience store/fuel station is located nearby.

President Point Estates is located along the Puget Sound shoreline in an isolated setting south of Kingston. The community is the result of a series of plats and land subdivisions created prior to zoning in Kitsap County, which resulted in a dense cluster of approximately 360 parcels with an average density of 1.5 units per acre. The majority of these lots are less than 10,000 s.f. in area. A number of the parcels are presently undeveloped, due to on-site septic constraints and a limited water supply. Recent upgrades to this area by P.U.D. No. 1 now provide water availability for additional development. The road network in this area is limited.

Edgewater Estates is located along the shores of Hood Canal just north of Poulsbo. The community is a rural PUD, which resulted in a dense cluster of 460 parcels with an average density of 3.3 units per acre.

Lake Tahuya is a dense area of shoreline development centered around a freshwater lake. The community results from many years of platting based on historic provisions. It contains a dense cluster of approximately 270 parcels with an average density of 2 units per acre.

Lake Symington is another dense area of shoreline development centered around a freshwater lake. The community contains approximately 540 parcels with an average density of 2.9 units per acre.

Rural Community

Examples/Candidate Areas: Indianola, Hansville, Driftwood Keys, Southworth, and Sunnyslope.

Indianola/Miller Bay Estates is characterized by a cluster of home sites averaging approximately 2.3 units per acre in Miller Bay Estates, to 3.5 units per acre in Indianola. Originally popular as a recreation destination, the area grew in response to its proximity to the "Mosquito Fleet" ferry system. The greater Indianola area is the location of approximately 700 homes with a population of approximately 2,000 residents. Located within the community center are a small grocery store, post office, club house, public dock, and private community beach. Residents desire to retain the community's unique identity without extensive commercial development. Public utilities include water; the area does not have a sewer system.

The approximate boundaries of what may be considered the Indianola community are the eastern shoreline of Miller Bay on the west; a line roughly equivalent to the tribal reservation line running from the head of Miller Bay to the 90 degree turn on South Kingston Road on the north; the tribal lands east of the church camp on the east, and the shoreline of Madison Bay on the south.

Hansville is located on the northern tip of the Kitsap Peninsula and is bounded by the waters of Puget Sound, Admiralty Inlet, and Hood Canal. The area is characterized by a cluster of single-family residences and a few vacation homes. There are approximately 213 parcels with an average density of 1.7 units per acre. The greater Hansville area includes a Post Office, general store, automotive repair shop, beauty salon, antique craft shop, recreational resorts, RV facilities, and two boat launching facilities. The area is serviced by Public Utilities District No. 1 with an 18-inch water main that

RURAL ISSUE PAPER APPENDIX

runs from Kingston to a reservoir. Hansville is bounded by Puget Sound to the north, and a ring of wetlands and uplands slopes to the south.

Driftwood Keys is a retirement community located on the northwestern tip of the Kitsap Peninsula. It extends along the shoreline of Hood Canal and has a view of the Olympic Mountain range. This community has approximately 1,051 parcels with an average density of 1.6 units per acre.

Southworth is located at the eastern terminus of Sedgwick Road on the shores of Puget Sound. The community is clustered around the Southworth Ferry Terminal which provides service to Seattle and Vashon Island. The community is predominantly single-family residential on lots created under previous three units per acre zoning. Public water is provided to the area by Manchester Water District. Manchester recently upgraded the water system to meet Department of Ecology requirements; however it has no sewer system.

Sunnyslope is located west of Port Orchard near the Bremerton Airport. The community is bordered by Sunnyslope Road to the west, SR-3 to the north, Victory Drive to the east, and a grouping of lots clustered around Old Clifton Road to the south. The area has approximately 370 parcels with an average density of 1.7 units per acre. It is currently serviced by Sunnyslope Water District; however it has no sewer system.

Rural Village

Examples/Candidate Areas: Manchester, McCormick Woods, Suquamish, Port Gamble, and Keyport.

Manchester is located along the shores of Puget Sound, affording residents views of the Seattle skyline. The community is delineated by boundaries of historical small lot subdivisions extending from the waterfront to the west, Mile Hill Drive to the south, and the Navy fuel depot along the north boundary. The community supports several small commercial establishments including a grocery store, post office, library, boat rental storage yard, contractor's yard, and restaurants. Most of the commercial activity is clustered along Colchester Drive and Main Street. Using the Manchester ULID boundary, the average density is approximately 2.8 units per acre with 2,370 predominantly developed lots. Manchester Water District has recently upgraded their system capabilities with a newly constructed water reservoir and water system plan. Sewer is provided by Kitsap County; it was recently upgraded but still has limited capacity.

