

## 1.0 SUMMARY

This Chapter summarizes elements of the Whatcom County 2016 Comprehensive Plan and Development Regulations Update and Urban Growth Areas (UGAs) Review, including the purpose of the proposal and alternatives and compares and contrasts the impacts of the alternatives, proposed mitigation measures to reduce impacts, and summary descriptions of impacts common to all alternatives.

This Chapter is the first of a series of chapters contained in the Draft Environmental Impact Statement (EIS) that are intended to provide both summary and more in depth environmental review of the proposal and alternatives:

- **Chapter 1 Summary:** Summary of proposal, impacts, and mitigation measures contained in Chapters 2 through 4.
- **Chapter 2 Alternatives:** Comprehensive description of the proposal and alternatives including highlights of the proposed growth, policy and code changes associated with the Alternatives.
- **Chapter 3 Suitability Analysis:** Provides additional UGA-specific information about factors that influence the shape and size of each UGA in Whatcom County (County).
- **Chapter 4 Affected Environment, Significant Impacts, and Mitigation Measures:** Evaluates, at a programmatic level, the current conditions and potential impacts of development that may occur under each of the alternatives described in Chapter 2. Addresses general or cumulative impacts on natural or constructed resources related to potential increased urbanization and growth that could result from each alternative.
- **Chapter 5 References:** A list of documents and personal communication cited in the Draft EIS.
- **Chapter 6 Distribution List:** A list of agencies and organizations sent a notice of availability of the document.

### 1.1 Purpose of Proposed Action

Whatcom County is preparing a Comprehensive Plan Update in accordance with the Growth Management Act (GMA). The County is required to complete its review and update of the Comprehensive Plan elements, development regulations, and Urban Growth Areas (UGAs) by June 30, 2016. As part of the review, and update process, the County and cities of Bellingham, Blaine, Everson, Ferndale, Lynden, Nooksack, and Sumas are collaborating on a process to allocate population and employment growth to UGAs and the area of the county outside of UGAs. As a result of the review and update process, the County is considering amendments to County Comprehensive Plan goals and policies, UGA boundaries, land use maps, and other plan elements, as well as development regulations (zoning, critical areas ordinances, etc.). In turn, the seven cities of Whatcom County are also anticipated to consider amendments to their own plans and regulations, and may use this Environmental Impact Statement (EIS) as a basis for their respective reviews as allowed under the State Environmental Policy Act (SEPA).

Four alternatives are studied in the Draft Environmental Impact Statement (Draft EIS) as follows:

- **Alternative 1: No Action.** Assumes that the existing Whatcom County Comprehensive Plan and associated growth projections are carried forward; this represents a lower growth option (48,630 population growth).
- **Alternative 2: Historic Shares.** Allocates growth to each UGA and the area outside the UGAs using recent historic population shares (68,111 population growth, which is the Washington State Office of Financial Management (OFM)'s medium projection).
- **Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013).** Allocates growth requested by the cities and County as approved by the County Council (74,781 population growth).

- **Alternative 4: Targeted Land Use Change.** Proposes a higher countywide population projection, apportioned similarly to the Multi-Jurisdictional Resolution (86,149 population growth).

Employment would also vary by alternative within a range of 26,372 to 41,506 new jobs. UGA infill and boundary changes are considered in all alternatives to different degrees based on land capacity assumptions and city or county preferences, except that the No Action Alternative would continue the present boundaries.

All alternatives would amend County plans and regulations to meet the County's eight-year GMA review and evaluation requirements, except for the No Action Alternative, which presumes a continuation of current plans and regulations.

## 1.2 State Environmental Policy Act Process

The County is considering the potential environmental effects of the Comprehensive Plan and Development Regulations Update and Urban Growth Area (UGA) review in this Environmental Impact Statement (EIS). Generally, an EIS is an informational document that provides the county, cities, public, and other agencies with environmental information to be considered in the decision-making process for a plan, program, or new development. It also allows residents, businesses, and other government agencies to comment on proposals and alternatives. An EIS describes: proposed actions and alternatives; existing conditions of the study area; impacts that may occur if an alternative is implemented; mitigation measures to reduce or eliminate impacts; and potential significant, unavoidable, and adverse impacts.

Whatcom County conducted a scoping process allowing written comments and testimony to help define alternatives and the scope of the EIS.

Appendix A summarizes the comments received. After consideration of scoping comments, Whatcom County has included the following areas for discussion in the EIS:

*Earth, air quality, water resources, plants and animals, land and shoreline use, plans and policies, population, housing and employment, cultural resources, transportation, and public services and utilities.*

For each natural and built environment topic, a comparative evaluation of alternative courses of action is included in Chapter 4 of the EIS. Alternatives described in this chapter review different rates and shares of growth and consider each jurisdiction's planning preferences.

## 1.3 Public Involvement

The County has issued this Draft EIS with a 45-day comment period. It is anticipated that a Final EIS will be issued in summer 2015. The Final EIS will contain responses to comments received during the comment period.

The County has and will host public meetings on the Comprehensive Plan. For a summary of past meetings and notices of future meetings, please see the County's website for more information: <http://wa-whatcomcounty.civicplus.com/1178/Environmental-Impact-Statement>.

## 1.4 Proposed Action, Alternatives, and Objectives

### Proposal Objectives

As part of describing proposed actions and alternatives, the State Environmental Policy Act (SEPA) requires a description of proposal objectives and features in the Draft Environmental Impact Statement (EIS). 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.

The Comprehensive Plan, Development Regulations Update, and UGA review objectives are:

**WHATCOM COUNTY COMPREHENSIVE PLAN UPDATE EIS SUMMARY**

- Fulfill the Growth Management Act (GMA) requirements for the eight-year review of the Comprehensive Plan.
- Provide for coordinated and consistent growth management planning between the County and cities.
- Accommodate the urban growth (population and employment) projected to occur in the succeeding 20-year planning period.
- Consider incentives and regulations that encourage a greater share of growth in urban areas.
- Conserve designated resources lands.
- Protect critical areas to promote environmental quality and manage growth consistent with the GMA.
- Make necessary changes to the Plan for internal consistency including growth policies, transportation, and capital facilities.
- Consider updated policies and regulations to implement the Comprehensive Plan land use designations and to achieve or increase quality of life in the County.

**Proposed Action and Alternatives**

Four alternatives are considered in this Draft Environmental Impact Statement (EIS), testing a range of growth allocations and policy and regulatory updates:

- Alternative 1: No Action
- Alternative 2: Historic Shares
- Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)
- Alternative 4: Targeted Land Use Change

Table 1.4-1 summarizes the key elements included in each alternative. Each alternative is described below.

**Table 1.4-1. Feature Comparisons by Alternative**

<b>Alternative</b>	<b>Urban/Rural Pop Growth Share</b>	<b>Population Growth</b>	<b>Employment Growth</b>	<b>Potential UGA Boundary Expansion</b>	<b>Policy &amp; Code Update</b>
1 No Action	86%/14%	48,630	31,092	No Change	No
2 Historic Shares	76%/24%	68,111	26,372	2 UGAs	Yes
3 Multi-Jurisdictional Resolution (Resolution 2014-013)	85%/15%	74,781	36,029	3 UGAs	Yes
4 Targeted Land Use Change	85%/15%	86,149	41,506	8 UGAs	Yes

Source: BERK Consulting, 2014.

**Alternative 1: No Action**

Alternative 1 would maintain the current Comprehensive Plan and development regulations in Whatcom County. The present land use plan would continue. Alternative 1 would include no UGA boundary changes or Comprehensive Plan land use Plan changes. There would be no policy or regulation changes. New population and employment growth allocations would not be made and the present remainder of growth for the period 2013-2029 would instead occur by 2036. The average annual growth rate would be 0.9%, less than the State Office of Financial Management (OFM)’s medium (most likely) forecast. The Alternative 1 share of rural population growth would be the least of the alternatives studied (14%). Current programs to lessen rural and resource land growth would continue without change, such as the present Purchase Development Rights (PDR) and Transfer of Development Rights (TDR) programs, the

Agricultural Protection Overlay (APO) that encourages clustering and retention of agricultural activities, and the County's Agricultural Strategic Plan (Whatcom County 2011).

### Alternative 2: Historic Shares

Alternative 2 would amend the Comprehensive Plan and development regulations to address Growth Management Act (GMA) review and evaluation results.

Growth would be similar to OFM's medium growth forecast but allocated based on historic shares of population (2000-2010) and current (2010) shares of employment. This results in the greatest share of rural growth among the alternatives (24%), though the great majority of growth would still occur in UGAs (76%). Two UGAs would be expanded: Birch Bay and Nooksack.

With this alternative, the County would prepare policy and regulation changes consistent with the eight-year GMA review, and continue to implement existing growth management tools for urban and rural growth.

### Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)

Alternative 3 would amend the Comprehensive Plan and development regulations to address GMA review and evaluation results, similar to Alternative 2.

To help identify local preferences for growth, the County and each city consulted members of the public and their legislative bodies on initial growth allocations. These are reflected in a multi-jurisdictional resolution adopted by the County (Resolution 2014-013). Bellingham would accommodate its higher allocations through intensification of its land use through upzones such as with additional mixed use villages and through higher densities. Ferndale would rely on its plans for Downtown and its Planned Action to intensify growth within present boundaries. After first accommodating growth in UGAs and finding a lack of capacity, UGAs would be expanded at Birch Bay, Lynden, and Nooksack.

There would be a lesser share of rural growth (15%) and a greater UGA share (85%). To help achieve a lesser rural share of growth, this alternative includes a menu of options for urban and rural density policies and code changes to redirect growth from rural and resource lands to UGAs.

### Alternative 4: Targeted Land Use Change

Alternative 4 would amend the Comprehensive Plan and development regulations to address GMA review and evaluation results. Population growth in this alternative is higher than in Alternative 3, based on a review of migration trends, but less than the OFM's high projection for the County. It is allocated similarly to the Multi-Jurisdictional Resolution. Employment growth would also be allocated in a manner similar to the Multi-Jurisdictional Resolution, but 15% higher. All city UGAs, except for Blaine, plus Birch Bay and Columbia Valley, would require expansion, under this alternative. There would be a lesser share of rural growth (15%) and a greater UGA share (85%). This alternative also includes options for urban and rural density policies and code changes similar to those in Alternative 3.

