

## **CHAPTER 2: SUMMARY OF IMPACTS EXPECTED**

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## **SUMMARY OF IMPACTS EXPECTED UNDER ALTERNATIVES CONSIDERED**

This FEIS is part of a process that will lead to the update and amendment of: 1.) the City of Bellingham Comprehensive Plan, 2.) the Bellingham Urban Growth Area boundary, and 3.) the Whatcom County Urban Fringe Subarea Plan. These updates and amendments will guide future development and capital facilities planning.

This FEIS provides information about the environmental impacts that could generally be expected under the four growth management alternatives considered. State Environmental Policy Act (SEPA) rules allow the discussion of alternatives to be conducted at a level of detail appropriate to the scope of the proposal. Once the City and County Councils adopt these updates and amendments, there will be site-specific projects that could have more direct impacts on the environment. These projects may be subject to further environmental review.

SEPA encourages discussion of the growth management alternatives to adequately inform decision makers of potential environmental impacts. SEPA suggests that the general environmental, as well as social, economic and other considerations, be taken into account when weighing the expected impact of each growth management alternative. However, this FEIS is programmatic rather than project-specific and, therefore, is not required to evaluate *all* possible impacts of development. The purpose of this FEIS is to analyze and discuss the potential environmental impacts of each alternative in order to provide a basis for officials to make decisions. Financing of capital improvements, economic competition, fiscal impact, or cost-benefit analysis are not required by SEPA (WAC 197-11-448 and 450).

### **2.1 EARTH**

Each alternative is expected to have some impact to the earth because increasing the extent and density of urban development will require the removal of vegetation, placement of earth fill, excavation and grading. These processes alter the earth in several ways, disrupting drainage systems and causing soil erosion that may negatively affect nearby water bodies. Habitat destruction and fragmentation are also of concern.

*Alternative 1 – No Action:* The No Action alternative (and any alternative that does not provide sufficient land and densities in the City and the UGA to accommodate projected population growth) is expected to push growth and the impacts of growth to the rural areas of the County and to the Urban Growth Areas of other cities in the County.

*Alternative 2 – Infill:* This alternative would focus development and impacts in the existing City and UGA and would be expected to result in the least amount of land impacted by development.

*Alternative 3 – Adjusted UGA Boundary:* This would expand the existing low-density development pattern of the UGA and would be expected to create the most significant and widespread impacts to the earth.

*Alternative 4 – Infill and Adjusted UGA:* Under this alternative new growth would be directed into the existing City and Urban Growth Area, but would require a minor expansion of the UGA. This alternative would be expected to result in a moderate area of land that is presently designated as rural being developed for urban land uses.

## **2.2 AGRICULTURAL CROPS**

Agricultural land will continue to be converted to large lot (5 and 10 acre) subdivisions within the Urban Fringe Subarea as long as undeveloped acreage remains available. Proximity to jobs in Bellingham makes the Rural zoned land in the Subarea attractive to homebuyers looking for acreage close to town. Whether or not there is adequate or even excessive capacity added to the City of Bellingham's UGA, and even if intensive infill occurs, agriculture will continue to decline in this area. The County's Rural zoning designation does not protect farmland and Agricultural Protection Overlay regulations to date have had little impact on saving farmland. Under all alternatives, it is likely that without additional farmland protection measures; valuable farmland will continue to be lost to development.

Agriculture normally involves activities that generate noise, dust, smoke, odors and airborne chemicals. As homes for people not involved in agriculture come closer to agricultural operations, the potential for complaints and even lawsuits against farmers increases, bringing increasing pressure on farmers to abandon farming and develop their land for more rural homes.

*Alternative 1 – No Action:* Under the existing plans and regulations, the current pattern of loss of farmland due to development in the Urban Fringe Subarea would be expected to continue.

*Alternative 2 – Infill:* This alternative would be likely to create the least amount of impact to farmland, but without additional farmland protection measures, the County would continue to experience loss of farmland over time.

*Alternative 3:* Adjusting the UGA boundary would be expected to create the most significant loss of farmland and impacts to agricultural crops as well as increased potential for conflict between farms and residences.