McCormick Woods is a residential golf course community. The original Rural Planned Unit Development, approved in 1981, proposed 1,298 residential dwelling units. The PUD allows a mix of lot sizes and housing types and includes a small commercial center, golf course and clubhouse. The project is only partially constructed with approximately 425 residences and an average density of 3.25 units per acre. McCormick Woods is currently on public water provided by the City of Port Orchard.

McCormick Woods was initially approved to be served by a community drain field, which recently was converted to City of Port Orchard public sewer. The sewer extension was approved to include Campus Station to the north, and 620 acres of land to the west, known as Utility Local Improvement District (U.L.I.D.) No. 6. Campus Station was approved as a Rural Planned Unit Development for 440 dwelling units, with 32 acres allocated as a community campus site. Public sewer and water were approved to serve the development. No dwelling units have been constructed to date.

Suquamish is located east of the City of Poulsbo along the shores of Port Madison Bay and lies within the Suquamish Tribe reservation boundary. This area has both public water and sewer service. There are approximately 1,000 parcels, with an average density of 4 units per acre.

Port Gamble was established as a mill town in 1853 by Pope and Talbot. The community consists of a cluster of historical homes

owned by the mill, and includes a post office, general store/deli, fire station, cemetery, rail service, and marine facilities. An old sewer and public water system provides service to the community. The lumber mill, which until recently employed approximately 300 workers, is no longer in operation. It was closed in 1995 in response to ongoing operating losses; and was subsequently destroyed during the process of closing the plant. Currently, the mill site is being leased for log staging prior to shipping. The community is bounded by Gamble Bay on the east.

Keyport is located near the mouth of Dyes Inlet on the west. This village contains 186 parcels with an average density of 4.7 units per acre. Dominated by older, single-family housing on small, platted lots, Keyport also includes a Naval Base and Museum, a motel, a marina, post office, tavern, fire station, deli/general store, service station and auto repair shop. Public water and fire flow are provided by Public Utility District No. 1, and public sewer service is provided by Kitsap County. The community is defined by the naval base to the south, Dyes Inlet to the east, and Dogfish Bay to the north and west.

Rural Commercial/Industrial Areas

Commercial uses in the rural areas typically cater to the daily needs of the residents. These include uses such as small grocery or convenience stores, gas stations, open space recreational uses, nurseries, feed-and-seed operations, small rental operations, and other small commercial and light industrial uses. In smaller rural areas, commercial activities sometimes include tourist amenities, such as eating and drinking establishments and specialty shops.

The following areas are found inside of potential areas of more intensive rural development: Sunnyslope - .5 acres, Parkwood - .25 acres, Long Lake - .5 acres, Manchester - 2 acres, Keyport - .5 acres, Hansville - .5 acres, Indianola - .25 acres, and Suquamish - 10 acres. Other rural areas of existing commercial or industrial development outside the areas of more intensive development include: Dickey Road- 20 acres, Luoto Court - 1 acre, Pioneer Way - 48 acres, Streibles Corner (Bond Rd) - 14 acres, Lemolo - 30 acres, and Georges Corner - 22 acres.

Examples/Candidate Areas: Streibles Corner, Georges Corner, and Pioneer Way

Streibles Corner (14 acres) is located at the intersection of Bond Road and Highway 104 in North Kitsap. There is currently a gas station/convenience store, fire station, and an industrial park with several businesses.

Georges Corner (22 acres) is located at the intersection of Highway 104 and Hansville Highway. This area contains a gas station/convenience store and a regional Albertson's grocery store.

Pioneer Way (48 acres) is located north of Poulsbo and is adjacent to the Edgewater Estates neighborhood. Pioneer Way is primarily an industrial park with several businesses currently in operation. The area is surrounded by an active mining extraction operation.

Small, existing industrial uses/developments are also dispersed throughout rural portions of the county. In north Kitsap, for example, there are approximately 28 sites developed for industrial activities. These range in size from .5 acres to 20 acres. Uses include light manufacturing, construction, storage yards, and machinery rebuilding and repair.

III. POTENTIAL CRITERIA FOR AREAS OF MORE INTENSIVE DEVELOPMENT

The following potential criteria have been identified based on the characteristics of Kitsap County’s existing areas of more intensive development. The criteria would be used to help interested citizens, the Planning Commission, and elected officials identify, designate and regulate areas selected rural consistent with GMA. These criteria are preliminary and for purposes of discussion.