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

Key environmental issues and options facing decision makers are listed below:

- location of growth;
- sizing and composition of UGAs given growth expected over the 2013-2036 period;
- the amount and location of growth balanced in UGA and non-UGA areas in order to protect resource lands of long-term commercial significance and rural lands; and
- the level of capital improvements needed to support land use/growth levels.

All alternatives would allow increases in population and employment. Long-term local impacts resulting from any alternative include increased urbanization, cumulative impacts on fish and wildlife habitat, increased transportation congestion, and increased demand for infrastructure and facilities.

Prior to final plan adoption, the following issues are anticipated to be resolved:

- refinement of a Preferred Alternative following public hearings;
- preparation of associated land use plan and development regulations;
- selection and refinement of capital facility projects supporting land use, including transportation; and
- refinement of goals, objectives, and policies as well as implementing regulations.

## 1.6 Summary of Impacts and Mitigation Measures

Chapter 4 contains the full text of the Affected Environment, Significant Impacts, and Mitigation Measures sections. Table 1.6-1 below contains significantly abbreviated versions of the full discussion in Chapter 4.

Table 1.6-1 summarizes mitigating measures beyond adopted policies and regulations including “Other Potential Mitigation Measures,” which are new measures that the County may employ to reduce impacts. Full lists of mitigation measures are found in the individual sections of Chapter 4 including “Incorporated Plan Features” (self-mitigating features of the alternatives such as policies) and “Applicable Regulations and Commitments” (adopted codes and regulations).

For these reasons, readers are encouraged to review the more comprehensive discussion of issues of interest in Chapter 4 to formulate the most accurate impression of impacts associated with the alternatives.

Table 1.6-1 and the chapter it summarizes (Chapter 4) focus on a cumulative analysis though UGA comparisons are often made. For UGA-specific analysis, readers are encouraged to review Chapter 3, Suitability Analysis.

**Table 1.6-1. Summary of Alternative Impacts and Mitigation Measures**

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
<b>Earth</b>				
Impacts Common to All Alternatives	Earth-related impacts would occur from development that caused any of the following disturbance mechanisms: clearing, grading, erosion and sedimentation, other site disturbance, expanded impervious area, and increased chemical contamination. All four alternatives would result in the eventual reduction of vegetative cover in concert with the construction of approved development projects. The risk of erosion would increase with the reduction in soil organic matter. Soils in developed areas would be subject to removal, compaction and disruption of the soil structure necessary to maintain natural drainage processes and to support native vegetation communities. All four alternatives would permit development that is at risk from some catastrophic geologic event, including landslides, earthquakes, and volcanic hazards.			
Impacts of Each Alternative	Similar to impacts common to all alternatives, with lowest population growth of the alternatives occurring in present UGA boundaries.	Includes medium growth across the County, but a greater share of growth within non-UGA areas where there is a greater distribution of landslide hazard areas, seismic hazard areas, volcanic hazard areas, and alluvial fan hazard areas.  Alternative 2 would maintain most existing UGA boundaries except for Birch Bay and Nooksack. The Nooksack growth would occur in an area mapped as seismic and volcanic hazard areas.	Alternative 3 would expand existing UGA boundaries at Birch Bay, Lynden, and Nooksack, and intensification of infill areas within existing city limits and UGA boundaries elsewhere. The Nooksack UGA expansion would occur in an area mapped as volcanic and seismic hazard areas. Increased densities within existing UGAs could increase the exposure geologic hazards in those areas.	Alternative 4 would result in potential expansions of all UGAs except for Blaine and Cherry Point as well as infill and intensification in existing UGAs. The Columbia Valley UGA Reserve is located in an area of an alluvial fan and steep slopes. The Everson, Nooksack, and Sumas UGA Reserves or Suitability Analysis Areas are located in volcanic and seismic hazard areas. There are a few areas of steep slopes in some of Bellingham’s UGA Reserves.
Mitigation Measures	In addition to Incorporated Plan Features and Applicable Regulations and Commitments, Other Potential Mitigation Measures include: <ul style="list-style-type: none"> <li>• Other potential mitigation measures such as redirecting growth from non-UGA areas where there are areas with greater</li> </ul>			

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change										
				<p>hazards and less alteration, into urban areas that have already been planned for appropriate densities given constraints, and in proximity to emergency and other services. Urban and rural density tools described in Chapter 2 indicate how tools could redirect rural growth.</p> <ul style="list-style-type: none"> <li>The County could also avoid or limit UGA expansion based on proposed development type (e.g., residential development, which may have lesser impacts, versus commercial or critical infrastructure, which may have greater impacts), limit expansion of UGAs in parts of the Suitability Analysis Area having moderate to high liquefaction hazard areas, or avoid volcanic hazard areas.</li> <li>The County is also considering potential changes to its CAO as part of its GMA review process for 2016, following a review of Best Available Science. To the extent such a review identifies potential changes, such as improved mapping resolution or understanding of geologic hazards, the County would apply the regulations to new development as appropriate.</li> <li>County geologists are considering developing a simple screening tool to identify unmapped coastal areas subject to tsunami inundation, such as mapping land with land surface elevations of 14 feet AMSL or lower (Wiser, July 2014).</li> <li>As part of each city's Comprehensive Plan Update, additional policies or regulations addressing regulation of development in geologic hazards could be considered.</li> </ul>										
<b>Air Quality</b>														
Impacts Common to All Alternatives	<p>During construction, fugitive dust from excavation and grading would contribute to temporary increases in ambient concentrations of particulate matter. Tailpipe emissions from heavy construction equipment and vehicles would temporarily degrade air quality near the construction sites.</p> <p>Under all alternatives, emissions would be generated by natural gas, fuel oil, and propane combustion used for space heating at new and existing dwellings and retail/commercial businesses. Because residential development may include installation of fireplaces or woodstoves, there is a potential for air quality impacts from burning wood.</p> <p>Under all of the alternatives, the study area is expected to experience air quality impacts due to commercial and business operations. Major industrial facilities could expand and increase their contribution to regional greenhouse gas (GHG) emissions.</p>													
Impacts of Each Alternative	<table border="1"> <thead> <tr> <th data-bbox="128 1242 499 1404">Average Annual GHG Emissions (metric tons CO2e per year) without</th> <th data-bbox="499 1242 877 1404">Alternative 1: No Action</th> <th data-bbox="877 1242 1255 1404">Alternative 2: Historic Shares</th> <th data-bbox="1255 1242 1633 1404">Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)</th> <th data-bbox="1633 1242 1950 1404">Alternative 4: Targeted Land Use Change</th> </tr> </thead> <tbody> <tr> <td data-bbox="128 1307 499 1404"></td> <td data-bbox="499 1307 877 1404">4,150,812</td> <td data-bbox="877 1307 1255 1404">4,287,277</td> <td data-bbox="1255 1307 1633 1404">4,428,978</td> <td data-bbox="1633 1307 1950 1404">4,571,346</td> </tr> </tbody> </table>				Average Annual GHG Emissions (metric tons CO2e per year) without	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change		4,150,812	4,287,277	4,428,978	4,571,346
Average Annual GHG Emissions (metric tons CO2e per year) without	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change										
	4,150,812	4,287,277	4,428,978	4,571,346										

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
mitigation				
Average Annual GHG Emissions (metric tons CO2e per year) with mitigation	3,362,158	3,472,694	3,587,472	3,702,790
Contributions to Forecast Regional Vehicle Miles Traveled (VMT), Regional Tailpipe Emissions	3.6%	3.7%	3.8%	4.0%
Mitigation Measures	<p>In addition to Incorporated Plan Features and Applicable Regulations and Commitments, Other Potential Mitigation Measures include:</p> <ul style="list-style-type: none"> <li>• The County and cities should require all construction contractors to implement air quality control plans for construction activities in the study area.</li> <li>• Mitigation measures proposed for the action alternatives and development goals and policies in the County’s and each city’s Comprehensive Plan will help mitigate GHG impacts within the study area. The County and each city could also require or encourage future developers to implement additional mitigation; some examples of additional mitigation are presented in Section 4.2 and would help reduce GHG emissions caused by transportation, facilities, building construction, space heating, and electricity usage.</li> </ul>			
<b>Water Resources</b>				
Impacts Common to All Alternatives	<p>Impacts on groundwater quantity and quality may occur due to:</p> <ul style="list-style-type: none"> <li>• Changes in land use that reduce groundwater recharge, such as development, soil compaction or other soil disturbing activities.</li> <li>• Changes in population that increase demand for groundwater as water supply for drinking and other household uses.</li> <li>• Land uses that produce higher levels of non-point source pollution, such as runoff or residential development with septic disposal.</li> <li>• Land uses that increase the density of on-site septic systems.</li> <li>• Land uses that produce point source pollutants that can enter the groundwater at specific discharge points (e.g. industrial</li> </ul>			

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
	<p>sources).</p> <ul style="list-style-type: none"> <li>Intrusion of saltwater from marine waters into coastal aquifers can result from over-pumping of wells and reversal of groundwater flow directions from seaward to landward.</li> </ul> <p>Two mechanisms that have significant influence on natural surface water systems, forest removal and creation of impervious surfaces (Booth et al. 2002), will unavoidably accompany the increased development that would occur under all alternatives. It is not practical or feasible to fully mitigate all the impacts on surface water resources from these mechanisms, so avoidance is the most effective strategy.</p> <p>The same factors that impact groundwater and surface water quality and availability can also affect water supply. As described previously, changes in land use that reduces groundwater recharge, such as development, soil compaction, or other soil-disturbing activities, can create impervious surfaces (and reduced pervious surfaces) that prevent precipitation from recharging groundwater aquifers. Impacts of reduced recharge can result in lower water tables and reduced base flow to surface waters. Point source and non-point source pollution are also major sources of water quality impacts resulting from changes in development.</p> <p>Impervious surface areas are generally defined as those areas developed with artificial structures (e.g., pavement or buildings) that are covered by or constructed with impermeable materials. Impervious surfaces can also include exposed soils compacted by urban development that inhibit water absorption. Impervious surfaces can reduce natural infiltration and increase surface runoff by altering the pathways by which water reaches adjacent or nearby waterbodies (USEPA, 2014). Stormwater that comes into contact with artificial impervious surfaces has increased potential for exposure to pollutants such as pesticides, metals, organic pollutants, and oil and grease (USEPA, 2014). The estimated number of impervious acre increases above the existing 60,310 acres varies by alternative below.</p>			
Impacts of Each Alternative				
Increase of Urban and Rural Impervious Acres by Alternative	2,478	4,567	3,982	4,564
Percentage Increase above No Action in UGAs	--	14%	43%	72%
Mitigation Measures	<p>In addition to Incorporated Plan Features and Applicable Regulations and Commitments, Other Potential Mitigation Measures include:</p> <ul style="list-style-type: none"> <li>Encourage use of drainage systems that mimic natural drainage systems, such as vegetated swales, wet ponds, and created</li> </ul>			