*Alternative 4 – Infill and Adjusted UGA:* This alternative would be expected to continue farmland loss similar to alternative 2, and may possibly have greater impacts similar to Alternative 3.

## **2.3 AIR QUALITY**

All four alternatives will increase discharges to the air from industrial, outdoor and wood heat burning, vehicular and construction related sources. Motor vehicles will likely have the most significant long-term effect, as suspended particulates, ozone and carbon monoxide content will increase as automobile traffic increases.

*Alternative 1 – No Action:* This alternative is expected to push development pressure further from the City thus increasing vehicle trips generated, vehicle miles traveled, traffic congestion, vehicle emissions, and air pollution.

*Alternative 2 - Infill:* Could create more opportunities for non-auto-dependent land uses, minimize vehicle trips generated, vehicle miles traveled, traffic congestion, vehicle emissions, and could possibly have the least significant impact to the air.

*Alternative 3 - Adjusted UGA Boundary:* Is expected to increase auto-dependent land uses, vehicle trips generated, vehicle miles traveled, traffic congestion, and vehicle emissions. This alternative would be expected to create the most significant impacts to the air.

*Alternative 4 - Infill and Adjusted UGA:* Would have similar effects as alternative 2, but would have slightly more impact to air quality than alternative 2.

### **2.4 WATER RESOURCES**

All four alternatives have the potential to negatively impact surface water, groundwater, and wetlands. These impacts can be reduced through pollution prevention, wetland protection, wetland enhancement, and stormwater management plans.

Surface water concerns focus on two major types of impacts: non-point source pollution, such as parking lot runoff, and the alteration of hydrological functions. Non-point source pollution, which is transported by stormwater runoff, may degrade the water quality of receiving waters, affect aquatic and riparian plant and animal life and create public health concerns. These concerns are especially significant in the Lake Whatcom watershed, which is the source of the drinking water supply for people living in and around Bellingham.

The alteration of hydrological functions is also of great concern. Urbanization can affect the rate and amount of stormwater runoff, which could impact streams that receive the runoff. Groundwater concerns focus on pollution caused by hazardous household wastes, solid waste disposal and increased impervious surface runoff that result from increased urban development. Wetland concerns focus on the alteration of wetland hydrology that results when wetlands are filled and/or built around. It is important to maintain adequate riparian buffers when building around wetlands.

*Alternative 1 – No Action:* The No Action alternative (and any alternative that does not provide sufficient land and densities in the City and UGA to accommodate projected population growth) is expected to push growth and the impacts of growth to the rural areas of the County and to the Urban Growth Areas of other cities in the County. Increased development outside of cities and UGAs, where inadequate stormwater management facilities exist is likely to increase impacts to surface water, groundwater, and wetlands.

*Alternative 2 – Infill:* This would concentrate urban development into compact areas and would be expected to have the least significant impacts to surface water, groundwater, and wetlands. If the available land supply within the City and UGA is restricted too

tightly, however, it could have the unintended consequence of encouraging development on five and ten acre parcels currently available in Whatcom County.

*Alternative 3 – Adjusted UGA Boundary:* This would expand the existing low-density UGA development pattern and would be expected to have the most significant and widespread impacts to surface water, groundwater, and wetlands.

*Alternative 4 – Infill and Adjusted UGA:* This alternative, would be expected to have similar effects as alternative 2, but could create slightly more impact to surface water, groundwater, and wetlands than alternative 2.

## **2.5 PLANTS AND ANIMALS**

The cumulative effects of urban encroachment will continue to stress and place pressure on plant and wildlife populations under all growth management alternatives considered. The greatest threat to plants and animals is the conversion of land to urban uses, which causes fragmentation, degradation and loss of habitat. The loss of open space, fragmented landscapes and degradation of habitat, in conjunction with associated urban impacts such as pesticide and herbicide use, air and noise pollution, domestic animals and night lighting create a cumulative effect, impacting diversity and health of plant and wildlife populations. Ground disturbance and removal of vegetation often result in the establishment of invasive plant species, preventing the reestablishment of native species and reducing ecological value. Vegetation removal may allow for increased erosion and runoff, resulting in increased sedimentation and scouring of streams. Vegetation removal along waterways will result in a loss of riparian cover, affecting water temperature and quality. The degradation of riparian habitats and their buffers may have a negative impact on a larger number of species than the disruption of a grass, shrub or forested habitat alone.