Table 1 - Potential Criteria

	Rural Neighborhood	Rural Community	Rural Village	Commercial & Industrial Areas
Sense of Place	Strong sense of neighborhood; seen as a distinct “place”	Strong sense of community; seen as a distinct “place”	Strong sense of community; seen as a distinct “place”	Clearly defined boundaries; seen as a distinct “place”
Land uses	Predominantly residential Limited commercial services	Predominantly residential Some commercial and community uses	Mix of residential, commercial, industrial, community and/or recreational uses	Freestanding or small cluster of retail, heavy commercial, industrial use, or industrial park
Average #DU’s/Density	212.5/1.65	375/1.61	602.2/2.9	N/A
Services & Facilities	On-site or community water	On-site	Public sewer and water	On-site or public sewer and water
Average Area	142 acres	238 acres	432.6 acres	1.875/22.5 acres*
Implementation Issues	Design standards Conflicts with adjacent rural areas	Design standards Conflicts with adjacent rural areas	Design standards Conflicts with adjacent rural areas	Design standards Conflicts with adjacent rural areas

*The 1.875 figure represents commercial areas inside proposed rural areas of more intensive development. The 22.5 acres represents existing commercial/industrial areas outside proposed rural areas of more intensive development.

COMPACT RURAL AREAS AS IDENTIFIED ON THE MAP

Rural Neighborhood

- 4. Gamblewood
- 5. Edgewater Estates
- 8. President Point Estates
- 11. Lake Symington
- 12. Lake Tahuya
- 16. South Sunnyslope
- 18. Glanwood Station
- 19. Fairview Lake
- 20. Bear Lake

21. Wye Lake
22. Parkview
23. Horizon Hills
24. Strawberry Park
25. North Long Lake
26. Clover Valley
27. South East Long Lake
28. Long Lake View Estates
31. Peacock Hill
32. Crescent Valley
33. Misery Point
34. Wildcat Lake
35. Tiger Lake
36. Mission Lake

Rural Community

1. Hansville
2. Driftwood Keys
6. Miller Bay Estates
7. Indianola
14. Rocky Point
15. Sunnyslope
30. Southworth

Rural Village

3. Port Gamble
9. Suquamish
10. Keyport
17. McCormick Woods
29. Manchester

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- Surface Water
 - drainage basins and stream types
- Critical Areas
 - potential wetlands, steep and unstable slopes, flood plains and Hansville aquifer
- Wildlife Habitat
 - Washington State Department of Wildlife priority habitat, shellfish resources
- Housing Distribution
 - number of dwelling units per square mile
- Water Lines
 - Class 1 systems with 100 or more connections
- Sewer Lines
 - service areas and sewer lines
- Arterials
 - principle and minor arterials and collectors
- Public Transit
 - Park and Ride lots, ferry terminals, fixed bus routes
- Schools
 - public school districts, schools, community college, vocation and special facilities
- Fire Stations
 - twelve districts
- Parks and Recreation
 - state and regional parks, boat launch ramps, fishing piers and marinas
- Utilities
 - electrical substations and transmission lines, natural gas service area and lines, telecommunication service areas, cellular tower sites

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GLOSSARY

Access/Accessibility: The opportunity to reach a given destination within a certain time frame or without being impeded by physical or economic barriers.

Accessory Housing / Accessory Dwelling Unit: A housing unit that is incidental to the principle unit, on the same lot and includes a kitchen, sleeping and bathroom facilities.

Activity Center: An area of centralized land use activity, such as a shopping center, industrial park, or business district, etc.

Affordable Housing: Affordable housing is generally defined as housing where the occupant is paying no more than 30 percent of gross income for housing costs, including utilities and meets the needs of moderate or low-income households.

Aggregate Demand Model: Model obtained by combining travel observations for individuals into geographic zones. These combined observations are used to estimate new flows when service attributes or zone sizes change (See also Disaggregate Demand Model).

Alignment: The horizontal and vertical path followed by a rail line, busway, transitway or roadway.

Alternative: A reasonable option for addressing land use or transportation concerns.

Alternative Analysis: The federal planning procedure undertaken to determine whether a fixed rail, busway, or transitway alternative is cost-effective.

Analysis Zone: In transportation planning, this term refers to traffic analysis zones. (See Traffic Analysis Zone).

Annexation: The act of incorporating an area into the legal jurisdiction of a city, county or state.

Annual Element: A list of transportation improvement projects proposed for implementation during the first program year.

Aquifer: An area of water-bearing soil or rock.

Arterial: A major thoroughfare, used mainly for through traffic rather than access to nearby property. Arterials generally have greater traffic carrying capacity than collector or local streets and are designed for continuously moving traffic. The principal and minor arterial road systems provide the network for travel between major points in both rural and urban areas.

Arterial, Collector: An arterial street which collects and distributes traffic from higher use arterial (principal and minor) to local streets or directly to traffic destinations. Collector arterial also serve trips which both start and end within a neighborhood.

Arterial, Major: Roads which convey traffic along corridors with a high-density of commercial or industrial activity. Major arterials emphasize mobility and de-emphasize access. They are also referred to as principal arterials.

