

Chapter 1. Summary

The Proposed Action is the Kitsap County Urban Growth Area (UGA) Sizing and Composition Remand Evaluation. The Proposed Action consists of amendments to Kitsap County's Comprehensive Plan approved by the County in 2006 consistent with the Growth Management Act (GMA) 10-year update review cycle. The proposed Comprehensive Plan amendments are the result of a remand by the Central Puget Sound Growth Management Hearings Board (CPSGMHB) requiring the County to revisit its UGAs to ensure that the County's residential land capacity assumptions reflect local conditions and GMA goals for future growth. As a result of reviewing UGA residential capacities and sizing, the County is also proposing consistency amendments with its adopted Comprehensive Plan Elements, including land use, capital facilities, and others.

Chapter 1 of the Final Supplemental Environmental Impact Statement (SEIS) provides a summary of alternatives under review and results of the impacts analysis of the studied alternatives together with mitigation measures. In addition to summarizing Draft SEIS alternatives, this Final SEIS introduces the Preferred Alternative. For more information on the Preferred Alternative, please see Chapter 2 and for analysis across a variety of topics, please see Chapter 3.¹ Chapter 4 provides clarifications and corrections to the Draft SEIS, and Chapter 5 provides responses to comments received during the Draft SEIS comment period held in May/June 2012. Chapter 6 provides acronyms, abbreviations, and references.

1.1. Purpose of Proposed Action

Based on an August 2011 decision² by the CPSGMHB, Kitsap County is re-examining eight of ten UGAs expanded during the 2006 Comprehensive Plan update process. This decision followed a five-year legal challenge that the Court of Appeals ultimately remanded back to the CPSGMHB for decision. As part of the remand process, the CPSGMHB found Kitsap County out of compliance with GMA in the following areas:

- **Urban Density/Minimum Densities.** The CPSGMHB found local circumstances did not support the County's reduction of minimum densities in its UGAs from five to four dwelling units per acre in the Urban Low and Urban Cluster Residential designations. The Board concluded the reduction and resultant UGA expansion created inconsistencies with the comprehensive plan, did not comply with RCW 36.70A.110, and was not guided by GMA Goals 1 and 2 on Urban Growth and Reducing Sprawl, respectively.

¹ The Draft SEIS alternatives are summarized in this Chapter but the Draft SEIS should be consulted for more detailed information.

² *Suquamish Tribe et al. v. Kitsap County*, CPSGMHB No. 07-3-0019c. Final Decision & Order on Remand (8/31/2011) (Order on Remand).

- **Land Capacity Analysis – Accounting for Environmentally Critical Areas Twice.** The CPSGMHB determined the County “double-dipped” when it discounted twice for constrained lands in its Urban Restricted designation. Specifically, the County’s use of a zoning density minimum after critical areas were already discounted understates the actual capacity for development of Urban Restricted designated lands.
- **Land Capacity Analysis – Minimum Density.** The CPSGMHB found four dwelling units per acre was not an appropriate capacity multiplier in the County’s Urban Low and Urban Cluster designations; it is not a supportable measure of capacity based on local circumstances; and is not consistent with the GMA Goals, the Buildable Lands Report (BLR) and the County’s Comprehensive Plan.

Based on the Remand Order, the UGAs requiring evaluation include:

- Kingston
- Silverdale
- Central Kitsap
- East Bremerton
- West Bremerton
- Gorst
- McCormick Woods/ULID#6, and
- Port Orchard/South Kitsap.

This UGA evaluation must be completed by August 31, 2012 per the Remand Order.

UGA remand issues primarily apply to the low-density residential zones. However, due to the revisiting of land supply and appropriate UGA boundaries in the listed UGAs, the County is also voluntarily reviewing the density trends and assumptions in medium density, high density, and mixed use residential zones located in the UGAs listed above.

Further, as a result of revisiting UGA sizing, the County is undertaking Comprehensive Plan amendments that are necessary for consistency, such as land use and capital facilities policy amendments, as well as a Capital Facilities Plan (CFP) update. The County’s 2007-2012 CFP requires update to a new six-year period (2013 to 2018) and must demonstrate an ability to serve growth with urban services through the year 2025 within newly reconfigured UGA boundaries.

Two unincorporated UGAs are not included in this remand effort: the Poulsbo and South Kitsap Industrial Area (SKIA) UGAs. The Poulsbo UGA is not included as it was not expanded in the 2006 Comprehensive Plan update process, does not include the three designations subject to the order (Urban Restricted, Urban Low and Urban Cluster) and was not subject to legal challenge during appeals since 2006. Additionally, the SKIA UGA is not included because it was predominantly annexed by the City of Bremerton in 2008 and contains no residential zoning as it is a commercial and industrial UGA.

1.2. State Environmental Policy Act Process

The State Environmental Policy Act (“SEPA”; Revised Code of Washington [RCW]) 43.21C) requires government officials to consider the environmental consequences of actions they are about to take and to consider better or less damaging ways to accomplish those proposed actions. They must consider whether the proposed action will have a probable significant adverse environmental impact on elements of the natural and built environment.

This Final SEIS provides qualitative and quantitative analysis of environmental impacts as appropriate to the programmatic nature of the Comprehensive Plan and UGA amendments. The adoption of comprehensive plans or other long range planning activities is classified by SEPA as a non-project (i.e., programmatic) action. A non-project action is defined as an action that is broader than a single site-specific project, and involves decisions on policies, plans, or programs. A EIS for a nonproject proposal does not require site-specific analyses; instead, the EIS discusses impacts and alternatives appropriate to the scope of the non-project proposal and to the level of planning for the proposal (WAC 197-11-442).

As described in the SEPA Rules (WAC 197-11-405(4)), the purpose of a SEIS is to add information and analysis to supplement the information in a previous EIS. A SEIS may address new alternatives, and this is the primary purpose of this SEIS. Scoping for a SEIS is not required.

This SEIS, addressing the UGA Remand, supplements the following EIS:

- Kitsap County 10-Year Comprehensive Plan Update – Integrated Plan and Environmental Impact Statement, Volume II: Final EIS, December 2006. The Kitsap County 10-Year Comprehensive Plan Update Draft and Final EISs are herein incorporated by reference.

Consistent with the SEPA Rules, this SEIS does not fully repeat the analysis of actions, alternatives, or impacts included in the 2006 Final EIS. The prior 2006 Final EIS alternatives studied a broad range of UGA land use patterns, boundaries, and population capacities. None of the SEIS alternatives exceed the prior range of geography or population capacity. However, having the same UGA boundaries and land use designations, the SEIS No Action Alternative is similar to the Preferred Alternative in the 2006 FEIS, and provides a link to the prior analysis.

This SEIS evaluates environmental topics most pertinent to the task of determining appropriate UGA boundaries, growth capacities, and public services/infrastructure needed to serve reconfigured UGAs. The natural and built environment topics studied in this SEIS include:

- Natural Environment
 - Water Resources (Surface and Ground)
 - Plants and Animals
- Built Environment: Land Use and Transportation
 - Land and Shoreline Use
 - Relationship to Plans and Policies
 - Population, Housing and Employment
 - Transportation

Summary

- Built Environment: Public Services and Utilities
 - Public Buildings
 - Fire Protection
 - Law Enforcement
 - Parks and Recreation
 - Schools
 - Solid Waste
 - Wastewater
 - Stormwater
 - Water Supply
 - Energy and Telecommunications
 - Library

1.3. Public Involvement

Kitsap County has maintained a website with educational information and a calendar of events at: http://www.kitsapgov.com/dcd/community_plan/remand%202011/remand.htm.

In addition, the County held several meetings and two hearings to notify citizens, agencies, and interested parties about the remand effort and to determine alternatives for the SEIS, including:

- Public Workshops – Remand 101 Meetings, November 7 and 11, 2011
- Public Workshops on Preliminary UGA Alternatives, January 24 and 25, 2012
- Board of County Commissioners (BOCC) Public Hearing on Preliminary UGA Alternatives, February 6, 2012
- Public Open Houses on the Draft SEIS, May 15 and 17, 2012
- Board of County Commissioners Hearing, June 4, 2012

Further, between fall 2011 and summer 2012, County staff conducted a series of meetings with cities, special districts, and remand appellants. The purpose of these meetings was to share information about the remand effort, to hear from agency staff about issues and concerns, and to obtain relevant information for the remand process. It is anticipated that these meetings will continue as needed throughout the duration of this project.

The Draft SEIS was issued with a 30-day comment period between May 7 and June 6, 2012; this Final SEIS responds to the comments received on the Draft SEIS, and make any necessary changes or corrections to the Draft SEIS.

The County intends to continue to solicit public and agency input. A public hearing is anticipated to be held on the proposed Comprehensive Plan amendments and CFP associated with the Preferred Alternative, prior to adoption. More information about scheduled meetings can be found at the website identified above.

1.4. Proposed Action, Alternatives, and Objectives

1.4.1. Objectives

As part of describing proposed actions and alternatives, SEPA requires the description of proposal objectives and features. Agencies are encouraged to describe a proposal in terms of objectives, particularly for agency actions to allow for consideration of a wider range of alternatives and measurement of the alternatives alongside the objectives. Kitsap County's objectives for the UGA Sizing and Composition Remand Evaluation are listed below.

- Make necessary changes to the Comprehensive Plan based on GMA goals and the Remand order;
- Accommodate the CPP population growth targets through 2025 for unincorporated UGAs;
- Provide a UGA land capacity method that recognizes local circumstances; and
- Ensure efficient provision of and adequately available public services and capital facilities that serve existing and new development in urban areas.

1.4.2. Proposed Action and Alternatives

The Proposed Action consists of amendments to Kitsap County's Comprehensive Plan approved by the County in 2006 consistent with the Growth Management Act (GMA) 10-year update review cycle. The proposed Comprehensive Plan amendments are the result of a remand by the Central Puget Sound Growth Management Hearings Board (CPSGMHB) requiring the County to revisit its UGAs to ensure that the County's residential land capacity assumptions reflect local conditions and GMA goals for compact growth. As a result of reviewing UGA residential capacities and sizing, the County is also proposing consistency amendments with its adopted Comprehensive Plan Elements, including land use, capital facilities, and others.

The SEIS addresses four alternatives: No Action, Alternative 1, Alternative 2, and the Preferred Alternative. The No Action Alternative is required by SEPA and is the continuation of the current Comprehensive Plan adopted in 2006. Alternatives 1 and 2, and the Preferred Alternative review different UGA capacities and boundaries.