*Alternative 1 – No Action:* The No Action alternative (and any alternative that does not provide sufficient land and densities in the City and the UGA to accommodate projected population growth) is expected to push growth and the impacts of growth to the rural areas of the County and to the urban Growth Areas of other cities in the County.

*Alternative 2 – Infill:* This alternative would focus development and impacts in the existing City and UGA and would be expected to increase impervious surfaces and storm water runoff in urban areas, but have the least significant impacts to plants and wildlife.

*Alternative 3 – Adjusted UGA Boundary:* This would expand the low-density development pattern of the UGA and would be expected to have the most significant and widespread impacts to plants and animals.

*Alternative 4 – Infill and Adjusted UGA:* Under this alternative, new growth would be directed into the existing City and Urban Growth Area but would require a minor expansion of the UGA. This alternative would be expected to have similar effects as

alternative 2, but would require additional land that is presently designated as Rural being developed for urban land uses, and would thus create slightly more impact to plants and animals than alternative 2.

## **2.6 NATURAL RESOURCES**

Impacts to natural mineral resources would be minimal under any of the growth management alternatives considered.

The forest resources within the City and UGA have already been heavily impacted by land conversion activity and, with few exceptions; those that remain are publicly owned and protected from development. Any conversion of forest land to urbanized uses will result in the permanent loss of the resource. With the conversion of forest lands there will be a loss of wildlife habitat, a decrease in aesthetic value, increases in stormwater runoff and possibly increases in the rate of erosion. Urban uses typically do not mix well with forestry operations. Forest operations can be a source of nuisance complaints by neighbors. In addition, the encroachment of urban growth can raise the value of forested land, making it more likely that the properties will convert to urban uses.

*Alternative 1 – No Action:* The No Action alternative (and any alternative that does not provide sufficient land and densities in the City and the UGA to accommodate projected population growth) is expected to push growth and land clearing activity to the rural areas of the County and to the Urban Growth Areas of other cities in the County.

*Alternative 2 – Infill:* This alternative would focus development and impacts into the existing City and UGA and would be expected to result in the least amount of land clearing in the UGA and Urban Fringe Subarea.

*Alternative 3 – Adjusted UGA Boundary:* This would expand the existing low-density development pattern of the UGA and would be expected to create the most significant and widespread land clearing impacts to the remaining forest resources.

*Alternative 4 – Infill and Adjusted UGA:* Under this alternative, new growth would be directed into the existing City and Urban Growth Area, but would require a minor expansion of the UGA. This alternative would be expected to result in moderate land clearing impacts.

## **2.7 SCENIC RESOURCES**

Scenic resources and views of the natural environment will be affected by the changing urban built environment throughout the planning area. Scenic resources that have protected status are not likely to change, but views of these scenic resources could change depending on a number of factors, including regional air pollution and atmospheric haze, as well as taller buildings within compact urban areas.

*Alternative 1 – No Action:* The No Action alternative (and any alternative that does not

provide sufficient land and densities in the City and the UGA to accommodate projected population growth) is expected to push growth and the impacts of growth to the rural areas of the County and to the Urban Growth Areas of other cities in the County, thus increasing vehicle emissions, air pollution, and atmospheric haze.

*Alternative 2 – Infill:* This alternative would focus new growth in the existing City and Urban Growth Area and would be expected to minimize vehicle emissions, air pollution, and atmospheric haze. This alternative would also be expected to result in the construction of taller buildings in the compact urban area, which could block views of scenic resources.

*Alternative 3 – Adjusted UGA Boundary:* This would expand the existing low-density development pattern in the UGA and would be expected to increase vehicle emissions, air pollution, and atmospheric haze.

*Alternative 4 – Infill and Adjusted UGA:* Under this alternative, new growth would be directed into the existing City and Urban Growth Area, but would require a minor expansion of the UGA. This alternative would be expected to have similar effects as alternative 2, but would have slightly more impact to air pollution and atmospheric haze and slightly less impact on view blockage than alternative 2.