Arterial, Minor: An arterial street which serves as a distributor of traffic from a principal arterial to collector arterial and local

GLOSSARY

streets, directly to secondary traffic generators such as community shopping areas and high schools, and serves trips between neighborhoods within a community. Minor arterials can be classified as either rural or urban, and as such each serves a different purpose.

Arterial, Principal: An arterial street which connects regional arterial to major activity areas and directly to traffic destinations. Principal arterials are the most intensive arterial classification, serving major traffic generators such as the Central Business District, major shopping and commercial districts, and move traffic from community to community.

Assisted Housing: Owner-occupied or rental housing units which are subject to restrictions on rents or sales prices as a result of one or more project based government subsidies. Assisted housing does not include holders on non-project based Section 8 Certificates.

Attached Single-Family Housing: Two adjacent single-family houses on separate lots with one attached common wall.

Average Daily Traffic (ADT): The average number of vehicles passing a point during a 24-hour period.

Calibration: The procedure used to adjust travel models to simulate base year travel.

Capital Cost: The expense of putting an alternative into operation, including construction costs, materials, and installation of equipment, and purchase of vehicles.

Capital Facilities: As a general definition, structures, improvements, pieces of equipment or other major assets, including land, that have a useful life of at least 10 years. Capital

facilities are provided by and for public purposes and services.

Capital Facilities Plan: A general plan that identifies and balances capital expenditures and revenues for 10 to 15 years and demonstrates the viability of the land use plan.

Capital Improvement Program (CIP): A six-year plan for future capital expenditures which identifies each capital project, including anticipated start and completion dates, and allocates existing funds and known revenue sources. The CIP is updated and adopted annually as part of the County budget.

Capital Improvements: Projects to create, expand or modify a capital facility. The project may include design, permitting, environmental analysis, land acquisition, construction, landscaping, site improvements, initial furnishings and equipment.

Carpool: Transportation system in which multiple travelers share transport in one automobile.

Central Business District (CBD): Usually the downtown retail trade area of a city, or generally an area of very high land valuation, traffic flow, and concentration of retail business offices, theaters, hotels, and service businesses.

Climbing Lanes: Paved lanes provided on hills astride motorized vehicle lanes to assist cyclists in ascending slopes out of the flow of motorized traffic.

Cluster Development / Clustering: A development design technique that concentrates buildings in specific areas on a site to allow the remaining land to be used for recreation, common open space or

preservation of environmentally sensitive areas. Planned Unit Developments typically use the clustering concept.

Collector-Distributor Street: A road generally parallel to an expressway which collects and distributes traffic at access points to the expressway involving through lanes.

Committed Improvement: An improvement which has been funded or has funds committed to it.

Commute Trip Reduction: Washington State Legislation passed in 1992 requiring specified large employers in certain counties to reduce vehicle occupancy within a specific time frame.

Comprehensive Plan: A statutory document which sets forth a government's major policies concerning the desirable future of the area's people and the physical development of the area. The Plan is adopted by the Board of County Commissioners according to the requirements of the Growth Management Act (GMA).

Comprehensive Planning: A planning process which requires inclusion of land use, transportation, water, and sewer, education health, and other elements.

Concurrency: A GMA requirement that the public facilities needed to maintain adopted level of service standards are available within six years of development.

Concurrent with Development: Transportation improvements or strategies are in place at the time of development or a financed commitment is in place to complete improvements or strategies within six years.

Consistency: A measure of whether any feature of the Plan or a regulation is

incompatible with any other feature of the plan, or another plan or regulation. The GMA requires that the Plan be both internally and externally consistent.

Corridor: A long, relatively narrow area within a region that includes a major direction of traffic flow or connects major sources of trips.

County Road Improvement District (CRID): A quasi-governmental organization formed by landowners to finance and construct roadway improvements beneficial to its members.

Countywide Planning Policies: As required for GMA, the Kitsap Regional Council adopted a series of policies which embody a vision of the future for Kitsap County. These policies are intended to guide the development of the comprehensive plans of the county and all cities within it.

Critical Area: Those areas designated and mapped by Kitsap County as having existing site conditions which require specific development standards to minimize adverse environmental impacts both on and off the site. Critical areas include wetlands, fish and wildlife habitat areas, geologically hazardous areas, frequently flooded areas, and critical aquifer recharge areas.

Debt Capacity: The amount of debt that a county can incur. The State has set legal debt limitations for counties. However, a city also has practical limitations on its ability to issue debts that result from the need to obtain approval of the county's voters, the cost of capital (interest rates), the desire to maintain good credit rating and other factors.

Debt Financing: A method of raising revenue for capital projects which involves

selling tax exempt bonds and incurring debt. The principle and interest in the bonds are repaid over time with property taxes or other revenues.