- **No Action Alternative.** This alternative retains the current Comprehensive Plan, UGA boundaries, and associated land use. Some trend assumptions for single-family densities, based upon 2005 development patterns, would be incorporated into the County's land capacity method. With the greater territory and increased density assumptions, this alternative provides for the largest UGA boundaries and the greatest capacity for growth.
- **Alternative 1.** This alternative modifies the UGA boundaries and associated land use the most dramatically. Alternative 1 reduces UGA boundaries the greatest amount in all studied UGAs. The bases for the reductions are more optimistic long-term development assumptions about future residential densities and a compact urban form.
- **Alternative 2.** This alternative provides for intermediate UGA boundary modifications and some changes to land capacity assumptions based on local circumstances and projected future development patterns to 2025. Assumed densities are greater than the No Action Alternative but less than Alternative 1. Discount factors in the land capacity method are changed to reflect recent trends. With moderate density and discount factor changes, UGA boundary reductions are more moderate as a result.

- The **Preferred Alternative** provides UGA boundary modifications similar to but smaller than Alternative 2 and provides changes to land capacity assumptions similar to Alternative 2. Assumed densities are the same as assumed for Alternative 2. Discount factors in the land capacity method are changed to reflect recent trends, except that the existing unavailable land factor would be retained rather than increased. On the whole, the Preferred Alternative has a projected population similar to Alternative 2 and the Countywide Planning Policies but located in more compact boundaries in the range of Alternatives 1 and 2.

Implementing policies and regulations are addressed for some aspects of Alternatives 1 and 2 and the Preferred Alternative.

- **Land Capacity Method.** All alternatives consider land capacity assumptions and propose changes based on local circumstances observed from 2000-2010. Primarily, the achieved densities found in unincorporated residential zones are considered. Alternative 2 and the Preferred Alternative consider modifications to discount factors such as public facilities based on observed trends. Alternative 2 also considers changes to unavailable lands factors.
- **Land Use and Zoning Map.** The following revisions to the Land Use and Zoning Maps governing future land uses are proposed.
 - Eight UGAs are considered for boundary changes in Alternatives 1 and 2 and the Preferred Alternative to accommodate population growth targets based on a new land capacity method that recognizes local circumstances. All studied UGAs would be amended with Alternative 1. Alternative 2 requires fewer boundary changes than Alternative 1. Due to the evaluation of land supply and demand not all UGAs require reduction in territory under the Preferred Alternative. Specifically, East Bremerton, West Bremerton, and Gorst boundaries would not require reduction. Kingston, Silverdale, Central Kitsap, and Port Orchard would be reduced. McCormick Woods/ULID6 would be slightly increased but only to include utility lands that provide service only to the adjacent UGA and have no development capacity.
 - UGA changes and land use and zoning redesignations are proposed in Alternatives 1 and 2 and the Preferred Alternative. These changes would remove territory from the current UGAs and redesignate them with appropriate rural classifications in place of urban classifications. All eight study UGAs would be affected. Alternative 1 would completely remove the Illahee area from the UGA. Alternative 2 would add some UGA territory to the Silverdale and Central Kitsap UGAs while also removing other territory. The Preferred Alternative would add UGA territory to the Central Kitsap UGA north of SR 303 while reducing territory elsewhere.
- **Plan policies.** Alternatives 1 and 2 and the Preferred Alternative propose amendments to the goals and policies of the Comprehensive Plan based on the revised Land Use Map and for purposes of maintaining internal consistency. Policies regarding UGAs and population would be amended. Further policies regarding capital facilities would be changed based on the balance of land use growth, needed improvements, and funding. A new Capital Facilities Plan (CFP) is proposed for Alternatives 1 and 2 and the Preferred Alternative.
- **Implementing regulations.** Development regulations, such as zoning, implement the Comprehensive Plan. Alternative 1 would remove the Illahee Greenbelt Zone as the area would become rural. In Alternative 2, the County is considering interim wastewater systems for final plats and proposing amendments to Title 17, footnote 48 which requires all new subdivisions to hook-up to sewer service. In the Preferred Alternative, the County is considering amendments to Title 17 that would require sewer connection when in proximity to a sewer line to be consistent with County health and sewer codes (e.g. Title 13). Additional amendments to Title 17 Zoning are to ensure consistency with the proposed land use

alternative. It is also anticipated that amendments to Kitsap County Code (KCC) 18.04.100 Categorical Exemptions for Infill Development would be needed if there are changes to the residential or infill capacity anticipated in the Silverdale Mixed Use Infill Trip Bank.

1.5. Major Issues, Significant Areas of Controversy and Uncertainty, and Issues to be Resolved

Major issues, significant areas of controversy and uncertainty, and issues to be resolved include:

- The selection of land capacity adjustments reflecting trends
- The reduction in UGA boundaries including location and extent
- The provision of public services and utilities to alternative UGA boundaries, including altered level of service standards
- The potential for banking population from UGAs that are undersized and reallocating to adjoining and associated cities or to UGAs that are oversized.

1.6. Summary of Impacts and Mitigation Measures

Section 1.6.1 describes the potential impacts that may occur under all studied alternatives. The unique impacts of each alternative are addressed in Section 1.6.2. Potential mitigation measures beyond adopted codes and regulations are then addressed in Section 1.6.3.

1.6.1. Impacts Common to All Alternatives

This section describes impacts common to the studied alternative by element of the environment.

Water Resources

The growth expected to occur in the future will convert land from forest and vegetative cover to urban uses and increase the amount of impervious surface in the UGAs. Impervious surfaces intercept precipitation and alter the flow and timing of stormwater runoff (increasing the amount of stormwater runoff). This can reduce groundwater recharge, increase erosion and sedimentation, change flow patterns in streams, increase flooding, and adversely affect water quality in ground, surface and marine waters. Increased impervious surface also has the potential to affect the depth and amount of water in wetlands, which can alter the composition of plant species in the wetland and its wildlife habitat value.

Plants and Animals

There would be a change in the amount and type of vegetation in the UGAs as land is converted from forest and vegetative cover to impervious surface under all the alternatives. While there are no known rare plants within the UGA boundaries, there is the potential for unmapped rare plants species that could be adversely impacted by development.

There would be a reduction in habitat for native wildlife species and development may fragment habitat and reduce habitat connectivity. This would also likely change the numbers and type of species occurring in the UGAs – favoring those wildlife species that can adapt to an urban environment.

Urbanization and increased stormwater runoff from impervious surfaces is the greatest threat to fish species because of the potential for higher stream water temperatures, erosion, sedimentation, increased peak flows and scour, reduced groundwater recharge for augmenting base flows, streambank armoring, channelization, and reduced riparian and wetland areas.

The impacts described above may adversely affect listed fish and wildlife species. In particular, listed fish species such as bull trout and Chinook and chum salmon are vulnerable to the changes that could occur in surface waters.

Land and Shoreline Use

All studied alternatives assume an increase in population and employment over the study period up to 2025. As a result of the expected growth, areas with new development would see an increase in activity in the localized area. Impacts of the additional population and employment growth include:

- Conversion of undeveloped land for new residential, commercial and/or industrial uses.
- Increased intensity of use on parcels currently developed through the redevelopment of those parcels or infill development on currently underutilized parcels.
- Land use compatibility issues resulting from the encroachment of new urban development patterns on current uses, often more rural in nature. Encroachment can also include two or more urban uses, such as industrial and residential uses, that are likely to have more conflicts. Encroachment can occur within the existing UGAs or in rural areas adjacent to the UGA boundary.

Relationship to Plans and Policies

The studied alternatives have similar impacts for the following types of plans and requirements:

- **Public Participation:** Consistent with GMA, public involvement has been based on a public participation plan and has involved workshops, open houses, and hearings. The process to date is described above in Section 1.3.
- **SEPA:** In 2006 the County prepared an EIS on three draft alternatives and a preferred alternative (largely the same as the No Action Alternative in this SEIS). The study alternatives in this SEIS fall in the range of the prior analysis.
- **Employment:** All alternatives provide for employment growth to meet forecasts.
- **Centers Designations – VISION 2040:** All alternatives maintain centers designations for Silverdale, and none would change the center boundaries or the land use within. Any mixed use or residential densities would be higher under Alternatives 1 or 2 or the Preferred Alternative, but all alternatives would continue to meet or exceed the center designation criteria. The City of Bremerton has annexed SKIA and no change to center status is anticipated there, as is also the case with Downtown Bremerton.
- **Community Designations – VISION 2040:** None of the alternatives change the growth allocations adopted in Countywide Planning Policies (CPPs) and applicable to the various cities and communities in VISION 2040. Accordingly, there is no anticipated impact to the designations of the cities and communities under the regional plan as metropolitan, core, large city and small city.
- **Transportation:** All alternatives would add traffic to County and state roads, but all would meet the County's countywide concurrency measure.

- **Municipal Plans:** External consistency with Municipal Comprehensive Plans is addressed by consistency with the Countywide Planning Policies.
- **Tribal Plans:** None of the studied alternatives alter the projected land use or growth of tribal reservations. The County will continue to coordinate with the tribes through the Kitsap Regional Coordinating Council (KRCC) and other forums.

Population, Housing and Employment

All studied alternatives assume an increase in population and employment over the planning period. The studied alternatives differ in their assumed intensity and location of development. Impacts of population and employment growth within the County from the present through 2025 likely include an increase in demand for infrastructure and public services, as well as the loss of open space within the UGAs as areas convert from semi-developed to developed characters. Population projections are approved through the KRCC process with Kitsap County's cities and Tribes.

Transportation

All studied alternatives are expected to experience common types of impacts, with the intensity of the impacts increasing as population and employment levels increase. The percentage of deficient state highway miles projected for 2025 are generally equal for all four alternatives: 62% for the No Action Alternative, and 63% for Alternatives 1 and 2 and the Preferred Alternative. The projected increase in demand for Washington State Ferries, transit, and other modes of transportation would be comparable for all alternatives.