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
				<p>wetlands.</p> <ul style="list-style-type: none"> <li>• Implement all adopted watershed management and salmon recovery plans.</li> <li>• Adopt more protective detention standards.</li> <li>• Adopt more protective water quality standards.</li> <li>• Reduce the potential for additional impervious surfaces by increasing urban densities and promoting infill development in urban areas.</li> <li>• Retrofit existing detention facilities to improve water quality treatment.</li> <li>• Construct improvements that would correct existing erosion problems and reduce the potential for increased erosion in the future.</li> <li>• Implement stormwater quality monitoring to evaluate the effectiveness of stormwater practices and standards.</li> <li>• Reclaim water from wastewater treatment plants to augment wetlands, streams, and aquifers and to decrease use of groundwater.</li> <li>• Provide additional interties to enhance the reliability and efficiency of the water distribution system.</li> <li>• Consider further integration of methods of watershed characterization and land use planning, similar to the Birch Bay Watershed Characterization Pilot Study (ESA Adolfson 2007)</li> <li>• Promote the preservation of onsite native vegetation, particularly mature trees and naturally diverse scrub-shrub communities.</li> <li>• Publicize and encourage the preservation of native soils and protect the natural processes of soil maintenance and onsite hydrology.</li> <li>• Consider larger wetland buffers for particularly complex or sensitive wetland areas.</li> <li>• Consider placing water quality improvement projects immediately upstream from wetlands.</li> <li>• Provide for ongoing care and preservation of natural areas either by placing them into public ownership or by providing technical assistance and materials to property owners to enhance native vegetation benefits.</li> <li>• Encourage maintaining existing working forests by purchasing development rights from willing foresters to maintain forested landscapes.</li> <li>• Develop mitigation banks, in lieu fees, or advanced mitigation to provide before-the-fact mitigation for anticipated impacts on wetlands, streams, and habitat in each UGA.</li> <li>• Consider conservation measures for domestic water uses, such as limits on house size, lawn size, and fixtures—to help</li> </ul>

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
	<p>ensure that sufficient water is available to protect endangered fisheries and for agricultural needs.</p> <ul style="list-style-type: none"> <li>• Establish a groundwater monitoring program to provide the groundwater information necessary to assess the ability of the resource to be managed to sustain fisheries, farming, and current and planned levels of growth.</li> <li>• Expand intergovernmental cooperation to coordinate groundwater impacts across political boundaries.</li> <li>• Create and implement a groundwater education and resource program.</li> <li>• Consider prohibitions on use of septic systems in UGAs at densities of greater than one system per one acre, and restricting septic systems within UGAs that are located within sensitive watersheds.</li> </ul>			
<b>Plants and Animals</b>				
Impacts Common to All Alternatives	<p>Vegetation communities would continue to be removed and/or disturbed during implementation of development activities. Vegetation communities that are characterized by trees and dense shrubs would be converted to managed plant communities typified by the vegetated suburban residential and developed cover types, such as lawns and landscaped trees and shrubs. Impervious surface area within the UGAs would increase. Indirect impacts would include changes in permeability to infiltrate water.</p> <p>Impacts on aquatic species could occur due to loss or alteration of habitat as a result of changes in water quality and quantity and shoreline development. Increases in the human population and subsequent development and increased density typically have a negative effect on aquatic species and their habitat.</p> <p>There would be a reduction in the amount of wildlife habitat in the County over time as planned projects and future development projects are implemented. Direct impacts could include loss or conversion of habitat to either unsuitable or less suitable types for many wildlife species currently occupying those habitats. Indirect effects common to all alternatives could include a reduction in wildlife habitat quality and function because of increased human disturbance and associated factors in areas adjacent to wildlife habitat.</p>			
Impacts of Each Alternative	As vacant and underdeveloped parcels are developed in the UGAs, removal and conversion of existing vegetation would increase. Because UGA boundaries are retained with the No Action Alternative 1,	Alternative 2 would likely focus growth in existing UGAs for eight of 10 UGAs, and therefore the change would be focused there; the alternative would expand UGA boundaries for Birch Bay	Under this alternative, impacts on vegetation would be similar to those as described for the No Action Alternative 1 and the Historic Shares Alternative 2, except that Alternative 3 has a higher amount of	Under the Targeted Land Use Change Alternative 4, impacts on vegetation would be as described under the Multijurisdictional Resolution Alternative 3 but magnified as it has the greatest UGA expansion potential in 8 of 10

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
	<p>the change would be focused there. There would also be potential impacts on sensitive plant species located in or adjacent to UGAs under this alternative. Development in unincorporated non-UGA areas would have the greatest potential to affect native vegetation, including sensitive plant species and high quality or rare vegetation communities but has the lowest amount and share of rural population or employment growth of all alternatives.</p> <p>Impacts on water quality would affect freshwater, marine, and estuarine areas, and the species that rely on those habitats.</p> <p>Under the No Action Alternative 1, there would be an increase in density in the UGAs. This density increase would be expected to result in a decrease in wildlife use and habitat within these areas.</p>	<p>and Nooksack.</p> <p>The amount of growth in unincorporated non-UGA areas would be greatest under the Historic Shares Alternative. Development in unincorporated non-UGA areas would have the greatest potential to affect native vegetation, including sensitive or threatened plant species and high quality or rare vegetation communities. Seven Washington Department of Natural Resources (WDNR) Washington Natural Heritage Program (WNHP)-listed species have been recorded within a UGA, UGA Reserve, or Suitability Analysis Study Areas.</p> <p>This alternative would result in habitat loss and fragmentation in current UGAs and in non-UGA areas.</p>	<p>population and employment growth than Alternatives 1 and 2 though principally focused in UGAs. Three UGAs may require expansion: Birch Bay, Lynden, and Nooksack.</p> <p>Alternative 3 would increase development in the Bellingham UGA and all other city and County UGAs and so would have the potential to affect water quality, and therefore, fish and other aquatic species.</p> <p>This alternative would focus growth in the UGA areas and three UGA expansion areas and would contain provisions to maintain rural lots in an undeveloped or lower density of development condition with rural density tools described in Chapter 2.</p> <p>Focusing most of the County’s population and employment development in the Bellingham UGA without a Bellingham UGA expansion would also focus potential</p>	<p>UGAs and has the second highest rural growth amount.</p> <p>If growth were to extend into the collective Suitability Analysis Study Areas in 8 of the 10 UGAs, there would also be potential impacts on sensitive or threatened plant species occurring in or near those areas.</p>

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
			impacts on wildlife and wildlife habitat in the area.	
Mitigation Measures	<p>In addition to Incorporated Plan Features and Applicable Regulations and Commitments, Other Potential Mitigation Measures include:</p> <p><b>Vegetation</b></p> <ul style="list-style-type: none"> <li>• Reduce impervious surface area by implementing applicable LID requirements per the Washington State Department of Ecology (Ecology) Stormwater Manual for Western Washington and Errata (Ecology, 2012d).</li> <li>• Promote the preservation of on-site native vegetation, particularly mature trees (i.e., tree retention ordinance) and naturally diverse scrub-shrub communities.</li> <li>• Publicize and encourage the preservation of native soils and protect the natural processes of soil maintenance and on-site hydrology. Leaving areas/tracts (“belts”) of native vegetation undisturbed in both commercial and residential developments can provide long-term benefits regarding stormwater management, on-site “landscaping” maintenance, microclimate, and general aesthetics/sense of well-being in a developed landscape.</li> <li>• Increase regulatory guidance or limit expansions of UGAs in areas that may impact sensitive plant species or complex wetland areas, such as Birch Bay, Ferndale, or Nooksack.</li> <li>• Sponsor or encourage public education about the benefits of native vegetation.</li> <li>• Provide for ongoing care and preservation of natural areas either by placing them into public ownership or by providing technical assistance and materials to property owners to enhance native vegetation benefits.</li> <li>• Implement restoration priorities identified in the County riparian vegetation inventory and function assessments for select watersheds and combine them with other considerations, such as landowner willingness and watershed location, to develop projects in areas lacking mature native trees and LWD recruitment (Anchor QEA, 2010 and 2012).</li> </ul> <p><b>Fish/Aquatic Species</b></p> <p>Additional measures could potentially be implemented to further mitigate the impacts of the alternatives on aquatic species. A potential plan or regulatory amendments could include the mitigation measures described in Section 4.3—Water Resources.</p> <p><b>Wildlife</b></p> <ul style="list-style-type: none"> <li>• Consider avoiding expansion of UGA boundaries in areas of documented priority, threatened, or endangered species. (See tables in Section 4.4 for Priority Habitats and Species [PHS] information.)</li> <li>• Require management plans for areas included in an expanded UGA boundary that would include threatened or endangered</li> </ul>			