Debt Management: Borrowing enables a jurisdiction to free itself from the constraints of current revenues, raise large sums of money, and obligate future citizens to repay the debt. To insure that the power to borrow is used prudently, it is carefully regulated and managed by a set of policies and procedures known as debt management.

Demand: The amount of transportation desired by the public. Used in an economic sense and based on the theory and methodology of consumer demand, a schedule of the quantities of travel consumed at various levels of price or levels of service offered by the transportation system. Demand is not a fixed amount of travel, but a function of level of service. Nearly all urban travel forecasting methods are based on the concepts of travel demand and transportation facility supply interacting in a transportation network as the market to produce an equilibrium flow pattern.

Demand-Responsive Transit: Transit service using small vehicles with flexible routes and schedules, providing door-to-door or point to point transportation, often at the customers request.

Density: The number of families, persons, housing units, jobs, or building per unit of land usually expressed as “per acre”.

Development Activity: The application of human, financial and physical resources to satisfy human needs and improve quality of life.

Development Capacity: The amount of residential (number of dwelling units) and non-residential uses (building floor area in square feet) that could be built based on the zoning of a parcel of land. Capacity is calculated primarily by assuming a certain amount of development is permitted based on allowable density.

Disaggregate Demand Model: Model that is obtained by using the observations of the travel choice behavior of individuals directly for model calibration (See also Aggregate Demand Model).

Distribution: Process by which trip defined by origin are distributed among the various available destinations. Common trip distribution models are the gravity model and the opportunity model.

Drainage Basin: An area which is drained by a creek or river system.

Duplex: A single structure containing two dwelling units, either side by side or above one another.

Dwelling unit: One or more rooms located within a structure, designed, arranged, occupied or intended to be occupied by not more than one family and/or permitted tenants as living accommodations independent from any other family. A kitchen area must be contained within a dwelling unit.

Environmental Impact Statement (EIS): A document intended to provide discussion of significant environmental impacts which may result from a proposed projects; the purpose of the EIS document is to provide the government decision-makers with information to be considered prior to determining a project’s acceptability. If the responsible official determines that a project or action may have a

significant adverse effect upon the quality of the environment, the State Environmental Policy Act (SEPA) requires that an EIS be prepared.

Fair Share Housing: The concept that affordable and special needs housing should be proportionately distributed within an area rather than concentrated in specific locations. The reasons for this are both an equitable distribution of the costs to governments and the social integration of various groups of persons.

Ferry: A form of water-based transit. Ferries can allow for a mix of service: passenger-only, auto-only, or auto with walk on passengers.

Federal Transit Administration (FTA): Formerly the Urban Mass Transit Administration (UMTA). A component of the U.S. Department of Transportation which administers the federal transit program.

Federal Highway Administration: Division of the U.S. Department of Transportation which funds highway planning and programs.

Forecasting: The process of determining the future values of land use, socioeconomic, and trip making variables within a certain study area.

Four Step Modeling Process: Developed as part of the UTPS modeling process, the Four Step Process refers to the four general procedures used to forecast travel demand. These procedures are as follows: 1) Trip Generation, 2) Trip Distribution, 3) Model Split, and 4) Traffic Assignment.

Freeway: A divided arterial highway designed for the unimpeded flow of large

traffic volumes. Access to a freeway is rigorously controlled; intersections grade separations are the rule.

Functional Classification: A technique for assigning categories to transportation facilities based on a facility's role in the overall transportation system.

Gravity Model: A mathematical model of trip distribution based on the premise that trips produced in any given area will distribute themselves in accordance with the accessibility of other areas and the opportunities they offer.

Greenway: A linear open space area frequently associated with a natural or landscaped course for pedestrians or bicyclists. A greenway can be an open space connector linking parks, natural reserves, cultural features or historic sites with each other and with populated areas.

Growth Management Act (GMA): Legislation passed in 1990 (ESHB 2929) and subsequently amended, which requires urban counties and the cities within them to develop urban growth areas, comprehensive plans and concurrent funding plans (among other things) to deal with growth in their area for the next twenty years.

High Occupancy Vehicle (HOV): A vehicle which carries more than one person (i.e., carries the driver and at least one passenger).

High Occupancy Vehicle Improvement: Facilities or priority treatments, such as preferential signalization or queue bypasses, designed to improve HOV roadways.

High Occupancy Vehicle Lane (HOV Lane): A lane of traffic designated for use by HOV and transit. It is also known as a "diamond" or carpool lane.

Highway: Term applies to roads, streets, and parkways, and also includes right-of-ways, bridges, railroad crossings, tunnels, drainage structure, signs, guard rails, and protective structures in connections with highways.

Home-Based Trip: A trip that has either its origin or destination at the traveler's residence.