Public Buildings

Under all alternatives, growth in population and employment would result in increased demand for government facilities, including administrative offices, maintenance facilities, district and superior courtrooms and community centers. Increased demand would result in a need for new facilities or expansions and improvements to existing facilities. Construction of new facilities would require the County to acquire additional property or reconfigure existing facilities, depending on where the specific need is located. Increased demand for community centers would be greatest in specific areas of higher growth and densification. Demand for maintenance facilities may also occur in specific areas of higher growth, although maintenance facilities would serve broader areas. Additional or expanded government facilities would also result in increased staffing needs for operation and maintenance. Under all alternatives, if annexation or incorporation of portions of the unincorporated UGAs occurs, some functions and responsibilities of the County (e.g., land use, facilities maintenance) would be assumed by cities.

Fire Protection

New development and population growth will result in an increased demand for fire protection. Greater infill development will allow for greater efficiency of fire protection service as compared to UGA expansion, which could increase driving distance and response time to the larger population. The capital facilities planning conducted within this Plan update will allow the County and fire districts to better anticipate funding needs and sources for future fire protection needs. A greater tax base will also allow for increased funding.

Fire district fire protection service, equipment and facilities are funded almost exclusively by levies. If annexation or incorporation of unincorporated area occurs and a municipal fire department is established, that fire department would have access to additional revenues and

could be funded by the city's general fund, with revenue from property and other taxes. Under all alternatives, these revenues would increase and could partially or fully offset the increased need for services and facilities.

The specific need for personnel services, equipment, and facilities would be determined through ongoing planning by the various fire protection districts and would be based on response time goals and the timing and location of future development.

Law Enforcement

New development and population growth would result in an increased demand for law enforcement and correctional facilities under all alternatives. Increased densities would allow for greater efficiency of service in urban areas. A more compact development pattern allows for smaller patrol areas and faster response times. A greater tax base would also allow for increased funding.

If urban areas of the county are annexed into adjoining cities or incorporated as new cities, patrol-related functions may be assumed by the cities while joint use of some facilities (e.g., jails) could be retained at the county level.

The ratios of commissioned officers and corrections officers to population served would decrease as the population increases in each of these alternatives, unless there is a commensurate increase in law enforcement staffing.

Parks and Recreation

All alternatives would result in an increased demand for park and recreation facilities or enhancement of existing facilities. As population growth occurs in cities, Tribal areas, and unincorporated county lands, demand for parks, open space, and recreational facilities will increase. The specific facilities most affected by increased use would depend in part on the location of growth, which would vary by alternative. The demand for trails would increase both for recreational/nature trails and trails used for transportation purposes.

There would be localized neighborhood impacts of increased demand on parks, with existing parks becoming more heavily used. Where parks are developed, adjacent neighborhoods would experience increased impacts from construction as existing acquisitions and newly acquired park properties are developed. In the long term, adjacent neighborhoods would experience impacts associated with increased intensity of use such as parking on neighborhood streets, more pedestrians on sidewalks, and evening noise and glare. However, these impacts would generally be less than if the same land were converted to other urban uses such as higher density residential, commercial, or industrial.

The growth in population could put development pressure on park and recreation properties with cultural/historical significance. Such properties would be at risk of alteration or degradation of their cultural/historical value.

An ongoing need to budget for acquisition and development of park properties to meet growing demand would be associated with all alternatives. Responsibilities and needs for additional staff to maintain and patrol parks and facilities would increase as the number of parks and facilities increases commensurate with the population. Community and local parks that do not meet the County's definition of regional facilities in UGAs that are incorporated into cities would no longer demand staff and resources from the County, but would require staffing and maintenance from those cities.

Schools

The alternatives will affect school districts by increasing residential development, and consequently the number of students enrolled within the four school districts serving the unincorporated county. Based on where population growth would occur and the demographic of the population within the unincorporated county, each school district will be affected differently. Impacts will generally be higher at schools serving the more urbanized area located within UGAs.

Solid Waste

The additional population capacity accommodated by the alternatives would increase demand for additional solid waste capacity. The degree of need would vary among the alternatives based on population and the capacity of existing solid waste facilities. The County, through contracts with private haulers, will continue to be able to provide solid waste management for an increased population regardless of the alternative ultimately chosen. The capital facilities planning conducted within this Comprehensive Plan will allow the County to better anticipate funding needs and sources for future solid waste disposal facilities.

The County would have adequate time to plan for landfill capacity for solid waste generation under all alternatives, and the County's current contracted landfill location is expected to have sufficient capacity through 2025 and beyond if a new or extended contract is enacted.

Wastewater

Under any of the alternatives, additional sanitary sewer service would be necessary to serve increased demand. Existing treatment plants would handle increased wastewater volumes generated by residential growth, transitioning septic systems and increased pollutant loads generated by new commercial and industrial development. Conveyance system extensions would be necessary to provide sanitary sewer service to developing areas within UGAs. Several capacity improvements to existing pump stations and sewer mains would also be needed to ensure the existing system could handle additional flows from development within the UGAs.

Extensions to conveyance systems would occur incrementally, funded by new development, local improvement districts or private property owners as appropriate. Funding for regular maintenance of systems is provided through user fees.

Estimates of future demand in this analysis are based primarily on projections of population growth. However, additional demand may be generated by new commercial and industrial growth as well. Demand may also include some transition of existing development on septic systems to public sewer.

Construction of new sewer facilities would have potential to result in impacts to both the natural and built environment. These impacts would be addressed at the project level at the time of project implementation.

Stormwater

Under all alternatives, additional stormwater drainage systems would be needed to handle increased stormwater runoff resulting from new development and added impervious surfaces such as roads and driveways. The creation of more impervious surface area and the reduction of forest land cover would reduce the amount of rainwater intercepted by trees and infiltrated into the ground, thereby increasing the volume and rate of stormwater runoff. Without adequate drainage facilities, an increase in either peak flow or volume of stormwater runoff could potentially add to

existing flooding problems by increasing the depth of flooding, the area that is flooded, the frequency of flooding, and the length of time an area remains flooded. In some cases, an increase in the peak flow or volume of stormwater runoff may also create new flooding problems (i.e., flooding hazards in areas that are not currently subject to them).

The impacts of increased runoff on drainage systems would depend on several factors, such as soil permeability and topography. Where soil conditions allow the use of infiltration facilities, runoff from new development would not increase for smaller, more frequent storm events or even for some larger storm events. In areas unsuitable for infiltration facilities, some increases in stormwater runoff could occur despite the requirement for retention/detention facilities in new development.

Any new development and redevelopment are subject to the requirements of Kitsap County's Surface and Stormwater Management (SSWM) Program. These regulations require site-specific and project-level engineering analyses be conducted to determine potential impacts on areas upstream and downstream of proposed development.

In some cases, redevelopment would add private stormwater control facilities where none currently exist. This could result in some localized reductions in stormwater runoff from individual properties served by County stormwater drainage systems where soils permit infiltration, or it could reduce the rate of flow into County drainage systems during large storm events from properties where retention/detention facilities are added.

Water Supply

Demand for water service would increase under any of the alternatives. Water demand associated with residential, commercial and industrial land uses would be concentrated within UGAs under all alternatives.

Energy and Telecommunications

For each private utility (gas, electricity, and telecommunications), increases in population capacity will create increases in demand. Funding for the increased demand would be acquired through user fees. In general, increased densities associated with the population growth would allow for greater efficiency in service by minimizing the length of pipe or line that would need to be installed and maintained. By service type, it is likely the following would occur with growth:

- Cascade Natural Gas (CNG) would increase its service connections upon customer request. Additional facilities would be constructed only when existing systems capacity has been maximized.
- The Puget Sound Energy (PSE) Total Energy System Planning Department would utilize the forecasts for future need for electricity based on 20-year OFM population projections to accommodate increased growth.
- Telephone, cable, and cellular service companies would increase their service connections upon customer request.

Library

As population increases, both within UGAs and at a countywide level, so too will the demand for library resources and services. Existing facilities may have to be expanded or new facilities may have to be built. Additional staffing, library materials in circulation, technological resources, and other services could be required to meet growing demand. Areas where proportionally higher new population growth would occur, would experience higher localized demand for additional library resources.

1.6.2. Matrix of Impacts by Alternative

Table 1-1 provides a high level summary comparing the action alternatives in relation to the No Action Alternative. Table 1-2 provides a topic by topic comparison of unique impacts by each studied alternative. For more information, please see Chapter 3 of the Draft and Final SEIS.

Table 1-1. Action Alternatives compared to the No Action Alternative

Alternative 1	Preferred Alternative	Alternative 2
Growth and Land Use		
35% reduction in Urban Growth Area (UGA) acres below the No Action Alternative	21% reduction in UGA acres below the No Action Alternative	13% reduction in UGA acres below the No Action Alternative
19.8% of land in the UGAs is in higher density use designations Urban Medium, Urban High, Mixed Use and similar) – 5.7% greater than the No Action Alternative ³	17.8% of land in the UGAs is in these higher density use designations – 3.7% greater than the No Action Alternative ³	16.3% of land in the UGAs is in these higher density use designations – 2.2% greater than the No Action Alternative ³
The overall density of the projected growth (projected population growth per developable acres) in UGAs for Alternative 1 is 16.2 people per developable acre, 3.7 people per acre more than the No Action Alternative.	The overall density of the projected growth (projected population growth per developable acres) in UGAs for the Preferred Alternative is 14.6 people per developable acre, 2.1 people per acre more than the No Action Alternative.	The overall density of the projected growth (projected population growth per developable acres) in UGAs for Alternative 2 is 13.8 people per developable acre, 1.3 people per acre more than the No Action Alternative.
Alternative 1 would more completely meet the intent of Growth Management Act (GMA) goals to guide growth in urban areas, reduce sprawl, and is less likely to prematurely convert rural areas to urban areas. This is due to the more compact UGA boundaries and the higher densities planned.	Same as Alternative 1. In addition, the Preferred Alternative would be most in balance of studied alternatives in terms of growth targets and urban land supply and may have less pressure on rural areas as a result.	Same as Alternative 1. In addition, Alternative 2 would be more in balance in terms of growth targets and urban land supply and may have less pressure on rural areas as a result.
Alternative 1 would provide a land capacity that is undersized at 14% under the projected population.	The Preferred Alternative has capacity that is within 2% of the projected population. Kitsap County considers UGA capacity within +/- 5% of the growth target to be appropriately sized.	Alternative 2 has capacity that is within 3% of the projected population. Kitsap County considers UGA capacity within +/- 5% of the growth target to be appropriately sized.

³ The percentage in high density residential designations versus low density residential designations does not include lands annexed between 2006 and 2012.