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
				<p>species for the potentially affected area by the landowner in coordination with Washington Department of Fish and Wildlife [WDFW] prior to permitting any habitat alteration.</p> <ul style="list-style-type: none"> <li>Promote low impact development [LID], with emphasis on native plant retention in greenbelts between and within areas of proposed development to retain a portion of the wildlife habitat on the site and to preserve a measure of connectivity between areas of wildlife habitat.</li> <li>Encourage buffer enhancement. Where stream and/or wetland buffers to be left are in a degraded condition, encourage enhancement of the buffer through means such as establishment of native vegetation and control of non-native invasive plant species with a goal of providing high quality wildlife habitat and discouraging human entry into the buffer area.</li> <li>Consider updates to critical areas regulations. The County is evaluating its Critical Areas Ordinance as part of its 2016 Comprehensive Plan Review. To the extent the regulations modify the County’s regulation of fish and wildlife habitat conservation areas, the County would apply them to new development. Cities will likewise consider GMA provisions and their critical area policies and regulations and determine if updates are needed as part of the 2016 Comprehensive Plan Updates.</li> </ul>
<b>Land &amp; Shoreline Use</b>				
Impacts Common to All Alternatives	<p>Population is anticipated to increase under all four alternatives, and new residents will require jobs and housing. Growth under all alternatives is anticipated to occur mostly within the UGAs, though the exact distribution of population between individual UGAs and non-UGA areas varies by alternative. As growth occurs, the total amount of land devoted to these uses would increase, and many areas that are currently vacant would be converted to other uses. Conversion of some land uses to different types of uses or more intensive uses, as well as redevelopment of existing developed lots could also occur.</p> <p>All alternatives would result in changes in activity levels and patterns as a result of new development. As growth occurs and land develops or redevelops at greater intensities, each alternative has the potential for creating localized incompatibilities, especially in less populous UGAs where the surrounding land uses are likely to be resource lands or more rural in nature. Increased growth in the County, particularly growth in non-UGA areas, has the potential to change shoreline uses.</p>			
Impacts of Each Alternative				
Land Demand: Total Net Acres of Developable Land in UGAs	7,140	8,958	9,742	12,091

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
Land Use and Shoreline Patterns	<p>With the lowest growth allocations, less land would be needed to accommodate the growth. Lot patterns would likely change from suburban and semi-rural densities to urban within UGAs. As development occurs, secondary impacts may occur, such as greater demand for public services and changed aesthetic character.</p>	<p>Alternative 2 plans about 40% more population growth than Alternative 1 but 15% less job growth than Alternative 1. Because the UGA population growth shares are based on trends between 2000-2010, some UGAs would have lower allocations for population than Alternative 1 and some would have higher allocations than Alternative 1. Alternative 2 would consume greater amounts of land to satisfy its anticipated growth than the No Action Alternative. Non-UGAs areas would have the highest share of growth than all studied alternatives. The potential for conversion of rural and resource lands to residential uses in particular would be greatest among all alternatives.</p>	<p>Alternative 3 would provide 54% more population growth than Alternative 1. Most growth would be in UGAs (85%). Acres required to meet the growth would be greater in total than for Alternative 2, but non-UGA land consumption would be less than for Alternative 2.</p>	<p>The potential for UGA rezones to allow higher growth capacity or alternative land uses, and the demand for UGA expansions converting rural zones to urban zones is highest under Alternative 4. Alternative 4 would exceed the population capacity of all UGAs except Blaine. While Cherry Point UGA is also under capacity for employment in Alternative 4, the County is likely to employ upzones or amend its code to allow for more efficient employment patterns with the UGA, rather than expanding the UGA boundary.</p> <p>The potential for UGA rezones to allow higher growth capacity or alternative land uses, and the demand for UGA expansions converting rural zones to urban zones is highest under Alternative 4. Alternative 4 has the second highest allocation of non-UGA growth among the alternatives; however, Alternative 4 would require</p>

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
				application of urban and rural density tools.
Mitigation Measures	<p>In addition to Incorporated Plan Features and Applicable Regulations and Commitments, Other Potential Mitigation Measures include:</p> <ul style="list-style-type: none"> <li>• Within the city limits and unincorporated UGAs whose land capacity analysis indicated an acreage deficit, increased densities could alleviate the need to expand UGA boundaries. Where infill alone may not fully address future growth needs, limited UGA expansions may be considered according to GMA goals and the County Comprehensive Plan.</li> <li>• The County could consider reducing the size of UGAs with a current large surplus of developable acreage and allowing this land to return to non-UGA use. See Sections 4.6 and 4.7 for descriptions of regarding appropriate sizing of UGAs given the planning level nature of capacity analysis (e.g. +/- 5% within capacity).</li> <li>• Rural and resource land protection measures and incentives to make UGAs more attractive for urban development (e.g., densities, infrastructure investment) could be applied to direct growth to urban areas under all alternatives. See Chapter 2 for more information.</li> </ul>			
<b>Plans and Policies</b>				
Impacts Common to All Alternatives	<p>Consistent with GMA provisions, the Comprehensive Plan Update and UGA Review is intended to accommodate anticipated urban and rural population growth for the next 20-year period (through 2036). All of the alternatives propose population forecasts that are within the OFM population range.</p> <p>Under each alternative, growth is predominantly focused in UGAs that are already characterized by urban growth or adjacent to areas characterized by urban growth, and include all of the County’s incorporated cities. However, under each alternative several UGAs are greater in size than required for the population allocations. Therefore, some determinations about areas more or less suitable for growth would need to be made.</p>			
Impacts of Each Alternative	The No Action Alternative meets GMA goals by focusing growth in the current UGAs. This alternative also provides a relatively low allocation of growth to non-UGA areas and resource lands, which helps protect natural	Alternative 2 provides for growth similar to OFM’s medium growth forecast but allocated based on historic shares of population (2000-2010) and current (2010) shares of employment. This alternative carries forward	Alternative 3 assumes increased growth to meet collective visions of each county and city as documented in a multi-jurisdictional resolution (Resolution 2014-013). In some communities the	Alternative 4 focuses most growth in the UGAs and a relatively smaller share to the non-UGA areas; however total growth in the UGAs is the highest studied, and the non-UGA growth value is the second highest studied. To

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
	<p>resource industries and open space.</p> <p>Under the No Action Current Comprehensive Plan Alternative 1, focusing growth in existing UGAs promotes the use of infill measures and more efficient urban services. However, most UGAs are sized between 12% and 40% above the allocations. The overall percentage difference from the population land capacity analysis (LCA) is 26%. The percentage difference of the employment allocation above the LCA results is 14%.</p>	<p>the trend of more growth in non-UGA areas, undermining both the urban and rural goals of GMA. Growth in non-UGA areas has a greater possibility of affecting intact ecological systems, reducing open space, and fostering less efficient public services.</p> <p>Under Alternative 2, Birch Bay and Nooksack UGAs would be undersized. Bellingham and Columbia Valley allocations would be within 5% above the LCA capacity. Although most UGAs would be greater than 5% above Alternative 2 growth forecasts, there is a closer match of capacity and allocations, and the total UGA population capacity would be 9% higher than allocations whereas the No Action Alternative has a 26% gap.</p> <p>In general, the greater growth in Alternative 2 and the location of resource lands abutting the UGAs as well as inside the Suitability Analysis</p>	<p>emphasis studied in Alternative 3 includes infill, such as Bellingham and Ferndale, and in others the growth would likely be accommodated through a combination of infill and UGA expansion measures, such as Birch Bay, Lynden, and Nooksack. Each city will be planning in concert with their citizens and the County to determine the appropriate balance of infill and UGA boundary modifications.</p> <p>Under Alternative 3 half the UGAs would have allocations exceeding their population capacity, and half would have allocations below their capacity though most are within 5% of the allocation. The total allocation percentage difference would be below capacity by 12% unless infill and other measures are applied in particular in Bellingham.</p> <p>Employment allocations show most UGAs are either</p>	<p>help better balance GMA goals, this alternative includes infill incentives and rural protection measures.</p> <p>Most UGAs are undersized for Alternative 4 growth forecasts. Overall, population capacity deficits are 29%. Employment capacity deficits across UGAs are estimated at 11%. Growth is assumed to extend into the UGA Reserves and Suitability Analysis Area for UGAs that are undersized for population or employment.</p> <p>Resource land impacts would be similar for the Nooksack UGA as Alternatives 2 and 3. In addition, there is a potential for growth to intrude into a designated agricultural land west of Sumas in the Suitability Analysis Study Area.</p>

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
		<p>Areas means similar but greater potential for incompatibilities with resource lands.</p> <p>Under Alternative 2, the Nooksack UGA is undersized and some lands identified in Suitability Analysis Areas are designated agricultural lands of long-term commercial significance in the Comprehensive Plan. Unless infill measures are significant, a Nooksack UGA expansion may be needed to allow the community to meet both population and employment growth allocations.</p>	<p>within 5% above their allocations or are below capacity.</p> <p>Alternative 3 has a similar potential for urban growth to occur in designated Agricultural Lands of Long-term Significance in the Nooksack Suitability Analysis Area as for Alternative 2.</p> <p>Rural and resource land protection measures such as larger lots, lot consolidation, transfer of development rights (TDR), purchase of development rights (PDR), and others, are more likely to lower future growth in agricultural resource lands and other rural lands.</p>	
Mitigation Measures	<p>In addition to Incorporated Plan Features and Applicable Regulations and Commitments, Other Potential Mitigation Measures include:</p> <ul style="list-style-type: none"> <li>• For UGAs that show population capacities significantly below population allocations, the County in consultation with the appropriate city could: <ul style="list-style-type: none"> <li>○ Consider measures to increase the development capacity within city limits and existing UGAs such as applying incentives, upzones (e.g., greater densities), and mixed use zoning.</li> <li>○ Consider limited UGA expansions into UGA Reserve and Suitability Analysis Areas where infill measures are not feasible within the UGA boundaries.</li> <li>○ Reallocate population within the range of the population allocations of the Draft EIS. This would shift population from UGAs that lack capacity to communities that have greater potential to accommodate population in existing UGAs.</li> </ul> </li> </ul>			