Home-Based Work Trip: A trip for the purpose of one's employment, with either trip end being one's home.

Household: A non-profit housekeeping unit consisting of any number of related persons or eight or fewer related and/or non-related persons, living together in a single dwelling unit.

Housing Unit: A dwelling unit or group quarter.

Impact Fees: A fee imposed on developers to help pay for the cost of providing public facilities needed to serve new development. The use of impact fees were authorized by the Growth Management Act.

Impedance: More general than Friction Factors, impedance shows the effect that various levels of time of time and cost will have on travel between zones.

Impervious Surface: A surface that cannot be easily penetrated (eg: asphalt or concrete).

Infill Development: Development consisting of either (1) construction on one or more lots in an area which is mostly

developed, or (2) new construction between two existing structures.

Infrastructure: The basic foundation of facilities and services (eg: water, waste water, power and streets) which are necessary for urban development.

Intermodal: More than one transportation mode or type of service.

Intermodal Connection: Point at which different modes, or methods, of transportation meet and allow transfers to occur.

Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA): Legislative initiative by the U.S. Congress restructuring funding for highway and transit programs. ISTEA authorized increased levels of highway and transportation funding and an enlarged role for regional planning commissions/MPOs in funding decisions. The Act also requires comprehensive regional long-range transportation plans extending to the horizon year of 2015.

Kitsap Regional Council (KRC): A regional body comprised of representatives from Kitsap County, the cities of Port Orchard, Bainbridge Island, Poulsbo and Bremerton, and the Suquamish and S'Klallam Tribes wherein elected officials from the municipal and county jurisdictions meet to discuss and decide on issues of mutual concern. The Council was formerly known as the Kitsap Regional Planning Council (KRPC).

Kitsap Traffic Analysis Zone (KTAZ): A subset of the Puget Sound Regional Council's traffic analysis zone system.

Land Use: A term used to indicate the use of any piece of land. The way in which land is being used is the "land use".

Land-Use Density: The level of compactness of urban development, usually described as population or dwelling units per acre.

Level of Service: A measure of a public facility or service's operational characteristics used to gauge its performance. In transportation planning Level of Service fall into six categories ranked A to F, with A representing free traffic flow and F representing extremely long delays.

Link: In traffic assignment, a section of the highway network defined by a node at each end. A link may be one-way or two-way.

Linked Trip: A trip from the point of origin to the final destination, regardless of the number of modes or vehicles used.

Local Improvement District (LID): A quasi-governmental organization formed by landowners to finance and construct a variety of physical infrastructure improvements beneficial to its members.

Marine Transit: Water-based transit service. Marine transit includes all types of ferry service, such as that provided by the Marine Division of WSDOT. Marine transit also includes private and intra-county ferry service.

Mass Transit: A general term used to describe land-based transit systems which can carry a high volume of passengers. The term usually refers to such modes as light rail, commuter, rail, or bus systems. The term does not include demand responsive transit and carpooling because the low volume per vehicle.

Methodology: The system of principals, practices, and procedures applied to a specific branch of knowledge.

Metropolitan Planning Organization (MPO): The organizational entity designated by law with lead responsibility for developing transportation plans and programs for urbanized areas of 50,000 or more in population. MPOs are established by agreement of the Governor and units of general purpose local governments which together represent 75 percent of the affected population or an urbanized area.

Minimum Path: That route of travel between two points which has the least accumulation of time, distance or other parameter to traverse.

Mitigate: To reasonably reduce or eliminate the impact of development; usually applied to regulations concerning critical areas.

Mitigation: Steps taken to moderate the impact of construction or operation of a project.

Mixed Use: The presence of more than one use in a structure (eg: a mixture of residential units and offices in the same building).

Mobility: Capable of moving or being moved from place to place. Transportation planning focuses on increasing mobility rather than decreasing congestion or increasing vehicle trips.

Mode: Means of travel such as single occupant vehicle, vehicle passenger, transit, walking, bicycle, ferry, carpool, or vanpool.

Mode Split: The statistical breakdown of travel by various modes, usually used to describe the percentage of people using certain modes of transportation.

Model: A mathematical or conceptual analysis tool that uses data on past and present conditions to make a projection about the future.

Multimodal: Two or more modes or methods of transport.

National Environmental Policy Act (NEPA): A comprehensive federal law requiring an analysis of the environmental impacts of federal actions.

National Highway System: A classification of roads authorized by ISTEA comprised of Interstate routes, a large percentage of urban and rural principal arterials, the defense strategic highway network, and strategic highway connectors.

Network: A set of nodes and connecting links that represent transportation facilities in an area. Normally associated with links are modal names, distances, levels of service, capacities, and levels of service and volume requirements. In travel demand forecasting a network is a system of links (road segments) and nodes (activity centers or points representing activity centers).