Table 1-1. Action Alternatives compared to the No Action Alternative (continued)

Alternative 1	Preferred Alternative	Alternative 2
Natural Environment		
0.6 to 0.9% reduction in projected impervious surfaces below the No Action Alternative	0.3 to 0.5% reduction in projected impervious surfaces below the No Action Alternative.	0.2 to 0.3% reduction in projected impervious surfaces below the No Action Alternative
Least amount of urban land subject to more intense development and resulting loss of habitat area	The Preferred Alternative has UGA boundaries in the range of Alternatives 1 and 2 and is expected to have less habitat impacts in the range of the alternatives, but in any case, a reduction below the No Action Alternative.	Medium amount of urban land subject to more intense development and resulting loss of habitat area
Transportation, Infrastructure, and Public Services		
Vehicle Miles Travelled: Increase of 33% by 2025, which is 4% less than the No Action Alternative	Vehicle Miles Travelled: Increase of 34% by 2025, which is 3% less than the No Action Alternative	Vehicle Miles Travelled: Increase of 34% by 2025, which is 3% less than the No Action Alternative
Deficient Roadway Segments: 8.0% of lane-miles by 2025, which is 1.5% less than No Action	Deficient Roadway Segments: 8.3% of lane-miles by 2025, which is 1.2% less than No Action	Deficient Roadway Segments: 8.4% of lane-miles by 2025, which is 1.1% less than No Action
Wastewater – approximate cost for facilities to serve: \$373,633,000, about 21% less than the No Action Alternative	Wastewater – approximate cost for facilities to serve: \$435,584,000, about 6% less than the No Action Alternative	Wastewater – approximate cost for facilities to serve: \$435,048,000, about 7% less than the No Action Alternative
Public Buildings, Fire Protection, Law Enforcement, Parks and Recreation, Schools, Solid Waste, Stormwater, Water Supply, Energy and Telecommunications, and Library Services: Least demand for public of studied alternatives – less than No Action Alternative	Public Buildings, Fire Protection, Law Enforcement, Parks and Recreation, Schools, Solid Waste, Stormwater, Water Supply, Energy and Telecommunications, and Library Services: Moderate demand similar to Alternative 2 and less than No Action Alternative	Public Buildings, Fire Protection, Law Enforcement, Parks and Recreation, Schools, Solid Waste, Stormwater, Water Supply, Energy and Telecommunications, and Library Services: Moderate demand for public services – less than No Action Alternative

Table 1-2. Comparison Matrix of Impacts

Topic	Alternative 1	Preferred Alternative	Alternative 2	No Action (2006 Boundary)
Water Resources				
Impervious Surface	Estimates of impervious surface by watershed range from 7-9% coverage in the Burley Lagoon, Foulweather Bluff-Appletree, and Upper Hood Canal watersheds to 30-32% coverage in the Bainbridge Island, Dyes Inlet, and Sinclair Inlet watersheds. Total impervious surface for the entire county ranges from 17.0 – 18.0%.	Estimates of impervious surface by watershed are similar generally lower than the No Action Alternative for all watersheds except for North Bay, which is higher than Bainbridge Island, Lower Hood Canal and Minter Bay, which are the same. Total impervious surface for the entire county ranges from 17.3% – 18.4%.	Estimates of impervious surface by watershed are similar to but slightly higher than Alternative 1, except for Bainbridge Island, Minter Bay and Lower Hood Canal watersheds, which show no change from Alternative 1. Total impervious surface for the entire county ranges from 17.4 – 18.6%.	Estimates of impervious surface by watershed are similar to but slightly higher than Alternative 2, except for Bainbridge Island, Minter Bay and Lower Hood Canal watersheds, which show no change from Alternative 2. Total impervious surface for the entire county ranges from 17.6 – 18.9%.
Plants and Animals				
Land Area Subject to Development	Least amount of urban land subject to more intense development and resulting loss of habitat area - 13,748acres.	Medium amount of urban land subject to more intense development and resulting loss of habitat area – 16,629 acres.	Medium amount of urban land subject to more intense development and resulting loss of habitat area - 18,186 acres.	Greatest amount of urban land subject to more intense development and loss of habitat area - 20,979 acres.
Land and Shoreline Use				
Land Use	Alternative 1 reduces the size of all the UGAs under study. Under Alternative 1, the amount of lower density designations relative to higher density designations (Urban Medium, Urban High, Mixed Use and similar) decreases by virtue of eliminating low density territory from the UGA boundaries. For Alternative 1, 19.8% of land in the UGAs is in these higher density use designations - the most of the three studied alternatives.	East Bremerton, West Bremerton, and Gorst boundaries would not require reduction. Kingston, Silverdale, Central Kitsap, and Port Orchard would be reduced. The Preferred Alternative has a net reduction in the Central Kitsap UGA though it adds territory to the UGA north of Waaga Way in Central Kitsap McCormick Woods would be slightly increased but only to include utility lands provide service only to the adjacent UGA and have no development capacity. About 17.8% of land in the UGAs is in these higher density use designations.	Alternative 2 also reduces the size of the Kingston, Silverdale, Central Kitsap, Port Orchard, and ULID6 UGAs. While the overall UGA acres are reduced, Alternative 2 adds territory to the UGA north of Waaga Way in Central Kitsap, and adds the Barker Creek area to the southeast of the Silverdale UGA. Based on the land capacity assumptions for this alternative the UGAs are much more in line with projected population growth. For Alternative 2, 16.3% of land in the UGAs is in these higher density use designations.	Under a growth alternative with a number of oversized UGAs, land development patterns may be less dense and more dispersed throughout those UGAs. In addition, development on undeveloped or greenfield sites are often more attractive to developers because they are easier and less costly to build on. The No Action Alternative would have the smallest share of urban territory devoted to higher density land use classifications at 14.1%.

Table 1-2. Comparison Matrix of Impacts (continued)

Topic	Alternative 1	Preferred Alternative	Alternative 2	No Action (2006 Boundary)
Conversion of Uses	<p>Vacant land is 13.3% of total current acres under Alternative 1. Vacant or less intensely used parcels will likely be converted to residential and commercial uses to accommodate the projected population and employment growth in studied UGAs.</p>	<p>Vacant land makes up 23.5% of total current acres under the Preferred Alternative. Vacant or less intensely used parcels will likely be converted to residential and commercial uses to accommodate the projected population and employment growth in these UGAs.</p> <p>The Silverdale, Central Kitsap, and Port Orchard UGAs have the most vacant land. The West Bremerton UGA also has a high percentage of vacant land (20%) though less acres than the three UGAs listed.</p> <p>In Central Kitsap, a new area of Urban Low Residential extended north of Waaga Way would abut Rural Residential designated property. This could create a new precedent for urban densities north of that roadway.</p>	<p>Vacant land is 24.1% of total current acres under Alternative 2. Vacant or less intensely used parcels will likely be converted to residential and commercial uses similar to Alternative 1.</p> <p>In Central Kitsap, a new area of Urban Low Residential extended north of Waaga Way would abut Rural Residential designated property. This could create a new precedent for urban densities north of that roadway.</p> <p>In the Silverdale UGA, the Barker Creek area would be designated as Urban Restricted, achieving an “urban separator” between the two UGAs but allowing for higher net densities in developable areas compared to a rural designation.</p>	<p>The total amount of vacant land under the No Action Alternative is 28.3%, the highest of studied alternatives. Studied UGAs, with the exception of Gorst, have more than 20% of their parcel acres currently classified as vacant. Vacant or less intensely used parcels will likely be converted to residential and commercial uses to accommodate the projected population and employment growth in these UGAs.</p>
Changes in Activity Levels	<p>For Alternative 1, the projected growth within smaller UGAs and higher assumed densities would result in more intense use of land within the UGAs than under the other studied alternatives. The overall density of the projected growth (projected population growth per developable acres) in UGAs for Alternative 1 is 16.2 people per developable acre, the highest of the three alternatives. The additional population would likely mean more activity in terms of population density, traffic, and noise.</p>	<p>The overall density of the projected growth (projected population growth per developable acres) in UGAs for the Preferred Alternative is 14.6 people per developable acre. The additional population would likely mean more activity in terms of population density, traffic, and noise.</p>	<p>The overall density of the projected growth (projected population growth per developable acres) in UGAs for Alternative 2 is 13.8 people per developable acre. The additional population would likely mean more activity in terms of population density, traffic, and noise.</p>	<p>Under the No Action Alternative, the assumed densities are lower than under Alternative 1 and 2, but the projected growth within the UGAs would still result more intense use of land. The overall density of the projected growth (projected population growth per developable acres) in UGAs for the No Action Alternative is 12.5 people per developable acre, the lowest of the three alternatives.</p>

Table 1-2. Comparison Matrix of Impacts (continued)

Topic	Alternative 1	Preferred Alternative	Alternative 2	No Action (2006 Boundary)
Land Use Compatibility	The UGAs in this alternative are the smallest and have less undeveloped area that can be converted to residential and commercial. As a result there is less land area that can be encroached on by conflicting uses than Alternative 2 or the No Action Alternative.	Same as Alternative 2.	Projected growth has the potential to create compatibility issues with existing lower density residential, agriculture and open space uses, particularly during the transition from semi-developed, suburban, to urban uses. The encroachment of different uses will mainly occur in those UGAs with a large amount of vacant and developable land, which include Silverdale, Central Kitsap, and Port Orchard. In Central Kitsap, a new area of Urban Low Residential extended north of Waaga Way would abut Rural Residential designated property. This could alter the rural character north of this main roadway.	Projected growth has the potential to create compatibility issues with existing lower density residential, agriculture and open space uses, particularly during the transition from semi-developed, suburban, to urban uses. The encroachment of different uses will mainly occur in those UGAs with a large amount of vacant and developable land, which include Kingston, Silverdale, Central Kitsap, Port Orchard and ULID6 for the No Action Alternative.
Shoreline	In areas of UGA reduction along shorelines, proposed in most studied UGAs, the proposed SMP designations may need to be revisited to ensure consistency between the land use and shoreline designation particularly where UGAs are retracted along shorelines.	Similar to Alternative 1, except that there would be no changes to the West Bremerton or East Bremerton UGAs.	Alternative 2 proposes similar but smaller reductions in UGAs along shorelines in the Kingston, Central Kitsap, East Bremerton, and Port Orchard UGAs with similar results as for Alternative 1. However, this Alternative would not make land use and zoning changes along shorelines in the Silverdale or West Bremerton UGAs.	The No Action Alternative would retain current land use map and zoning designations along the shoreline. The current shoreline plans and regulations would still have some mis-matches between the SMP designation and UGA land use designations since there are many areas in the current UGA boundaries shown for Rural and Semi-Rural shoreline overlays. The proposed SMP is intended to result in a better match between the present land use plan and zoning and the shoreline use environment overlays.