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
				<p data-bbox="611 321 1940 383">This could be done in consultation with communities that want to reduce their share to those communities that want to increase their share of the growth allocation.</p> <ul data-bbox="506 399 1940 1398" style="list-style-type: none"> <li data-bbox="506 399 1940 565">• For UGAs that show land capacities significantly greater than the population allocations, UGA boundaries could be decreased. Areas could be removed that are more costly to provide public services, that have significant concentrations of critical areas or constraints or that are considered lower priorities by the associated cities or communities (see Chapter 3). Alternatively or in combination, 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.</li> <li data-bbox="506 581 1940 711">• UGAs that are undersupplied with employment capacity could be modified to change the balance of land uses that have different land demand requirements (e.g., industrial versus retail), or to change UGA boundaries (e.g., expansions). Deficits in employment could be offset with a rezone of residential land to employment given the oversupply of residential land in some UGAs.</li> <li data-bbox="506 727 1940 857">• To avoid an oversupply of employment land that is unused during the 20-year planning period, the County in consultation with cities could reduce the proposed amount of land designated for commercial and industrial employment use or alter the mix of employment zones in the unincorporated portions of UGAs to reach a corresponding level of jobs as the employment forecast.</li> <li data-bbox="506 873 1940 1036">• The County could conduct joint planning with cities to determine appropriate land use categories in the UGA to attain the population and/or employment allocation. Until joint planning is complete, the population or employment allocation would be held in reserve. The County would not allow annexation until joint planning is complete and final UGA boundaries are determined. Pre-annexation, the County could adjust allowable densities to retain rural character until services and annexation are assured.</li> <li data-bbox="506 1052 1940 1360">• Where additional capital plans are needed, UGA sizing and capital planning options may include: <ul data-bbox="562 1101 1940 1360" style="list-style-type: none"> <li data-bbox="562 1101 1940 1166">○ updating system plans or providing supplemental information that demonstrates an ability to serve, prior to June 30, 2016;</li> <li data-bbox="562 1182 1940 1214">○ retaining UGAs but disallowing urban growth until adequate capital facility planning is completed;</li> <li data-bbox="562 1230 1940 1295">○ before expanding UGAs or modifying UGA boundaries, reserving some portion of growth allocations until more detailed planning and capital facility information is available; and/or</li> <li data-bbox="562 1312 1940 1360">○ reducing UGAs and identifying urban reserve areas that constitute a potential supply of land for future addition into the UGA that can be added after additional planning is completed.</li> </ul> </li> <li data-bbox="506 1377 1940 1398">• Rural land protection measures and incentives to make UGAs more attractive for urban development (e.g., densities,</li> </ul>

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
	<p>infrastructure investment) could be applied under all alternatives to direct growth to urban areas. See Section 4.7 for more information.</p> <ul style="list-style-type: none"> <li>The County and cities could require clustered development, buffers, graduated densities, and other measures to reduce potential incompatibilities next to resource lands outside of UGAs.</li> <li>The County and cities of Nooksack and Sumas should conduct an analysis of designated agricultural lands in the Suitability Analysis Areas to determine long-term significance and consider UGA additions for lands that are not of long-term commercial significance.</li> </ul>			
<b>Population, Housing, and Employment</b>				
Impacts Common to All Alternatives	<p>Population would grow under each alternative. All alternatives project growth within the OFM 2012 range of low, medium, and high projections. All alternatives also assume average annual growth rates (AAGR) lower than historical averages.</p> <p>Each alternative would provide opportunities for increased employment growth.</p>			
Impacts of Each Alternative	<p>Alternative 1 produces the lowest population growth of all studied alternatives. There is excess capacity countywide (26%) considering all UGAs' capacities in relation to the low projection. All UGAs except for Ferndale would have excess capacity of 5% in comparison to allocations. Excess capacity may lead to more dispersed growth inside UGAs and corresponding less efficient UGA growth patterns, though growth would be controlled by infrastructure availability.</p> <p>Alternative 1 has the second</p>	<p>Alternative 2 projects growth to 2036 based on historic shares of growth and the OFM Medium (most likely forecast). Cumulatively, the UGAs would be 9% over capacity. Individually the Birch Bay and Nooksack UGAs would be undersized, Bellingham and Columbia Valley would be within 5% of allocations, and the remainder with greater than 5% capacity of their allocations. Given historic shares, the non-UGA area would have the highest growth projection among the</p>	<p>Alternative 3 proposes growth in accordance with each jurisdiction's initial review of growth forecasts. There would be a deficit of residential land supply of -12% considering present plans. However, Bellingham anticipates the development of urban village plans and higher densities in newly-annexed areas and existing UGAs. If that occurs, then under Alternative 3 the capacity for population could become more in balance with the growth allocation.</p>	<p>Alternative 4 would allocate population growth similar to Alternative 3, but at higher levels. Across the County all UGAs would have insufficient capacities except for Blaine. The undersupply in land to accommodate population in UGAs collectively would be -29%. If Bellingham were to institute its anticipated infill intensification discussed with Alternative 3, the undersupply of land for population growth would drop significantly, as would the undersupply across the UGAs overall.</p> <p>Without sufficient capacity</p>

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
	<p>lowest job growth. Regarding employment, all UGAs have sufficient capacity for jobs, apart from Ferndale, Lynden, and Nooksack. Among all UGAs there would be 14% excess capacity in jobs. Non-UGA job growth would be the lowest studied of the alternatives.</p>	<p>alternatives studied and no additional rural growth tools would be needed to redirect growth.</p> <p>With a share of growth consistent with historic shares, the UGAs would collectively have excess employment capacity of 34%. Only Nooksack would be undersized for its share of jobs. Non-UGA job growth would be higher than other alternatives though close to Alternative 4.</p>	<p>A few UGAs would be undersized if boundaries or densities are unchanged: Bellingham, Birch Bay, Ferndale, Lynden, and Nooksack. All remaining UGAs except Blaine would have capacities within 5% of their allocations. Blaine would have 33% excess capacity.</p> <p>Under Alternative 3, non-UGA population growth would be less than historic shares. The County could implement new tools designed to redirect rural growth to UGAs.</p> <p>Alternative 3 would have an employment allocation slightly lower than UGA capacity, within 4%. UGAs under capacity include Lynden and Nooksack. Remaining UGAs would mostly be within 5% of allocations, except Ferndale, Blaine, Cherry Point, and Everson would be greater than 5% of the allocation.</p>	<p>either through upzones or UGA expansions there could be spillover growth into non-UGA areas. The non-UGA share is 15% of the total population allocation but the rural growth value is nearly as high as Alternative 2. Therefore, both urban and rural/resource density incentives to redirect non-UGA growth to urban areas and sufficient densities and infrastructure in urban areas could be considered.</p> <p>Similar to population results Alternative 4 would show an undersupply in UGA employment capacity of -11%. All UGAs except for Blaine, Everson, and Ferndale would have less capacity than needed to meet growth allocations.</p>

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
Mitigation Measures	<p>In addition to those listed under plans and policies:</p> <ul style="list-style-type: none"> <li>The County could consider if there is an acceptable margin of error regarding land capacity analysis to recognize its use as a predictive planning tool rather than as a precise method. For example, Kitsap County has established a margin of error of 5% and UGA land capacity results within +/-5% of the growth allocation are considered in balance.</li> </ul>			
<b>Cultural Resources</b>				
Impacts Common to All Alternatives	<p>Potential impacts to cultural resources that are common to all alternatives include growth in existing UGAs. This would likely include loss of, or damage to, archaeological sites and historic structures as development occurs in previously undeveloped areas.</p>			
Impacts of Each Alternative	<p>Under the No Action Alternative (Alternative 1), population growth is projected within existing UGAs. There are several structures older than 50 years that have not been evaluated for historic significance within the UGAs. Further, there is development potential along waterbodies in all UGAs as well as the non-UGA areas, and these are likely locations for cultural resources.</p>	<p>Alternative 2 projects population growth beyond existing UGAs, and expansion of two UGAs, Birch Bay and Nooksack. It also has the greatest amount of non-UGA growth.</p> <p>The shoreline around Birch Bay in the existing UGA contains numerous archaeological sites. Increased growth within the UGA, Reserve and Suitability Analysis Study Areas are mostly within areas of high archaeological potential. The Nooksack UGA, UGA Reserve, and Suitability Analysis Study Areas contain a handful of recorded sites, but the area has had only sparse cultural</p>	<p>Alternative 3 projects population growth beyond existing UGAs, and expansion of three UGAs, Birch Bay, Lynden, and Nooksack. In addition to resources in the previously described Birch Bay and Nooksack areas, the existing Lynden UGA contains both archaeological and historic resources. The Lynden vicinity is composed entirely of areas of moderate to high archaeological potential.</p>	<p>Alternative 4 projects UGA expansions in all areas except Cherry Point and Blaine. This includes areas with recorded significant archaeological resources (and high potential for unrecorded resources) such as portions of the Bellingham Bay shoreline. Some areas, such as Columbia Valley (an area of high archaeological potential according to the statewide predictive model), have had no documented cultural resources surveys. Development under Alternative 4 has the greatest potential to impact cultural resources of all the proposed alternatives due to its most extensive UGA expansion</p>

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
		resources surveys. Most of the area has moderate to high archaeological potential.		potential and second highest non-UGA growth level.
Mitigation Measures	<p>In addition to Incorporated Plan Features and Applicable Regulations and Commitments, Other Potential Mitigation Measures include:</p> <ul style="list-style-type: none"> <li>• Mitigation for impacts of individual projects may be required under Section 106 or Executive Order (EO) 05-05.</li> <li>• The County could enact a qualifying historic preservation ordinance similar to current Comprehensive Plan Design Policy 10E-5.</li> <li>• Under SEPA authority, the County and cities could apply a decision tree framework for level of analysis and conditions of approval.</li> </ul>			
<b>Transportation</b>				
Impacts Common to All Alternatives	<p>As population and employment are projected to increase all of the alternatives, the resulting increase in traffic is expected to degrade the LOS on the transportation system under all alternatives. It is noted that projected 2036 traffic volumes are generally lower, sometimes significantly, than 2031 projections that were completed for the previous Comprehensive Plan update in 2008. This is consistent with trends that have been observed throughout the region, in which traffic volumes have held steady or declined over the past few years, and in turn, are projected to grow into the future at slower rates than previously anticipated. Some of the decline may have been due in part to the recession that occurred within that period, but the lower rate of traffic growth also reflects region-wide trends in which a greater proportion of new development has occurred in urban areas and increasing land use mixes that put residents and jobs closer together, as well as an ongoing focus on infrastructure and services to support alternative transportation modes. This has contributed to slower growth in vehicular traffic than was projected in years past, and with continued emphasis on smart growth and alternative transportation mode strategies, this trend is expected to continue into the future.</p> <p>Increases in population and employment levels are expected to increase the demand for additional facilities; thus, all four alternatives would affect non-motorized facilities through increased demand for additional trails and bikeways.</p> <p>Transit operations and facilities will be affected by the increase in travel demand created by any of the alternatives. The increases will require increase in hours of operations and some capital facilities such as park-and-ride lots.</p>			