No-Build Alternative: An alternative which leaves the transportation situation as it already exists.

Node: An activity center.

Nonmotorized Mode: Any mode of transport that utilizes a power source other than a motor. Primary nonmotorized modes include walking (pedestrian), horseback riding (equestrian), and cycling.

Nonpoint Source Pollution: Pollution that enters water from dispersed and uncontrolled sources (such as surface runoff) rather than through pipes.

Origin: The location of the beginning of the trip or the zone in which a trip begins.

Paratransit: Personalized flexible transportation services which are operated publicly or privately generally using low or moderate capacity vehicles.

Park-and-Pool: A system in which commuters individually drive to a common location, park their vehicles, and share continued travel to a common destination in fewer vehicles.

Park-and-Ride: A system in which commuters individually drive to a common location, park their vehicles, and continue travel to their final destination via public transit.

Peak Direction: The direction of major traffic flow on a highway or transit facility during rush hours.

Peak Hour: The hour during which the maximum amount of travel takes place.

Peak Period: The period during which the maximum amount of travel occurs. Usually about 7 to 9 am and 4 to 6 pm.

Pedestrian Facility: A general term to describe a facility designed to accommodate pedestrian travel, such as sidewalk, a path, or a road shoulder.

Peninsula Regional Transportation Planning Organization (PRTPO): The Regional Transportation Planning Organization for Kitsap, Mason, Clallam, and Jefferson Counties. The PRTPO serves as a mechanism for coordinating transportation planning in and among those counties and as a conduit for federal and state transportation funds.

Point Source Pollution: A source of pollutants from a single point of conveyance such as a pipe. For example, the discharge from a sewage treatment plant is a point source.

Productions: The number of home-based trip ends in the zone of residence. For all non-home based trips, productions are synonymous with origins.

Puget Sound Council of Governments (PSCOG): Predecessor to The Puget Sound Regional Council. The former area-wide metropolitan planning organization (MPO) responsible for regional planning in the Puget Sound area (See Puget Sound Regional Council).

Puget Sound Regional Council (PSRC): Current MPO for the Puget Sound Region, including Snohomish, King, Pierce, and Kitsap Counties. The PSRC coordinates transportation planning in those four counties and allocates federal and state transportation funds. The PSRC is responsible for coordinating transportation planning with air quality emissions reductions requirements and manages the adopted regional growth strategy, Vision 2020.

Planned Unit Development (PUD): A planning technique which provides increased flexibility for the developer in exchange for a higher quality development. PUD's are characterized by a focus on overall project design rather than lot-by-lot zoning, setbacks and placement. Innovative housing types, open space and recreational facilities are often included.

Recreational Travel: Travel undertaken specifically for recreational purposes. Frequently occurring on weekends and to tourist attractions, recreational travelers often

drive for the pleasure of the trip and have different behavioral characteristics than commuters.

Regional Transportation Planning Organization (RTPO): Specific to Washington state, an RTPO is responsible for coordination and cooperation between jurisdictions on transportation related projects. RTPO's represent at least two rural counties and are eligible for some state and federal funding.

Road Improvement District (RID): A quasi-governmental organization formed by landowners to finance and construct roadway improvements beneficial to its members.

Ridesharing: Vanpooling and carpooling.

Right-of-Way (ROW): Land acquired for or occupied by a transportation use including unused space along the edges or median. Roads, highways, railways, and power lines are all built on rights-of-way.

Riparian Corridors: The transitional area along a stream, river, pond, lake or wetlands between the water's edge and the surrounding upland areas. This includes stream banks, lake shores, beaches, floodplains, side channels and the vegetation growing in these areas. Riparian zones function as wildlife corridors, providing food, shelter and shade. The vegetation in these corridors filters pollution from adjacent development, and helps control flooding and erosion by absorbing rainfall, slowing runoff and stabilizing stream banks.

Road Adequacy: A measure of a roadway segment's ability to accommodate a given traffic level.

Scenario: A set of assumptions used to describe a potential future. In transportation

GLOSSARY

planning, a scenario is either a set of transportation network assumptions or demographic assumptions used to analyze potential transportation alternatives.

Secondary Arterial: Roads which link activity centers and convey traffic onto major arterials. Secondary arterials provide both mobility and access. They are also referred to as minor arterials.

Single Occupant Vehicle (SOV): A vehicle carrying only the driver and no passengers.

State Environmental Policy Act (SEPA): The state law passed in 1971 requiring state and local agencies to consider environmental impacts in the decision making process. A determination of environmental significance must be made for all non-exempt projects or actions which require a permit, license or decision from government agency. If the action does not have significant adverse environmental impacts, a Declaration of Non-Significance (DNS) is issued. If the action or project could have major impacts, an Environmental Impact Statement (EIS) is required.