Table 1-2. Comparison Matrix of Impacts (continued)

Topic	Alternative 1	Preferred Alternative	Alternative 2	No Action (2006 Boundary)
Relationship to Plans and Policies				
GMA Planning Goals	Alternative 1 would more completely meet the intent of GMA goals to guide growth in urban areas, reduce sprawl, and is less likely to prematurely convert rural areas to urban areas. This is due to the more compact UGA boundaries and the higher densities planned. Alternative 1 does avoid some concentrations of critical areas by removing UGA territory along shorelines, critical areas, and other locations. It provides for more open space by returning some undeveloped lands to a rural classification.	Same as Alternative 1. The Preferred Alternative would be the most in balance in terms of growth targets and urban land supply and may have less pressure on rural areas as a result.	Same as Alternative 1. Alternative 2 would be more in balance in terms of growth targets and urban land supply and may have less pressure on rural areas as a result.	The No Action Alternative would not fully meet GMA goals for Urban Areas and Sprawl (due to oversized UGAs 31% above population targets). It would be less protective of rural areas.
Population Forecasts	Alternative 1 would provide a land capacity that is undersized at 14% under the projected population.	The Preferred Alternative has capacity that is within 2% of the projected population. Kitsap County considers UGA capacity within +/- 5% of the growth target to be appropriately sized.	Alternative 2 has capacity that is within 3% of the projected population. Kitsap County considers UGA capacity within +/- 5% of the growth target to be appropriately sized.	The No Action alternative has 31% more capacity than projected population and is oversized.
Vision 2040	Alternative 1 meets environmental goals by avoiding some concentrations of critical areas with UGA reductions. Alternative 1 focuses more growth within urbanized areas, and protects rural lands, though its UGA boundaries are undersized by 14%. There would be a greater share of efficient higher density residential designations.	Same as Alternative 1, except that the Preferred Alternative provides UGA sizing that is within 2% of the target and is most in balance.	Same as Alternative 1, except that Alternative 2 provides UGA sizing that is within 3% of the target and is more in balance.	The No Action Alternative retains larger UGA boundaries. Although encompassing sensitive areas, critical area and shoreline regulations would guide development. The No Action Alternative provides for UGAs that are oversized by about 31% and would not focus growth as well as the action alternatives; it would create a lower density urban pattern.

Table 1-2. Comparison Matrix of Impacts (continued)

Topic	Alternative 1	Preferred Alternative	Alternative 2	No Action (2006 Boundary)
Transportation 2040	<p>More compact growth patterns could be more easily served by transit. Alternatives 1 provides for more compact growth and a greater share of higher density and mixed use growth that can help reduce vehicle miles travelled.</p> <p>The proposed capital facilities plan (CFP) includes funding projections for transportation facilities under County responsibility.</p>	Same as Alternative 1.	Same as Alternative 1.	<p>There would be greater growth and a higher potential for vehicle miles travelled. The No Action Alternative would retain the current CFP that expires in 2012, though the Transportation Improvement Program (TIP) has been regularly updated.</p>
Countywide Planning Policies	<p>Alternative 1 would more completely meet the intent of Countywide Planning Policies (CPPs) for UGAs that provide for urban growth consistent with GMA. Alternative 1 does avoid some concentrations of critical areas by removing UGA territory along shorelines, critical areas, and other locations. It provides for more open space by returning some undeveloped lands to a rural classification. The County has prepared land capacity analysis, updated Comprehensive Plan policies and zoning regulations consistent with CPPs addressing UGAs.</p>	<p>Same as Alternative 1. The Preferred Alternative would be the most in balance in terms of growth targets and urban land supply and may have less pressure on rural areas as a result.</p>	<p>Same as Alternative 1, except Alternative 2 would be more in balance in terms of growth targets and urban land supply and may have less pressure on rural areas as a result.</p>	<p>The No Action Alternative would not fully meet CPPs. The No Action Alternative retains larger UGA boundaries and could prematurely convert rural lands. Although encompassing sensitive areas, critical area and shoreline regulations would guide development. The No Action Alternative provides for UGAs that are oversized by about 31% and would not focus growth as well as the action alternatives, and would create a lower density urban pattern.</p>
Kitsap County Comprehensive Plan	<p>Alternative 1 would require amendments to the County Comprehensive Plan due to updated growth trends, new land use maps and UGA boundaries.</p>	Same as Alternative 1.	Same as Alternative 1.	No changes would be proposed.

Table 1-2. Comparison Matrix of Impacts (continued)

Topic	Alternative 1	Preferred Alternative	Alternative 2	No Action (2006 Boundary)
Municipal Plans	The cities of Bremerton and Port Orchard future land use plans assume the UGA boundaries of the 2006 Comprehensive Plan (No Action) and will need future amendment to be consistent with revisions to the Kitsap County comprehensive plan in this process.	Same as Alternative 1. The Preferred Alternative proposes to add some Park designated property to the ULID6 UGA boundaries at the City of Port Orchard's request to recognize City owned property with public facility uses.	Same as Alternative 1. Alternative 2 proposes to add some Park designated property to the ULID6 UGA boundaries at the City of Port Orchard's request to recognize City owned property with public facility uses.	Land use designations along the boundaries between incorporated and unincorporated areas are similar to those planned in 2006 under the No Action Alternative since proposed changes to the UGA boundaries are generally located in the outer areas of the current UGAs.
Population, Housing and Employment				
UGA Capacities	Alternative 1 reduces the size of all the UGAs under study. Based on the land capacity assumptions, studied UGAs can accommodate population growth of 32,704, which is 14% less than the projected 2025 population growth of 38,012. Under Alternative 1, Central Kitsap, Gorst and Silverdale have capacity for more than 5% of their projected population. Oversized UGAs may see land development patterns less dense and more dispersed throughout the UGA. A number of other UGAs are undersized, which could lead to a development pattern that achieves higher densities than assumed in those locations or sees the projected growth in these UGAs shift to other parts of the County where there is more land area to accommodate them.	Based on the land capacity assumptions for this alternative the UGAs are most in line with projected population growth. The UGAs can accommodate 37,369 additional people compared a projected population growth of 38,012, which is a difference of about 2%. Under the Preferred Alternative, the McCormick Woods/ULID 6 and Central Kitsap are the only study UGAs that have significantly more capacity than projected population. Oversized UGAs may see land development patterns less dense and more dispersed throughout the UGA, and more land area would be developed for urban housing and commercial uses. The Bremerton East, Bremerton West, and Port Orchard UGAs have less capacity than projected population. Bremerton East in particular has a difference of -1,512. UGAs that are undersized could lead to a development pattern that achieves higher densities than assumed in those locations or sees the projected growth in these UGAs shift to other parts of the County where there is more land area to accommodate them. All other UGAs are relatively close to their target.	Based on the land capacity assumptions for this alternative the UGAs are much more in line with projected population growth. The UGAs can accommodate 36,934 additional people compared a projected population growth of 38,012, which is a difference of about 3%. Silverdale and ULID6 are still oversized under this alternative. The Bremerton East, Bremerton West and Port Orchard UGAs are undersized for this alternative, while Kingston and Central Kitsap UGAs are appropriately sized with the difference between their capacity and projected population growth less than 5%.	The No Action Alternative makes no change to the current UGA boundaries established in 2006. The alternative also assumes the lowest assumed densities of the studied alternatives, through greater than the minimum densities assumed in the 2006 Comprehensive Plan for the Urban Low, Urban Cluster, and Urban Restricted designations – the new density assumptions for these designations are more consistent with the County's most recent Buildable Lands Report (Kitsap County 2007). The Kingston, Silverdale, Central Kitsap, Port Orchard, and ULID6 UGAs all have capacities greater than 5% of their growth targets and are considered oversized under this alternative. The rest of the UGAs under the No Action Alternative are appropriately or slightly undersized. In total the UGAs under study in the No Action Alternative are oversized by 31%.

Table 1-2. Comparison Matrix of Impacts (continued)

Topic	Alternative 1	Preferred Alternative	Alternative 2	No Action (2006 Boundary)
Housing Mix	There is a greater proportion of land designated for higher density housing (Urban Medium, Urban High, Mixed Use, and Urban Village). This would mean a slightly more diverse mix of housing types in the study UGAs than for the No Action Alternative. For Alternative 1, 19.8% of land in the UGAs is in these higher density use designations - the most of the three studied alternatives.	The Preferred Alternative proposes 17.8% of land in the UGAs is in higher density use designations – greater than Alternative 2 and the No Action Alternative and less than Alternative 1.	Similar to Alternative 1, Alternative 2 would have a greater proportion of higher density zones to lower density zones, and thus more housing variety than the No Action Alternative. For Alternative 2, 16.3% of land in the UGAs is in these higher density use designations.	For the No Action Alternative, 14.1% of land in the UGAs is in these higher density use designations, the smallest share of the three studied alternatives due to a more expansive UGA with lower density designations.
Transportation				
Daily Vehicle Trips	Increase of 34% by 2025	Increase of 35% by 2025	Increase of 35% by 2025	Increase of 38% by 2025
Vehicle Miles Traveled (VMT)	Increase of 33% by 2025	Increase of 34% by 2025	Increase of 34% by 2025	Increase of 37% by 2025
Deficient Roadway Segments	8.0% of lane-miles by 2025 Not projected to exceed the County concurrency standard of 15%	8.3% of lane-miles by 2025 Not projected to exceed the County concurrency standard of 15%	8.4% of lane-miles by 2025 Not projected to exceed the County concurrency standard of 15%	9.5% of lane-miles by 2025 Not projected to exceed the County concurrency standard of 15%
State Facilities	62% Deficient State Highway Miles by 2025	63% Deficient State Highway Miles by 2025	63% Deficient State Highway Miles by 2025	63% Deficient State Highway Miles by 2025
Other Modes of Travel (Non-motorized, Transit, Rail, Air)	Approximately equal increase in demand under all alternatives	Approximately equal increase in demand under all alternatives	Approximately equal increase in demand under all alternatives	Approximately equal increase in demand under all alternatives