## **BUILT ENVIRONMENT**

### **2.8 ENVIRONMENTAL HEALTH**

Population increase and urban growth are expected to have impacts to elements of environmental health, including noise, risk of explosion, and hazardous materials throughout the planning area. It is expected that the following elements of environmental health would be subject to similar impacts under all growth management alternatives considered.

#### **2.8.1. Noise**

#### **2.8.2. Risk of Explosion**

#### **2.8.3. Hazardous Materials**

*Alternative 1 – No Action:* The No Action alternative (and any alternative that does not provide sufficient land and densities in the City and the UGA to accommodate projected population growth) is expected to push growth and the impacts of growth to the rural areas of the County and to the Urban Growth Areas of other cities in the County, thus spreading noise, risk of explosion, and the generation and transport of hazardous materials impacts over a larger area.

*Alternative 2 – Infill:* This alternative would focus new growth in the existing City and Urban Growth Area and would be expected to concentrate most increased noise, risk of

explosion, and the generation and transport of hazardous materials impacts within the City and UGA.

*Alternative 3 – Adjusted UGA Boundary:* This would expand the existing low-density development pattern of the UGA and would be expected to create the most significant and widespread noise, risk of explosion, and the generation and transport of hazardous materials and would be expected to create the most significant impacts to environmental health.

*Alternative 4 – Infill and Adjusted UGA:* Under this alternative, new growth would be directed into the existing City and Urban Growth Area, but would require a minor expansion of the UGA. This alternative would be expected to have similar effects as alternative 2, but would create increased noise, risk of explosion, and the generation and transport of hazardous materials impacts over a slightly larger area than alternative 2.

### **2.9 POPULATION AND LAND SUPPLY AND DEMAND**

The population of Bellingham and the UGA is projected to increase by approximately 31,600 new residents over the next 20 years. The adopted population projection requires Bellingham to adopt planning strategies to accommodate approximately 14,100 new housing units within the City and UGA. An increase in population will also result in a need for expanded employment opportunities, which will require 700 to 1,000 additional acres of buildable commercial and industrial land (ECONorthwest/GMOC). Population growth will affect land use and housing in various ways. For example, there are already enough platted lots in rural Whatcom County to accommodate all of the projected growth and unless population growth is directed into urban areas, rural lands will be converted into low-density suburban areas that are very expensive to serve with public services and facilities.

*Alternative 1 - No Action* - the existing land supply available for development under existing zoning and density is not sufficient to accommodate the projected population and housing units that will be required over the next 20 years. This would be expected to result in an increase in the cost of housing as the available land supply is diminished. Population in rural areas would be expected to grow as sprawling, low-density housing development occurred in the UGA, Urban Fringe, and rural areas of Whatcom County.

*Alternative 2 – Infill* - City and UGA zoning would be adjusted, where appropriate, to allow for higher residential densities that would accommodate the projected population growth and housing units. This alternative would be expected to result in smaller residential lot sizes and a wide variety of affordable housing forms. If infill housing is not affordable, then this alternative could push population growth to rural areas where more affordable housing is available.

*Alternative 3 - Adjusted UGA* - City and UGA land would retain existing zoning and the UGA boundary would be expanded to accommodate additional population growth. If



existing UGA zoning allowing 4 dwelling units per acre were applied to land added to the UGA, then approximately 1,250 acres of undeveloped or redevelopable land would need to be added to the UGA. Continued development of UGA land at this density would be expected to result in sprawling, low-density housing development in the UGA, Urban Fringe, and rural areas of Whatcom County to accommodate the population growth.

*Alternative 4 - Infill and Adjusted UGA* - existing zoning in the City and UGA would be changed to allow increased densities in appropriate locations and a minor expansion of the UGA boundary would be utilized to accommodate projected population and housing needs. This alternative would also be expected to encourage pedestrian- and transit-oriented development in some locations to minimize increased traffic congestion, promote the use of creative building techniques and design standards, and increase the available land supply to minimize the increase in housing prices. This alternative would be expected to have similar effects to the land base as alternative 2, but would require more conversion of rural land to urban uses than alternative 2.