Traffic Analysis Zone (TAZ): A specifically delineated area of analysis used to forecast trip generation and traffic flow. TAZ boundaries are based on existing land use. Population and employment are held roughly equal for all TAZ's in a region.

Transit: Refers to a multiple-occupant vehicle operated on a for-hire, shared-ride basis, including bus, rail, ferry, taxi, shuttle bus, carpool or vanpool.

Transit Center: A transit stop or station at the meeting point of several routes or lines

which is designed to facilitate passenger transfers.

Transit Dependent: Relying on transit services instead of the private automobile as the main means of travel.

Transit Incentives: Actions encouraging the use of public transit, including increased service and reduced fares.

Transitway: An exclusive right-of-way that is used by transit and high occupancy vehicles.

Transportation Demand Management (TDM): Development of policies and programs to motivate people to use public transportation, such as bus pass subsidies, flex time programs and limiting free parking.

Transportation Improvement Board (TIB): A funding agency in the State of Washington which focuses on providing transportation funds to projects which are multi-jurisdictional.

Transportation Improvement Program (TIP): A staged multi-year program of transportation improvement projects. The TIP is usually updated annually.

Transportation Control Measures (TCM): Local actions taken to adjust traffic patterns or reduce vehicle with the intent of reducing polluting emissions. These local actions may include HOV lanes, right turn on red permission, ridesharing, etc. TCMs are generally associated explicitly with air quality issues. Compare to Transportation Demand Management (TDM).

Transportation Corridor: The area served and influenced by a given transportation facility.

Transportation Facility: Any portion of the physical infrastructure that supports or assists the movement of goods and people.

Transportation Management Area (TMA): Defined by ISTEA as all urbanized areas over 200,000 in population. Within a TMA, all transportation plans and programs must be based on a continuing and comprehensive process carried out by the Metropolitan Planning Organization (MPO) in cooperation with states and transit operators. The TMA boundary affects the responsibility for the selection of transportation projects that receive federal funds.

Transportation Management Association (TMA): Transportation management associations are private organizations which work with local jurisdictions, transit agencies, and business to promote HOV travel and discourage SOV travel.

Transportation System Management (TSM): An array of strategies intended to lead to a reduction in the number of vehicles using the road system while simultaneously serving the same number of travelers.

Trip: A one-way movement of a person or vehicle between two points for a specific purpose; sometimes called a one-way trip to distinguish it from a round trip.

Trip Assignment: The process of determining route or routes of travel and allocating the zone-to-zone trips to these routes.

Trip Distribution: The process by which the movement of trips between zones is estimated. The data for each distribution may be measured or be estimated by a growth factor process or by a synthetic model.

Trip End: Either a trip origin or a trip destination.

Trip Generation: A general term describing the analysis and application of the relationships which exists between the trip makers, the urban area and the trip making. It relates to the number of trip ends in any part of the urban area.

Trip Purpose: The reason for making a trip, normally one of ten possible purposes. Each trip may have a purpose at each end, e.g., home to work.

Trip Table: A table showing trips between zones. The trips may be separated by mode, by purpose, by time period, by vehicle type, or by other classification.

Urban Growth Area (UGA): An area designated for urban development and to be served with urban services. The Growth Management Act requires designation of urban growth areas which are "the intensive use of land"; this is incompatible with agricultural products or mineral extraction.

Urban Growth Boundary (UGB): The point at which urban growth is prohibited and only growth which is not urban in nature is allowed.

Urbanized Area: An urbanized area contains a city (or twin cities) of 50,000 or more (central city) plus the surrounding closely settled incorporated area which meet certain criteria of population size or density.

Unlinked Trip: Any segment of a linked trip.

U.S. Department of Transportation (USDOT or DOT): The Principal direct federal funding and regulating agency for

GLOSSARY

transportation facilities and programs.
Contains FHWA and the FTA.

Vanpool: Privately or publicly provided vans transporting groups of persons to and from work on a regular basis. Vanpools generally carry between 7 and 15 people traveling together for their commute trip.

Vehicle Miles Traveled (VMT): A standard area-wide measure of travel activity. Most conventional VMT calculations is to multiply average length of trip by the total number of trips.

Vision 2020: The adopted long-range regional growth and transportation strategy for the Central Puget Sound area (King, Kitsap, Pierce and Snohomish counties). It combines a public commitment to a growth vision with the transportation investments and other programs needed to support that vision. It identifies the policies and key actions necessary to implement the strategy. Vision 2020 was created by the PSRC in cooperation with local jurisdictions.

Watershed: The geographic region within which water drains into a particular river, stream or other body of water. A watershed includes hills, lowlands and the body of water into which the land drains.

Wetlands: Areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to develop specific soil types and to support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.