Table 1-2. Comparison Matrix of Impacts (continued)

Topic	Alternative 1	Preferred Alternative	Alternative 2	No Action (2006 Boundary)
Public Buildings				
Countywide Demand	Alternative 1 assumes the lowest population growth of the three alternatives, resulting in the lowest demand for government facilities. The County will need an additional 40,954 ft ² of county administration building space, 6,297 ft ² of county maintenance facility space, 3 district and 2 superior courtrooms, and 11,709 ft ² of community center space by 2025.	The Preferred Alternative has slightly higher demand for public buildings than Alternatives 1 and 2, but less than the No Action Alternative. The Preferred Alternative would adopt new LOS standards to ensure no deficiencies in needed space.	Alternative 2 has a moderately higher demand than Alternative 1, but lower than the No Action. The County will need an additional 45,573 ft ² of county administration building space, 6,847 ft ² of county maintenance facility space, 3 district and 3 superior courtrooms, and 12,720 ft ² of community center space by 2025.	The No Action Alternative results in the highest demand for government facilities due to having the greatest amount of population growth. The County will need an additional 59,448 ft ² of county administration building space, 8,499 ft ² of county maintenance facility space, 4 district and 2 superior courtrooms, and 15,757 ft ² of community center space by 2025.
Fire Protection				
Central Kitsap Fire & Rescue	CKFR's service area population will increase from 68,406 to 92,863 by 2025, a net growth of 24,457. CKFR's planned facilities will allow it to meet its LOS through 2025.	CKFR would have a population of 91,744 (compared to 91,435 under Alternative 2). The Preferred Alternative would result in slightly different countywide population than Alternative 2, but would not result in changes to LOS in 2025 from that under Alternative 2.	CKFR's service area population will increase from 68,406 to 91,435 by 2025, a net growth of 23,029. CKFR's planned facilities will allow it to meet its LOS through 2025.	CKFR's service area population will increase from 68,406 to 96,348 by 2025, a net growth of 27,942. CKFR's planned facilities will allow it to meet its LOS through 2025.
South Kitsap Fire & Rescue	SKFR's service area population will increase from 72,329 to 93,921 by 2025, a net growth of 21,592. SKFR will need two to three additional fire units to meet its LOS standard through 2025.	SKFR would have a population of 99,212 (compared to 99,000 under Alternative 2). The Preferred Alternative would result in slightly different countywide population than Alternative 2, but would not result in changes to LOS in 2025 from that under Alternative 2.	SKFR's service area population will increase from 72,329 to 99,000 by 2025, a net growth of 26,671. SKFR will need four to six additional fire units to meet its LOS standard through 2025.	SKFR's service area population will increase from 72,329 to 105,392 by 2025, a net growth of 33,063. SKFR will need about seven additional fire units to meet its LOS standard through 2025.
North Kitsap Fire & Rescue	NKFR's service area population will increase from 18,622 to 23,850 by 2025, a net growth of 5,228. NKFR will need one additional fire unit to meet its LOS standard through 2025.	NKFR would have a population of 24,030 (compared to 24,053 under Alternative 2). The Preferred Alternative would result in slightly different countywide population than Alternative 2, but would not result in changes to LOS in 2025 from that under Alternative 2.	NKFR's service area population will increase from 18,622 to 24,053 by 2025, a net growth of 5,431. NKFR will need one additional fire unit to meet its LOS standard through 2025.	NKFR's service area population will increase from 18,622 to 24,866 by 2025, a net growth of 6,244. NKFR will need two additional fire units to meet its LOS standard through 2025.

Table 1-2. Comparison Matrix of Impacts (continued)

Topic	Alternative 1	Preferred Alternative	Alternative 2	No Action (2006 Boundary)
Poulsbo Fire Department/Fire District 18	Poulsbo Fire Department's service area population will increase from 23,594 to 29,367 by 2025, a net growth of 5,773. Poulsbo FD will need three additional fire units to meet its LOS standard through 2025.	Poulsbo/FD 18 would have a population of 29,367, which is the same as under Alternative 2.	Poulsbo Fire Department's service area population will increase from 23,594 to 29,367 by 2025, a net growth of 5,773. Poulsbo FD will need three additional fire units to meet its LOS standard through 2025.	Poulsbo Fire Department's service area population will increase from 23,594 to 29,367 by 2025, a net growth of 5,773. Poulsbo FD will need three additional fire units to meet its LOS standard through 2025.
Law Enforcement				
Countywide Demand	Alternative 1 would require the lease amount of facility space/beds. The County is estimated to need an additional 28,706 ft ² of sheriff office space, 80 county jail beds, and 7 work release beds.	Under the Preferred Alternative, a population increase of 48,078 within the unincorporated county would be slightly higher than under Alternative 2, which estimated an increase of 47,621. For the County overall, the Preferred Alternative is also slightly higher than Alternative 2 (increase of 78,340 from 2012 to 2025, versus 77,904 for Alternative 2). The Preferred Alternative would adopt new LOS standards to ensure no deficiencies in needed space. Demand for law enforcement would be very similar and would not change the proposed LOS standards identified for Alternative 2,	Alternative 2 is similar to Alternative 1, but results in slightly higher demand. The County is estimated to need an additional 29,391 ft ² of sheriff office space, 87 county jail beds, and 8 work release beds.	The No Action Alternative creates the most demand for new facilities. The County is estimated to need an additional 31,744 ft ² of sheriff office space, 109 county jail beds, and 10 work release beds.
Parks and Recreation				
Countywide Demand	Alternative 1 generates the least additional demand for park facilities. The county would need additional open space, regional, heritage, and community parks to reach its Target LOS in 2025.	The Preferred Alternative has similar but slightly higher demand than Alternatives 1 and 2. The county would need additional open space, regional, heritage, and community parks to reach its Target LOS in 2025.	Alternative 2 has similar but slightly higher demand than Alternative 1. The county would need additional open space, regional, heritage, and community parks to reach its Target LOS in 2025.	The No Action Alternative has the highest demand for additional parks. The county would need additional open space, regional, heritage, and community parks to reach its Target LOS in 2025.

Table 1-2. Comparison Matrix of Impacts (continued)

Topic	Alternative 1	Preferred Alternative	Alternative 2	No Action (2006 Boundary)
Schools				
North Kitsap School District	Alternative 1 has the lowest enrollment projections of all alternatives for NKSD. The District is estimated to have a deficiency of 533 student spaces in 2025.	Nearly identical to Alternative 2, the Preferred Alternative has a projected enrollment of 9,035 in 2025. The District is estimated to have a deficiency of 543 student spaces in 2025.	Alternative 2 has the second lowest enrollment projections of all alternatives for NKSD. The District is estimated to have a deficiency of 544 student spaces in 2025.	The No Action Alternative has the highest enrollment projections for NKSD. The District is estimated to have a deficiency of 792 student spaces in 2025.
Central Kitsap School District	Alternative 1 has the second highest enrollment projections for CKSD. The District is estimated to have a deficiency of 2,170 student spaces in 2025.	The Preferred Alternative has a similar enrollment projection as Alternative 2 and a resulting deficiency of 1,943 student spaces.	Alternative 2 has the lowest enrollment projections for CKSD. The District is estimated to have a deficiency of 1,910 student spaces in 2025.	The No Action Alternative has the highest enrollment projections for CKSD. The District is estimated to have a deficiency of 2,774 student spaces in 2025.
South Kitsap School District	Alternative 1 has the lowest enrollment projections of all alternatives for SKSD. The District is estimated to have a deficiency of 1,218 student spaces in 2025.	The Preferred Alternative has a similar enrollment projection as Alternative 2 and a resulting deficiency of 2,193 student spaces in 2025.	Alternative 2 has the second lowest enrollment projections of all alternatives for SKSD. The District is estimated to have a deficiency of 2,179 student spaces in 2025.	The No Action Alternative has the highest enrollment projections for NKSD. The District is estimated to have a deficiency of 3,450 student spaces in 2025.
Bremerton School District	Alternative 1 has the lowest enrollment projections of all alternatives for BSD. The District has sufficient capacity to meet its LOS through 2025 under this alternative.	The Preferred Alternative has the highest enrollment projections for BSD of all studied alternatives. However, the District has sufficient capacity to meet its LOS through 2025 under this alternative.	Alternative 2 has the second highest enrollment projections of all alternatives for BSD. The District has sufficient capacity to meet its LOS through 2025 under this alternative.	The No Action Alternative has the second highest enrollment projections of all alternatives for BSD. The District has sufficient capacity to meet its LOS through 2025 under this alternative.
Solid Waste				
Countywide Demand	Alternative 1 has the least population growth in the studied UGAs and therefore less demand than the other alternatives. The County has adequate solid waste capacity under all alternatives.	Under the Preferred Alternative, the expected population increase would vary only slightly from that under Alternative 2, and thus the amount of solid waste generated in 2025 would be similar to that with Alternative 2. The County has adequate solid waste capacity under all alternatives.	Alternative 2 has the second most population growth in the studied UGAs and therefore higher demand than Alternative 1 but lower than the No Action Alternative. The County has adequate solid waste capacity under all alternatives.	The No Action Alternative has the highest population growth in the studied UGAs and therefore the highest demand for solid waste capacity. The County has adequate solid waste capacity under all alternatives.