WHATCOM COUNTY COMPREHENSIVE PLAN UPDATE EIS  
SUMMARY

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
Impacts of Each Alternative				
County Roadways with Projected Deficient Segments by Alternative, 2036	<ul style="list-style-type: none"> <li>• 243: Lakeway Drive: Bellingham City Limits – Lowe Avenue</li> <li>• 244: Lakeway Drive: Lowe Avenue – Terrace Avenue</li> </ul>	<ul style="list-style-type: none"> <li>• 162: Hannegan Road: Van Wyck Road – Kelly Road</li> <li>• 243: Lakeway Drive: Bellingham City Limits – Lowe Avenue</li> <li>• 244: Lakeway Drive: Lowe Avenue – Terrace Avenue</li> </ul>	<ul style="list-style-type: none"> <li>• 162: Hannegan Road, Van Wyck Road – Kelly Road</li> <li>• 243: Lakeway Drive: Bellingham City Limits – Lowe Avenue</li> <li>• 244: Lakeway Drive: Lowe Avenue – Terrace Avenue</li> </ul>	<ul style="list-style-type: none"> <li>• 161: Hannegan Road: Bellingham City Limits – Van Wyck Road</li> <li>• 162: Hannegan Road: Van Wyck Road – Kelly Road</li> <li>• 163 Hannegan Road: Kelly Road – Smith Road E</li> <li>• 164: Hannegan Road: Smith Road E – Axton Road E</li> <li>• 243: Lakeway Drive: Bellingham City Limits – Lowe Avenue</li> <li>• 244: Lakeway Drive: Lowe Avenue – Terrace Avenue</li> </ul>
Total Deficient Miles of Roadway: County Roads	0.63	1.64	1.64	3.91
Percent of Deficient Miles: County Roads	0.2%	0.5%	0.5%	1.1%
Length of State Highway Projected to Exceed Standard (Miles)	12.16	17.26	17.26	17.26
Percent of Total Length – State Highway	10.3%	14.6%	14.6%	14.6%
Vehicle Miles Traveled	5,840,200	6,027,300	6,183,400	6,520,600
VMT: Increase over Existing	29%	33%	37%	44%

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change		
Mitigation Measures	<b>Possible Roadway Improvements to Meet Concurrency by Location, 2036</b>					
	Location	Possible Improvements	Alt 1	Alt 2	Alt 3	Alt 4
	Lakeway Drive, between Bellingham city limits and Terrace Avenue	Add left-turn lanes at intersections and driveways and/or widen the road to meet the urban minor arterial standard.	X	X	X	X
	Hannegan Road, between Bellingham city limits and Van Wyck Road	Add left-turn lanes at intersections and driveways and/or widen the road to meet the urban minor arterial standard.				X
	Hannegan Road, between Van Wyck Road and Kelly Road	Add left-turn lanes at intersections and driveways and/or widen the road to meet the rural major collector standard.		X	X	X
	Hannegan Road, between Kelly Road and Axton Road E	Add left-turn lanes at intersections and driveways and/or widen the road to meet the rural major collector standard.				X

Source: Heffron Transportation, Inc., 2015.

Table 4.9-11 presents additional strategies that the County could consider to achieve balance between land use, transportation, and available financing. Implementation of some strategies would raise additional revenue; others would affect LOS standards to recognize a higher level of “acceptable” roadway congestion. Strategies that affect land use could result in lowering of demand at different locations, but in order to accommodate future population and employment targets, could also result in higher demand at other locations.

The County employs a number of implementation measures that are not improvement projects or specific policy decisions, but represent programmatic actions that help implement the Comprehensive Plan. The following implementation measures could, over time, mitigate ongoing growth and transportation impacts. The County has discretion and a number of options under each of these policy categories. In order to maintain this three-way balance, an increase or decrease in one category requires change in the other two categories:

- Commute trip reduction
- Transit compatible design
- Access management

Most of the beneficial traffic mitigation offered by these implemented measures is accounted for in the County’s travel modeling and analysis. However, increased emphasis on these measures could result in further reduced vehicular trips,

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
<p>reduced travel-time delay, and higher transit usage.</p> <p>State highways across the County form an important part of the transportation system for county residents. As shown in Table 4.9-7, operations on a number of state highways are expected to be affected by the increased level of population and employment. Although state highways are not under the County’s direct responsibility, the County will work cooperatively with WCOG and WSDOT to ensure that the impact of growth on these facilities is addressed. The County’s Comprehensive Plan has adopted the goal of ensuring “an efficient regional system of state highways that is functional and safe, and is consistent with regional priorities and City and County comprehensive plans.”</p>				
<p><b>Public Services and Utilities</b></p>				
Law Enforcement	<p>There will be an increase in population and demand for services, but with planned Sheriff’s office, emergency management space, jail beds, and juvenile detention improvements, County LOS standards can be met.</p>	<p>Alternative 2 will have greater population growth than Alternative 1 and increase demand for Sheriff services. With planned improvements all LOS standards can be met, except that the County will need to add 2 beds to its Juvenile Detention facility by 2036.</p>	<p>Alternative 3 will have greater population growth than Alternatives 1 and 2, and would need to add 3 beds to its Juvenile Detention facility by 2036.</p>	<p>Alternative 4 would have the greatest increase in population studied and would have similar results as Alternative 3 with a need for 4 beds at the Juvenile Detention facility by 2036.</p>
Fire and Emergency Services	<p>Fire districts that have the highest projected population change include the City of Bellingham Fire Department (22%), the City of Lynden Fire Department (34%), Fire District 1 (24%), Fire District 7 (38%), Fire District 14 (25%), and Fire District 21 (27%).</p> <p>Fire Districts meet the County LOS, except that Fire Districts 21 does not have</p>	<p>Fire districts that have the highest projected population change include the City of Bellingham Fire Department (31%), City of Lynden Fire Department (41%), Fire District 1 (33%), Fire District 7 (35%), Fire District 8 (30%), Fire District 11 (32%), Fire District 14 (40%), Fire District 17 (34%), Fire District 19 (90%), Fire District 21 (40%).</p>	<p>Fire districts that have the highest projected population change include the City of Bellingham Fire Department (38%), City of Lynden Fire Department (52%), Fire District 1 (31%), Fire District 7 (39%), Fire District 8 (31%), Fire District 14 (37%), Fire District 19 (67%), and Fire District 21 (38%).</p> <p>Regarding District 21 see</p>	<p>Fire districts that have the highest projected population change include the City of Lynden Fire District (59%), and Fire District 4 (50%), Fire District 7 (58%), Fire District 8 (63%), Fire District 14 (43%), Fire District 19 (73%), and Fire District 21 (50%).</p> <p>Fire Districts 8, 14, 19, and 21 have a similar status as for</p>

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
	<p>data in a form to ascertain the Urban LOS is met. The district meets the Rural standard. Whatcom County has requested that Fire District 21 start tracking response times to UGAs.</p>	<p>The status of District 21 is the same as for Alternative 1. Fire District 8 does not meet the Urban LOS standard, but expects to meet it with capital improvements in their plan.</p> <p>Fire District 19 is unstaffed, and therefore based on its WSRB rating would meet the LOS standard. The District believes growth shares may be higher than warranted given the seasonal nature of the housing and past employment trends. Since this Alternative tests higher rural growth levels, Fire District 19 presents a bookend.</p>	<p>Alternative 1. Fire District 8 conclusions are the same as for Alternative 2.</p> <p>Fire District 19 indicates that the future growth levels are likely infeasible given the seasonal nature of housing occupancy and jobs. A reallocation among non-UGA serving districts could be accomplished to address concerns.</p>	<p>Alternatives 2 and 3.</p>

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
Parks	<p>Whatcom County Parks and Recreation would meet its Developed Parks LOS and Activity Center LOS in 2036, but the County would need 87.20 miles more of trails.</p> <p>The Blaine-Birch Bay Park and Recreation District would not be able to meet its LOS by 2036, with the following deficiencies: 15.36 acres of neighborhood parks, 78.21 acres of community parks, 88.05 acres of regional parks and facilities, and 1.98 miles of trails.</p> <p>The Lynden Park District would not be able to meet its LOS, and would need an additional 94.46 acres of parkland.</p> <p>The Point Roberts Park District would have a projected growth of 134 persons in 2036, increasing demand for services by 9%.</p>	<p>Whatcom County Parks and Recreation would be able to meet its Developed Parks LOS, but would need an additional 98.89 miles of trails, and 1 additional activity center.</p> <p>The Blaine-Birch Bay Park and Recreation District would not be able to meet its LOS by 2036, as follows: 17.98 acres of neighborhood parks, 91.80 acres of community parks, 106.33 acres of regional parks and facilities, and 3.29 miles of trails.</p> <p>The Lynden Park District would not be able to meet its LOS, and would need an additional 103.98 acres of parkland.</p> <p>The Point Roberts Park District would grow by 333 persons in 2036, increasing demand for services by 23%, highest of any alternative.</p>	<p>Whatcom County Parks and Recreation District would be similar to Alternative 2 except that the County would need an additional 102.89 miles of trails, and 2 activity centers.</p> <p>The Blaine-Birch Bay Park and Recreation District would have a little less demand for facilities than Alternative 2 with the following deficiencies: 18.38 acres of neighborhood parks, 93.89 acres of community parks, 109.16 acres of regional parks and facilities, and 3.49 miles of trails.</p> <p>The Lynden Park District would have a need for 111.89 parkland acres.</p> <p>The Point Roberts Park District would grow by 229 in 2036, and the growth would increase the demand for district services by 16%.</p>	<p>Impacts would be similar to but higher than Alternative 3, and Whatcom County would need an additional 109.71 trail miles, as well as 2 additional activity centers.</p> <p>The Blaine-Birch Bay Park and Recreation District would have a little less demand for facilities than Alternative 2 with the following deficiencies: 20.01 acres of neighborhood parks, 102.39 acres of community parks, 120.60 acres of regional parks and facilities, and 4.31 miles of trails.</p> <p>The Lynden Park District would need an additional 119.32 acres the highest of the alternatives studied.</p> <p>The Point Roberts Park District would grow by 264 in 2036, increasing demand for services by 18%.</p>