Table 1-2. Comparison Matrix of Impacts (continued)

Topic	Alternative 1	Preferred Alternative	Alternative 2	No Action (2006 Boundary)
Wastewater				
Cost for Additional Wastewater Infrastructure	Alternative 1 has the least population growth in the studied UGAs and therefore less demand than the other alternatives.	The Preferred Alternative wastewater infrastructure costs are higher than those of Alternative 1, similar to and slightly higher than Alternative 2, and less than the No Action Alternative.	Alternative 2 wastewater infrastructure costs are higher than those of Alternative 1, but less than under the No Action Alternative.	The No Action Alternative has the highest population growth in the studied UGAs and therefore the highest need for wastewater infrastructure. Costs are highest under the No Action Alternative.
Stormwater				
Increased Impervious Surfaces	Alternative 1 would result in lower levels of urbanization and resulting overall impervious surface area, need for stormwater drainage and treatment facilities.	The Preferred Alternative would result in slightly higher levels of urbanization than Alternative 1, although less than for Alternative 2 and the No Action Alternative. The Preferred Alternative would result in an increase in impervious surface, which would increase the need for stormwater drainage and treatment facilities.	Alternative 2 would result in slightly higher levels of urbanization and resulting overall impervious surface area, need for stormwater drainage and treatment facilities.	The No Action Alternative would result in the greatest increase of the three alternatives in terms of development and impervious surface area; Potentially greater need for upgrades to existing drainage systems with UGA boundaries
(See Water Resources Impacts for estimated percentages of pollution-generating impervious surfaces)				
Water Supply				
Water Demand	Alternative 1 would concentrate growth within the smallest UGAs, reducing demand for water to a lower level. Would result in the need for less additional water distribution infrastructure than the other two alternatives.	The Preferred Alternative would result in greater demand for water than Alternatives 1 and 2, but less demand than the No Action Alternative. Could require more extensions of the water distribution system than Alternative 1.	Alt 2 would result in greater demand for water than Alternative 1, but less demand than the No Action Alternative. Could require more extensions of the water distribution system than Alternative 1.	The No Action Alternative would create the largest demand for water, and has the greatest likelihood of requiring additional water distribution infrastructure

Table 1-2. Comparison Matrix of Impacts (continued)

Topic	Alternative 1	Preferred Alternative	Alternative 2	No Action (2006 Boundary)
Energy and Telecommunications				
Natural Gas, Power, Telecommunications	Alternative 1 would have the least population growth in the studied UGAs (32,704 net increase in population in the eight UGAs) and therefore less demand than the other studied alternatives. Growth would occur in a more compact geography and may be more efficient to serve.	The Preferred Alternative is nearly identical to Alternative 2 in terms of population (37,369 net increases in population in the eight UGAs, about 435 in population greater than Alternative 2). Though greater than Alternative 1, the Preferred Alternative would have less demand than the No Action Alternative. Growth would occur in a more compact geography than the No Action Alternative and Alternative 2, and may be more efficient to serve.	Alternative 2 would have the moderate population growth in the studied UGAs (36,934 net increase in population in the eight UGAs) and greater demand than Alternative 1 but less than the No Action Alternative. Growth would occur in a more compact geography than the No Action Alternative, though greater than Alternative 1, and may be more efficient to serve.	The No Action Alternative would have the greatest population growth in the studied UGAs (49,610 net increase in population in the eight UGAs). Growth would occur in a larger geography than the action alternatives and could be less efficient to serve.
Library				
Countywide Demand	Alternative 1 has the lowest projected UGA population and thus the lower countywide population. It would have the lowest increase in demand for circulated items and the lowest demand for new library space.	The Preferred Alternative would have a similar but slightly greater demand as Alternative 2 in terms of both per capita circulation demand and demand for library space at a countywide level.	Alternative 2 would have an intermediate demand for materials and library space.	The No Action Alternative would have the greatest demand of all the Alternatives at the countywide level.
Particular Locations of Demand	It would allow for greater population in proximity to the main branch on Sylvan Way than Alternative 2. It would have nearly the same population growth in proximity to the Silverdale branch. Its greatest growth would be in South Kitsap, potentially affecting the Port Orchard branch.	Based on individual UGA growth, the Preferred Alternative would have a greater demand for library services in Downtown Bremerton than other studied alternatives, but still a fraction of the annual patron count. East Bremerton would add demand to the Sylvan Way Library similar to Alternative 1. Other locales would be similar to Alternative 2.	It would have a slightly greater demand than Alternative 1 in all UGAs except for the combined Central Kitsap and East Bremerton UGAs where the population would be a little lower in the vicinity of the Sylvan Way branch.	The No Action Alternative would have the greatest demand of all the Alternatives at the UGA level, except that the projected population for West Bremerton would be lower than the other alternatives.

1.6.3. Summary of Mitigation Measures

Chapter 3 of the Draft SEIS describes a series of mitigation measures that could reduce impacts including Incorporated Plan Features (i.e. self-mitigating features of the alternatives), applicable regulations and commitments (e.g. local, state, and federal laws and programs), and other proposed mitigation measures that the County could potentially implement to reduce impacts. Table 1-3 provides a summary of other potential mitigation measures. A complete list of all categories of mitigation measures is found in Draft SEIS Chapter 3.

Table 1-3. Other Potential Mitigation Measures

Topic	Other Potential Mitigation Measure
Water Resources	<ul style="list-style-type: none"> • The County could continue to provide policies and regulations that encourage the use of low-impact development methods to control stormwater runoff. • The County could implement an updated shoreline master program. As of the time of this writing, the program is under revision to meet recent state laws and rules. It will have a new set of environment designations to promote preferred uses, and a new set of shoreline buffers to achieve no-net-loss of ecological function. • The County would continue to encourage voluntary water conservation and provide incentives to reduce water consumption to protect groundwater supplies.
Plants and Animals	<ul style="list-style-type: none"> • The County could implement an updated shoreline master program. As of the time of this writing, the program is under revision to meet recent state laws and rules. It will have a new set of environment designations to promote preferred uses, and a new set of shoreline buffers to achieve no-net-loss of ecological function.
Land and Shoreline Use	<ul style="list-style-type: none"> • Under all studied alternatives, increasing allowed densities in UGAs that are below targets could allow for more efficient use of land and avoid additional UGA expansions. Targeted UGA expansions may be needed where upzones or other measures have already been instituted. • Under all studied alternatives, the excess capacity in some UGAs could be reduced by reducing UGA boundaries, or providing for a different mix of urban densities. • The County could implement an updated shoreline master program. As of the time of this writing, the program is under revision to meet recent state laws and rules. It will have a new set of environment designations to promote preferred uses, and a new set of shoreline buffers to achieve no-net-loss of ecological function.
Relationship to Plans and Policies	<ul style="list-style-type: none"> • Kitsap County staff will coordinate to ensure that policies and regulations that are developed in association with ongoing planning initiatives are consistent (e.g. shoreline master program) and meet the requirements of GMA. • Alternative 2 and the Preferred Alternative nearly accommodate population targets, thereby retaining consistency with CPP policies and GMA goals. Adoption of additional "reasonable measures" together with limited geographic expansion of designated UGAs under Alternative 2 and the Preferred Alternative may allow it to accommodate the CPP Population target. • Alternative 1 does not meet growth targets. Reasonable measures and increases in UGA boundaries could allow the overall growth capacity to reach the CPP target. • City future land use maps could be amended as needed to achieve consistency with County UGA amendments. This could be accomplished through the next GMA review period currently scheduled for 2016.

Table 1-3. Other Potential Mitigation Measures (continued)

Topic	Other Potential Mitigation Measure
Population, Employment and Housing	<p>The following measures are recommended for UGAs that are oversized:</p> <ul style="list-style-type: none"> • For UGAs that show capacities greater than the population targets, UGA boundaries should be decreased, where possible. Areas should be removed that are more costly to provide public services or that have significant concentrations of critical areas. • Alternatively or in combination with UGA reductions, a different mix of densities or land uses may also assist the achievement of allocations, provided the densities are still urban in nature and can be served with public services. • The County could work with KRCC and cities to reallocate population from undersized UGAs to oversized ones. This would shift population to UGAs that have existing potential to accommodate population. Until such time as the CPPs are amended, the population could be “banked”. <p>The following measures are recommended for UGAs that are undersized:</p> <ul style="list-style-type: none"> • The County could consider measures to increase the development capacity through increasing density such as applying incentives (e.g., infill incentives such as density bonuses) and/or upzones (e.g., greater densities). • Where the County has already applied reasonable measures (e.g. upzones or other incentives), the County could consider limited UGA expansions. • The County could work with KRCC and cities to reallocate population from undersized UGAs to oversized ones. This would shift population to UGAs that have existing potential to accommodate population. Until such time as the CPPs are amended, the population could be “banked”.
Transportation	<ul style="list-style-type: none"> • The County could maintain the current countywide concurrency test or it could consider amending the KCC to define the area of impact for proposed developments, so that the concurrency test may be applied on a sub-area basis.
Public Buildings	<ul style="list-style-type: none"> • In order to address future deficiencies, the County could adjust its LOS standards to reflect the likely service levels in 2025, given estimated population growth and planned facilities. If the County selected this mitigation measure, the County would need to adjust its LOS standards as shown in Draft SEIS Table 3.3-7 in order to meet its standards in 2025. For the Preferred Alternative, see Section 3.3 of this Final SEIS. • The County could coordinate with non-County facility providers including cities and special purpose districts to provide community center facilities in areas of greatest need. • If determining impact fees for parks and recreation facilities, the County could ensure that impacts on community centers are incorporated into fees. • The County could consider co-location of government agencies and uses to reduce the costs of new facilities.
Fire Protection	<ul style="list-style-type: none"> • In order to address future deficiencies, the County in consultation with the fire districts could choose to adjust their LOS standards to reflect the likely service levels in 2025, given estimated population growth and planned facilities. The districts would need to make the adjustments presented in Draft SEIS Table 3.3-14 to their LOS standards in order to meet the standards in 2025. For the Preferred Alternative, see Section 3.3 of this Final SEIS. • Alternatively, the County could work with the fire districts to develop a joint LOS measure that accounts for personnel, fire units, fire station spacing that would best allow them to achieve response time service objectives. This could be developed in association with the regular Comprehensive Plan review next due in 2016. • Expanded fire and emergency medical services could be provided concurrent with new development. • Specific impacts of future development proposals should be assessed and appropriate mitigation measures imposed through the County’s SEPA authority. These may include impact fees, building access and lighting, right-of-way

Table 1-3. Other Potential Mitigation Measures (continued)