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
Schools	Bellingham, Blaine, and Lynden School Districts do not have the projected future capacity to meet this growth if all students attended at the projected rates. Ferndale has a small deficit of 12 students and at a planning level the estimate could be considered at full capacity.	Bellingham, Blaine, Ferndale, and Lynden School Districts do not have the projected future capacity to meet this growth if all students attend at the projected rates. The deficits would be at greater levels than for Alternative 1.	The same districts under Alternative 2 would be impacted under Alternative 3 but there would be greater deficits in capacity. Additionally there is a small deficit for the Nooksack Valley School District of 7 students. At a planning level the estimate could be considered at full capacity.	Bellingham, Blaine, Ferndale, Lynden, Meridian, and Nooksack Valley School Districts do not have the projected future capacity to meet this growth if all students attend at the projected rates. The deficits would be greater than for Alternative 3.
Water	All water service providers can meet demands for projected growth under the No Action Alternative if planned water system upgrades and improvements are implemented.	Most water service providers can meet demands for projected growth under Alternative 2 if planned water system upgrades and improvements are implemented. The exception is Birch Bay Water and Sewer District (BBWSD); it does not have sufficient supply to meet projected growth demands.	Most water service providers can meet demands for projected growth under Alternative 3 if planned water system upgrades and improvements are implemented. The exception is BBWSD as for Alternative 2.	Most water service providers can meet demands for projected growth under Alternative 4 if planned water system upgrades and improvements are implemented. The exceptions are Blaine and BBWSD.
Wastewater	All sewer service providers can meet the demands for projected growth under the No Action Alternative if planned sewer system upgrades and improvements are implemented.	All sewer service providers can meet demands for projected growth under Alternative 2 if planned sewer system upgrades and improvements are implemented. The exception	It is expected that the majority of sewer service providers can meet demands for projected growth under Alternative 3 if planned sewer system upgrades and improvements are	Demand is higher under Alternative 4 than Alternative 3, but the resulting deficiencies for BBWSD and Everson are similar. The total adequate wastewater treatment capacity for Everson

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
		is BBWSD.	implemented. The exceptions are BBWSD and the City of Everson. However, on a cumulative basis, the wastewater treatment plant serving the City of Everson and the City of Nooksack has the capacity for the combined projected growth for both cities in Alternative 3; a contract adjustment could be made between the two cities to allow for Everson’s growth.	and Nooksack combined are similar, and a contract adjustment could mitigate the impacts for Everson.
Stormwater	Alternative 1 has the lowest amount of total new development and impervious surface area growth compared to the other alternatives; and therefore, the overall capacity needs for stormwater drainage and treatment facilities would likely be lower as well. The UGAs with the greatest amount of impervious surface area growth, and corresponding growth in stormwater drainage demand, are Bellingham, Cherry Point, and Lynden.	The total amount of impervious surface area growth and overall capacity needs is greater than Alternative 1. Alternative 2 features a greater share of total population growth occurring at lower densities in non-UGA areas. As a result it includes a greater amount of new impervious surface area per capita. The UGAs with the greatest amount of impervious surface area growth, and corresponding growth in stormwater drainage demand, are	Alternative 3 calls for a greater emphasis on higher density and infill development within the Bellingham and Ferndale UGAs, and there is less rural growth in non-UGA areas. As a consequence, the total growth in impervious surface area per new resident is lower than Alternatives 2 and Alternative 4.	Alternative 4 has the highest total amount of impervious surface area growth and overall capacity needs for stormwater drainage and treatment facilities in UGAs. UGAs with the greatest amount of impervious surface area growth, and stormwater drainage demand, are Bellingham, Cherry Point, and Lynden. Its amount of rural impervious area is second highest but still less than Alternative 2. Its total amount of impervious surface, urban and rural is nearly the same as

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
		Bellingham, Cherry Point, and Lynden.		Alternative 2 but it would occur primarily in UGAs.
Solid Waste	The No Action Alternative would have the lowest population growth, 48,630, and therefore the lowest projected increase in solid waste production, 33,068 additional tons per year. This alternative would also produce 27,475 tons per year in recycling materials.	Under this alternative, the County's population would grow by 68,111, resulting in a projected increase in solid waste production of 46,315 tons each year. Approximately 38,482 tons of recycling per year would also be produced.	Under this alternative, the County's population would grow by 74,781, causing a projected 50,851 additional tons of solid waste production each year. An increase in recycling would also occur at 42,250 tons per year.	Under this alternative, the County's population would grow by 86,149, causing a projected 58,581 additional tons of solid waste each year. There would also be an increase in household recycling of 48,673 tons per year.
Power, Gas, and Telecommunications	Alternative 1 anticipates the lowest level of growth and generates the lowest increase in demand for power, gas, and telecommunications services. Growth in services would occur primarily in UGAs in order to provide an efficient service delivery pattern.	Alternative 2 anticipates the second-lowest level of population growth, and a higher employment growth rate than Alternative 1. Growth would be more spread to non-UGA areas and the distribution would be less concentrated than other alternatives.	Alternative 3 would generate the second-highest increase in demand for power, gas, and telecommunications services. Growth would largely be concentrated in existing cities and UGAs, though some expansions of UGA boundaries may occur.	Alternative 4 would thus generate the highest increase in demand for power, gas, and telecommunications services. Most growth would occur in UGAs, but most UGAs would require extensive infill and expansion to accommodate the growth.
Mitigation Measures	<p>In addition to Incorporated Plan Features and Applicable Regulations and Commitments, Other Potential Mitigation Measures include:</p> <p><b>Law Enforcement</b></p> <ul style="list-style-type: none"> <li>Expanded police services should be provided as the County continues to grow.</li> <li>Staffing will need to be increased as population increases. Additionally, as urban areas are annexed, additional personnel and/or facilities may be needed in the annexing city.</li> <li>Building and site designs known as Crime Prevention through Environmental Design (CPTED), which would reduce</li> </ul>			

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
				<p>opportunities for crimes to occur, could be encouraged through regulations, such as adequate street lighting for residential and commercial development.</p> <ul style="list-style-type: none"> <li>Development of community crime prevention programs could help mitigate some of the impacts of increased demand for police services.</li> </ul> <p><b>Fire Protection and Emergency Medical Services</b></p> <ul style="list-style-type: none"> <li>Expanded fire and emergency medical services and public safety dispatch services should be provided as the County and cities continue to grow.</li> <li>Fire Districts and city Fire Departments should develop or update capital facility plans, especially if they provide service to an UGA.</li> <li>Specific impacts of future development proposals should be assessed and appropriate mitigation measures imposed through the County’s and cities’ SEPA authority. These may include building access, right-of-way access, and other measures or resources to support rapid emergency response.</li> <li>The County and cities should consider adopting fire impact fees pursuant to RCW 82.02.050-.100, if requested by a fire district.</li> <li>Since emergency medical service provision makes up approximately 75% of all emergency response countywide, a larger number of lower cost EMS Stations could be constructed in lieu of providing full-service fire station. By providing more of the EMS Stations in more geographically dispersed locations, fire districts could serve a larger percentage of their incident calls at a lower cost. A precedent for this model of service delivery is already in place in the County with Medic One’s two county medic stations.</li> </ul> <p><b>Parks</b></p> <ul style="list-style-type: none"> <li>Whatcom County will consider updating the Comprehensive Parks, Recreation and Open Space Plan to guide park and open space planning.</li> <li>Whatcom County could update its LOS for trails and activity centers or the County could create more trails within the park land available in Whatcom County.</li> <li>Whatcom County could implement parks impact fees to help with funding of new trails, and activity centers.</li> <li>Birch Bay Parks and Recreation District, and the Lynden Parks and Recreation District could add facilities consistent with their parks plans or update their LOS standards in order to address growth expected in 2036.</li> </ul>

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
<p><b>Schools</b></p> <ul style="list-style-type: none"> <li>School districts could work, in consultation with the County and cities, to identify potential sites for new school development in areas where higher amounts of growth are planned.</li> <li>The County could incorporate school district capital facility plans, and subsequent updates, into the Whatcom County Comprehensive Plan by reference.</li> </ul> <p><b>Water</b></p> <ul style="list-style-type: none"> <li>Water service providers should, as needed, 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.</li> <li>Water service providers and County planners should continue to consult early in plan updating processes for both water system and land use plans to coordinate land use with future water supply needs, particularly in UGAs.</li> <li>Where water supply appears inadequate for one or more of the alternatives, water service providers should update their water system plans to develop strategies to secure adequate supplies. These water service providers may need to seek additional water rights and/or contracts with other purveyors to secure adequate water supply to serve planned urban growth over the 20-year planning period. The County could make UGA sizing decisions based on planning for water system improvements and the status of water system plan updates.</li> <li>The City of Lynden should continue to work with Ecology to address their water rights issues. Lack of water supply would impact Lynden’s ability to meet demand under all of the alternatives.</li> <li>The County could coordinate regional water supply planning as part of an update to the Whatcom County Coordinated Water System Plan (CWSP).</li> <li>The County could review and revise landscaping codes as necessary to encourage use of native plantings and reduce demand for water.</li> <li>The County and water service providers should encourage water conservation, native plantings, and the use of rainwater retention systems in new and existing development to reduce water demand for domestic and commercial landscaping needs.</li> </ul> <p><b>Wastewater</b></p> <ul style="list-style-type: none"> <li>Programs that help mitigate stormwater overflows can continue to reduce combined sewer system overflows.</li> <li>The increased amount of unincorporated rural population growth found under Alternative 2 would increase population growth in the sensitive Lake Whatcom watershed outside of current sewer service areas to a greater extent than other</li> </ul>				

Element of Analysis	Alternative 1: No Action	Alternative 2: Historic Shares	Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)	Alternative 4: Targeted Land Use Change
				<p>alternatives. This may mean that the Lake Whatcom Water and Sewer District (LWWSD) would be called upon to provide future sewer service outside of the UGA to address Lake Whatcom water quality issues. Alternatively, the County could plan for less growth in the non-UGA areas, limiting the scope of sewer extension needed.</p> <ul style="list-style-type: none"> <li>Increases in unincorporated rural population in Alternative 2 would increase population growth pressure in an area that is outside of the City of Ferndale’s UGA, but is currently served by sewer. If this alternative is adopted, it may make sense to extend the Ferndale UGA to this area to provide sewer service in an area that is already served by sewer facilities. This may be a longer term planning solution; it could be considered in a UGA Reserve until planning implications can be assessed.</li> <li>In instances where sewer service providers do not identify future sewer service trunk lines and major future sewer service facilities, the providers should update their comprehensive sewer plans to identify the future locations of sewer collection facilities to serve their entire UGA or service area.</li> <li>Where wastewater treatment appears inadequate for one or more alternatives, wastewater service providers should update their system plans. The County could make UGA sizing decisions based on the planned sewer system improvements and the status of system plan updates. For service providers in the process of updating their plans, the sewer capacity should be updated to analyze the ability of those service providers to meet future population projections.</li> <li>The County could incorporate comprehensive sewer plans and subsequent updates into the Whatcom County Comprehensive Plan by reference for sewer systems that serve UGAs.</li> </ul> <p><b>Stormwater</b></p> <ul style="list-style-type: none"> <li>See Section 4.3 Water Resources, particularly regarding low impact development and green infrastructure.</li> </ul> <p><b>Solid Waste</b></p> <ul style="list-style-type: none"> <li>Composting services could be expanded in the County.</li> </ul> <p><b>Power, Gas and Telecommunications</b></p> <ul style="list-style-type: none"> <li>The County, cities, and utilities could promote energy conservation by encouraging site design that emphasizes tree retention and solar access, as well as architectural design that incorporates energy-efficient building materials and techniques such as the Leadership in Energy &amp; Environmental Design (LEED) building certification program.</li> <li>The County, cities, and utilities could encourage co-location of telecommunications facilities with undergrounded utilities in urban areas to minimize the aesthetic and land use impacts associated with utility corridors.</li> <li>The County, cities, and utilities, in cooperation with state and federal governments, could encourage and create incentives for the installation of smaller-scale alternative energy generating systems on individual residential, commercial, and industrial buildings and sites. The cumulative effect of smaller-scale, decentralized energy sources can reduce the need for</li> </ul>

WHATCOM COUNTY COMPREHENSIVE PLAN UPDATE EIS  
SUMMARY

---

<b>Element of Analysis</b>	<b>Alternative 1: No Action</b>	<b>Alternative 2: Historic Shares</b>	<b>Alternative 3: Multi-Jurisdictional Resolution (Resolution 2014-013)</b>	<b>Alternative 4: Targeted Land Use Change</b>
	new large-scale facilities, potentially reduce greenhouse gas emissions, and reduce the vulnerability of standard, centralized energy sources.			

---

Source: BERK Consulting, 2014

## 1.7 Significant Unavoidable Adverse Impacts

### Earth

All alternatives would result in increased urbanization in the County. An unavoidable consequence will include a corresponding increase in erosion and sedimentation. A greater population could also be at risk from the adverse impacts of damage to buildings and infrastructure should an earthquake, volcanic eruption, or catastrophic landslides occur. The No Action Alternative (Alternative 1) would have the least potential for these impacts because it would result in the least growth and would maintain present UGA boundaries. Alternative 2 would have the greatest potential impact in non-UGA areas because it would allocate the most growth to non-UGA areas, though the overall population would be less than the Multi-Jurisdictional Resolution Alternative (Alternative 3) and the Targeted Land Use Change Alternative (Alternative 4). Alternative 3 would have a greater share of urban growth than rural growth, and would focus on infill development with few UGA expansions, some of which would occur in geologic hazard areas. Alternative 4 would allocate growth with a more extensive urban pattern due to infill within existing boundaries plus growth in undersized UGAs that could extend into the UGA Reserves and Suitability Analysis Areas where there are some mapped geologic hazards.

### Air Quality

No significant unavoidable adverse impacts on regional or local air quality are anticipated. Temporary, localized dust and odor impacts could occur during the construction activities. The regulations, incorporated plan features, and other potential mitigation measures described above are adequate to mitigate any adverse impacts anticipated to occur as a result of County growth increases.

### Water Resources

Impervious surface area would increase under all four alternatives based on projected growth. Measures are currently in place to reduce the potential impacts associated with increases in impervious surface area and additional measures have been identified within this section; however, increases in impervious surface area would likely have some level of unavoidable impact on water resources. The potential degree of impact on water resources would be dependent upon several factors, which could include where within a subbasin the impervious surface area is located, the level of pollution that may be generated by the impervious surface area (e.g., new road, driveway, and parking lot) and the effectiveness of stormwater facilities in treating and detaining stormwater and mimicking the natural conditions that exist pre-development (e.g., infiltration, groundwater discharge to surface waters, and surface water patterns).

### Plants and Animals

#### Vegetation

Potential impacts under all alternatives include the loss and reduced function of vegetation communities as a result of population growth and development within the County. A reduction in the amount of vegetation communities would reduce habitat for wildlife as discussed in the following wildlife section. Additional development under any alternative would result in the loss of larger tracts of native forested vegetation and grassland/pasture areas that also include non-native species. Vegetation diversity (i.e., number of different native plant species and structure) would decline as the larger tracts of vegetation are developed and converted to vegetated suburban residential areas where lawns and non-native landscaping increases.

#### Fish/Aquatic Species

Over time, changes in land use and development patterns would likely result in increased potential risk of impacts on fish, fish habitat, and aquatic species. Overall, greater human activity, increased impervious surface area, modified hydrology, and degraded water quality associated with discharges from commercial, residential, and roadway surfaces would likely result from the alternatives considered. All of these factors could adversely affect fisheries and aquatic habitat.

Under all alternatives, fish habitat could be lost or suffer diminished function and value as a result of population growth and development in the County. In general, alternatives that allow for the greatest amount of new development and extend the land available for urban purposes would have the greatest potential effect on fisheries and aquatic resources.

## Wildlife

Under all alternatives, wildlife habitat could be lost and degraded as a result of population growth and development in the County. In general, alternatives that allow for the greatest amount of new development and extend the land available for urban purposes have the largest potential to affect wildlife habitat.

A reduction in habitat could result in decreased abundance or local extirpation of species dependent on the habitat. On a landscape scale, wildlife habitats would become more fragmented and disconnected from adjoining natural habitats. Over time, some re-growth of native vegetation would occur within the UGAs as residential areas mature. Such re-growth would present an incremental improvement in habitat values for some wildlife species, primarily songbirds and small mammals. The reduction in habitat values for some species of wildlife would result in an increase in populations of those species adapted to more urban habitats.

The precise extent of impacts on wildlife, wildlife habitat, and corridors would depend on the site-specific development plans for individual properties.

## Land and Shoreline Use

Over time, the implementation of any of the alternatives would irreversibly commit vacant, partially developed, and redeveloped properties to additional or new single-family, multifamily, commercial, retail, and industrial uses. Under all of the alternatives, the UGAs would experience development and greater urbanization over time and the non-UGA areas will receive additional housing units and jobs in a lower density character.

The greatest potential for land use and shoreline pattern impacts is with Alternative 2 which would imply a continuing trend of rural growth that has the potential to alter rural character. The greatest potential for UGA development and urban land conversion is Alternative 4, which would require both UGA infill and expansion measures to meet allocations.

## Plans and Policies

All alternatives provide for population allocations in the range of state forecasts. In general, all alternatives are consistent with GMA goals by focusing growth in urban areas, though rural protection measures would improve consistency with GMA rural and resource land goals. All alternatives include UGAs that are significantly oversized or undersized for growth allocations, and this may be mitigated by UGA land use or boundary changes to bring land supply and land demand in balance.

Expansions of the Nooksack and Sumas UGAs have the potential to irreversibly commit agricultural lands of long-term commercial significance to urban uses.

## Population, Housing, and Employment

Population, employment and housing will increase under any of the alternatives reviewed, to different degrees, with the Alternative 1 No Action increasing the least and Alternative 4 the greatest. Alternative 2, followed by Alternative 4, would have the greater likelihood to alter rural character with the level of population and employment growth assumed in Non-UGAs lands. 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 Draft EIS.

## Cultural Resources

With implementation of standard federal and state procedures and potential mitigation measures, no significant unavoidable adverse impacts have been identified for any of the alternatives.

## Transportation

Implementation of any of the alternatives will result in increased traffic within the county, with the lowest VMT and V/C increases expected to occur under Alternative 1, and the highest under Alternative 4. With proposed mitigation in place, no significant unavoidable adverse impacts are identified.

## Public Services and Utilities

**Police:** Future population growth and development will continue to increase the need for police services and facilities under all alternatives. Regular capital facility and staffing need planning can minimize impacts and meet future demand.

**Fire and Emergency Medical Services (EMS):** As population and employment growth continues, the demand for fire and EMS services will increase. With mitigation, significant, unavoidable adverse impacts would not be anticipated.

**Parks:** With increase in population, there would be a greater demand for parks, recreational facilities and programs. With implementation of adopted plans, and periodic capital facility planning updates, no significant, unavoidable, adverse impacts are anticipated.

**Schools:** The demand for public school services and facilities will likely increase as new development occurs and the number of families with school-aged children increases. The consequences of setting aside land for school facilities would decrease the availability of that land for other uses. With mitigation, including regular capital facility planning, significant, unavoidable adverse impacts would not be anticipated.

**Water:** All alternatives would increase demand for water services and require extensions of services. Service providers have capital plans, contracts, and improvements scheduled showing demand can be met by most providers under most alternatives. Some water service providers will require additional water sources to be able to serve additional growth. Adequate attention to capital facility planning should mitigate potential impacts, unless additional water sources cannot be found.

**Wastewater:** With advanced planning, phased implementation, and periodic updates of capital facility plans, as well as the review of development permits in terms of sewer system impacts, no significant unavoidable adverse wastewater impacts would be anticipated within the range of alternatives reviewed.

**Stormwater:** Impervious surface area would increase under all alternatives based on projected population growth. The degree of impact on storm drainage facilities is dependent on several factors, including where within a sub-basin the impervious surface area is located, the level of pollution that may be generated by the impervious surface area, and the effectiveness of stormwater facilities in treating and detaining stormwater.

**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 would be anticipated within the range of alternatives reviewed.

**Power, Gas, and Telecommunications:** Regardless of which alternative is selected, population and employment growth in the County will drive additional demand for energy and telecommunications services. This increased demand will require some degree of construction of new facilities or upgrades to existing infrastructure. Private service providers will need to continuously monitor system needs and plan for necessary service expansions.