Topic	Other Potential Mitigation Measure
	<p>access, and other measures to support rapid emergency response.</p> <ul style="list-style-type: none"> • The County could increase fire impact mitigation fees and apply them through SEPA or land use permits. • Fire districts may propose levies for stable funding sources to address sufficient operations.
Law Enforcement	<ul style="list-style-type: none"> • In order to address future deficiencies, the Sheriff's Office could choose to adjust their LOS standards to reflect the likely service levels in 2025, given estimated population growth and planned facilities. The Sheriff's Office would need to make the adjustments shown in Draft SEIS Table 3.3-20 to their LOS standards in order to meet the standards in 2025. For the Preferred Alternative, see Section 3.3 of this Final SEIS. • Staffing will need to be increased as population increases. However, as urban areas are annexed, personnel and/or facilities may need to transfer to the annexing city. • Building and site designs known as Crime Prevention through Enhanced Design (CPTED), which would reduce opportunities for crimes to occur, could be encouraged through regulations, as would adequate street lighting for residential and commercial development. • Development of community crime prevention programs could also help mitigate some of the impacts of increased demand for police services. • The County would continue to implement a mutual aid agreement with other law enforcement agencies.
Parks and Recreation	<ul style="list-style-type: none"> • The County could reassess its target LOS standards and adopt base LOS standards for the six-year planning period. This base LOS would reflect funding constraints. However, the County could strive to achieve the target LOS from the 2012 PROS Plan if it is able to secure additional funding that would allow the County to reach its target LOS. The Parks categories that are projected to have deficiencies in 2025 based on the target LOS are Open Space, Regional Parks, Heritage Parks, and Community Parks. None of the other categories would need to have separate base LOS standards developed. Draft SEIS Table 3.3-33 shows how target and base LOS standards for these categories would need to be adjusted under different Draft SEIS alternatives. For the Preferred Alternative, see Section 3.3 of this Final SEIS. • The County could consider allowing public use of undeveloped or partially developed parkland in or near urban areas. For instance, sites could be used with unimproved parking areas to open play areas or fields for team practices and games, and portable restroom facilities. • User fees could be initiated or increased at specific County parks and recreation facilities. • Regular review of UGA boundaries and buildable land capacity in conformance with GMA requirements could help reduce the potential for future parkland to become difficult to acquire due to scarcity. • The County could consider joint use of facilities for parks and recreation purposes such as school athletic fields and playgrounds. • The County should monitor population growth in relation to LOS and planned facilities such as at the time of the capital improvement programs in association with the County budget, and adjust the LOS or facilities if needed to ensure a future balance of demand, service, and planned projects.
Schools	<ul style="list-style-type: none"> • To address enrollment changes on an ongoing basis, prior to reaching the level of demand that would necessitate construction of a new facility, districts can use portable classrooms to temporarily meet growth demands. Portables can be funded by impact fees paid by residential developers. • The County and school districts could work together to identify potential sites for new school development in areas where higher amounts of growth are planned.

Table 1-3. Other Potential Mitigation Measures (continued)

Topic	Other Potential Mitigation Measure
Solid Waste	<ul style="list-style-type: none"> Based on available landfill capacity at the County's current contracted landfill location a new or extended contact could be enacted to provide landfill capacity well beyond the 2025 planning horizon.
Wastewater	<ul style="list-style-type: none"> The County could continue to coordinate with non-County facility providers, including cities and special purpose districts, to support and be consistent with the future land use patterns identified by city and County comprehensive plans. Plan policies and development regulations could include mechanisms or incentives to encourage existing properties within UGAs to connect to sewer systems to meet planned growth levels. Methods or incentives could include formation of local improvement districts, permit facilitation and newcomer agreements for developer extensions, density bonuses to encourage lot consolidations, or allowing for innovative sanitary sewer extension and treatment facility designs, such as package plants, grinder pumps and membrane systems for urban densities and others. The County could continue pursuing opportunities for water reclamation.
Stormwater	<ul style="list-style-type: none"> The County could implement Low Impact Development (LID) standards to require new developments to incorporate LID technologies wherever possible to aid in the reduction of stormwater impacts. Some examples of LID technologies are green roofs, bioretention swales or cells (rain gardens), pervious pavement, amended soils, forest cover retention, minimal excavation foundations, and general minimization of impervious surface coverage.
Water Supply	<ul style="list-style-type: none"> Water systems should increase the size of piping, install additional looping to increase water pressure for fire flow, and/or increase frequency of hydrant placement to meet fire flow requirements. Water providers and County planners should continue to consult early in plan updating processes to coordinate land use with future water supply needs, particularly in urban infill areas designated for higher densities. The County should review and revise landscaping codes as necessary to encourage use of drought tolerant plantings and reduce demand for water. The County should encourage the use of rainwater retention systems in new and existing development to reduce water demand for landscaping needs.
Energy and Telecommunications	<p>The County could:</p> <ul style="list-style-type: none"> Continue to encourage site design that emphasizes tree retention and planting as well as optimizes solar access to moderate temperatures and reduces energy consumption. Encourage energy conservation through provider-sponsored programs and building codes. Continue to encourage co-location of telecommunications facilities and undergrounding of utilities (in urbanized areas) to minimize aesthetic and land use impacts of utility corridors and in rural area to minimize aesthetic and environmental impacts. Continue to encourage appropriate landscaping and stealth design of telecommunication facilities to minimize their visual impacts on their surroundings.
Library	<ul style="list-style-type: none"> Additional libraries and library capacity should be added in areas of concentrated and growing population, based on community input. The Library District could partner with municipalities by locating new libraries within incorporated areas where UGA expansions will contribute to the community's future growth.

Source: BERK and Parametrix

1.7. Significant Unavoidable Adverse Impacts

This section shows the general conclusions of the SEIS impacts analysis assuming the application of mitigation measures, and identifies if there are residual significant unavoidable adverse impacts.

1.7.1. Natural Environment

Water Resources (Surface and Ground)

Impervious surfaced area would increase under all studied alternatives. While the County requires measures to minimize the impacts from impervious surfaces there would be some unavoidable impact on water resources. The level of unavoidable impact would depend on location within a specific watershed, the amount of impervious surface created and the effectiveness of facilities to detain and treat stormwater runoff.

Plants and Animals

There would be an unavoidable loss of vegetation under any of the alternatives, which would also reduce habitat for wildlife. As larger tracts of vegetation are developed and converted to urban uses there would be a reduction in the number of native plant species. The loss of habitat would reduce the abundance of species and may result in localized extirpation of some plant or wildlife species. Wildlife habitat is also likely to become more fragmented making it harder for wildlife movement between and within habitats. There would also be some mortality to smaller wildlife species that are unable to avoid construction for new development.

Unavoidable impacts are also likely to occur to fish and fish habitat. Under any of the alternatives, fish habitat could be lost or altered during development. Increased impervious surfaces and stormwater runoff would unavoidably affect fish by impacting water quantity and quality.

1.7.2. Built Environment

Land and Shoreline Use

Over time, the implementation of any of the alternatives could irreversibly commit vacant, partially developed, and redeveloped properties to additional or new single-family, multifamily, commercial, mixed, and industrial uses. The potential for this is greatest under Alternative 3 due to the higher amount of UGA territory and least under Alternative 1. Under all of the alternatives, the UGAs will experience development and greater urbanization over time.

Relationship to Plans and Policies

With implementation of mitigation measures, no significant unavoidable adverse impacts are anticipated with regards to future plan consistency under any of the alternatives.

Population, Housing, and Employment

Population, employment and housing will increase under any of the alternatives reviewed, to different degrees, with the No Action Alternative increasing the most and Alternative 1 the least. Additional population growth will increase the demand for housing.

Additional population, housing, and employment growth will result in secondary impacts on the natural and built environment and to the demand for public services, and is addressed in the appropriate sections of this SEIS.

Alternatives 1 and 2 and the Preferred Alternative are projected to have less indirect impacts from growth on the natural environment and on public services since they focus growth in smaller more compact UGAs compared to the No Action Alternative.

Transportation

Implementation of any of the growth alternatives would result in increased traffic within the county, with the lowest increase occurring under Alternative 1 and the greatest increase occurring under the No Action Alternative. Although the effects of additional vehicles on traffic congestion can be mitigated to varying degrees through the recommended transportation improvements, the actual increase in traffic is considered a significant unavoidable adverse impact.

1.7.3. Built Environment: Public Services and Utilities

Public Buildings

Demand for public services will increase under all studied alternatives. With advanced planning, no significant unavoidable adverse impacts on public buildings would be anticipated within the range of alternatives reviewed.

Fire Protection

Future population growth and development will continue to increase the need for fire protection/EMS services under any studied alternative. With mitigation, significant, unavoidable adverse impacts would not be anticipated.

Law Enforcement

Future population growth and development will continue to increase the need for law enforcement services and facilities under all alternatives. With mitigation, significant, unavoidable adverse impacts would not be anticipated.

Parks and Recreation

With the increase in population and urbanization of the County under any of the alternatives, there would be greater demand for parks, recreational facilities, and programs. To avoid impacts, the County could work with other agencies and regularly monitor population growth, service levels, and demand to bring supply and demand into balance; this can be accomplished with regular CFP updates as appropriate.

Neighborhoods surrounding existing, new or expanded parks would experience more activity in the form of vehicles and pedestrians. Costs for acquiring parks is expected to rise with the increased demand for urban land.

Schools

The demand for school services and facilities will increase as new development occurs and the number of families with school-aged children increases. Land developed or set aside for school facilities would be generally unavailable for other uses. With mitigation, significant, unavoidable adverse impacts would not be anticipated.

Solid Waste

Future population growth and development would continue to increase the amount of solid waste generated in the county under any alternative. With Solid Waste Management Plans, regularly updated as appropriate, no significant unavoidable adverse impacts are anticipated.

Wastewater

With advance planning, implementation and update of capital facility plans no less than every six years, as well as review of development permits in terms of system impacts, no significant unavoidable adverse wastewater impacts would be anticipated within the range of alternatives reviewed.

Stormwater

With advanced planning, review of development applications, and implementation of mitigation measures, there should not be unavoidable adverse impacts from any of the studied alternatives. The level of unavoidable adverse impacts depends on the degree that potential mitigation measures are implemented. Even if one or more of the mitigation measures is implemented, there could still be some changes to existing stormwater runoff patterns. This could alter flow conditions downstream of the planning areas and could potentially aggravate existing downstream flooding and erosion problems.

Water Supply

All alternatives would increase demand for water services. However, with coordination of capital and land use planning, significant unavoidable adverse impacts are not anticipated.

Energy and Telecommunications

Population and employment growth under all studied alternatives will increase demands for energy and telecommunications that in turn will increase the need for additional facilities. Planning efforts to manage growth should reduce the demand and/or accommodate growth in a coordinated fashion than would otherwise occur.

Library

As population increases within the County and study UGAs, the demand for library services will also increase. The library system as a whole will experience increased demand as more people require greater collections of materials and other resources; however, the library facilities located in areas of the County where the greatest new population growth is expected will experience the most increased demand. With advanced coordination between the Library District, County, and municipalities, significant, unavoidable, adverse impacts are not anticipated.