## **2.10 HOUSING**

Much like, the population section, above, the impacts on affordable housing in Bellingham and the UGA will be affected by population growth and the land supply, which will affect the price of land and housing. The Bellingham and UGA population is projected to increase by approximately 31,600 new residents over the next 20 years. The adopted population projection requires Bellingham to adopt planning strategies to accommodate approximately 14,100 new housing units within the City and UGA. Population growth will affect land use and housing in various ways.

*Alternative 1 - No Action* - the existing land supply available for development under existing zoning and density is not sufficient to accommodate the projected population and housing units that will be required over the next 20 years. This would be expected to result in an increase in the cost of housing as the available land supply is diminished. Affordable housing would be expected to diminish as land and housing prices become increasingly out-of-reach for low-income individuals.

*Alternative 2 – Infill* - City and UGA zoning would be adjusted, where appropriate, to allow for higher residential densities that would accommodate the projected population growth and housing units. This alternative would be expected to result in smaller residential lot sizes and a wide variety of relatively-affordable housing forms. If infill housing is not affordable, then this alternative could push population growth to rural areas where more affordable housing is available. It could also result in a decrease of affordable housing for low-income individuals.

*Alternative 3 - Adjusted UGA* - City and UGA land would retain existing zoning and the UGA boundary would be expanded to accommodate additional population growth. If existing UGA zoning allowing 4 dwelling units per acre were applied to land added to

the UGA, then approximately 1,250 acres of undeveloped or redevelopable land would need to be added to the UGA. Continued development of UGA land at this density would be expected to result in sprawling, low-density housing development in the UGA, Urban Fringe, and rural areas of Whatcom County to accommodate the population growth. This alternative would be expected to create the least amount of market pressure on land and housing prices in Bellingham and subsequently result in more affordable housing available within the City and UGA where social support services and public transit services are most readily available for low-income individuals.

*Alternative 4 - Infill and Adjusted UGA* - existing zoning in the City and UGA would be changed to allow increased densities in appropriate locations and a minor expansion of the UGA boundary would be utilized to accommodate projected population and housing needs. This alternative would be expected to create slightly less market pressure on land and housing prices in Bellingham than alternatives 1 or 2, but more than alternative 3. This could result in slightly more affordable housing available within the City and UGA where social support services and public transit services are most readily available for low-income individuals.

### **2.11 LIGHT AND GLARE**

Population increase and urban growth are expected to have light and glare impacts throughout the planning area.

*Alternative 1 – No Action:* The No Action alternative (and any alternative that does not provide sufficient land and densities in the City and the UGA to accommodate projected population growth) is expected to push growth and the impacts of growth to the rural areas of the County and to the Urban Growth Areas of other cities in the County, thus spreading light and glare impacts over a larger area.

*Alternative 2 – Infill:* This alternative would focus new growth in the existing City and Urban Growth Area and would be expected to concentrate most light and glare impacts within the City and UGA.

*Alternative 3 – Adjusted UGA Boundary:* This would expand the existing low-density development pattern of the UGA and would be expected to create the most significant and widespread light and glare impacts.

*Alternative 4 – Infill and Adjusted UGA:* Under this alternative, new growth would be directed into the existing City and Urban Growth Area, but would require a minor expansion of the UGA. This alternative would be expected to have similar effects as alternative 2, but would create increased light and glare impacts over a slightly larger area than alternative 2.

## **2.12 AESTHETICS AND URBAN DESIGN**

The aesthetics of urban development are often affected by density and design regulations. Impacts of new development occur adjacent to established neighborhoods or as different types of new development are built adjacent to each other. As urban development spreads and/or intensifies, urban design will become increasingly important to ensure compatibility between established and new land uses while creating a community and livability. The impacts of each alternative greatly depend upon the urban design standards applied at the time of development.

The City of Bellingham requires all new multifamily development to adhere to Residential Multifamily Design Guidelines that address site and structural considerations and are intended to minimize and/or mitigate any negative impacts of new development and enhance quality of life in the urban residential neighborhoods of Bellingham. Whatcom County does not have design guidelines for new development in the Bellingham UGA or Urban Fringe.

*Alternative 1 – No Action:* The No Action alternative (and any alternative that does not provide sufficient land and densities in the City and the UGA to accommodate projected population growth) is expected to push growth and the impacts of growth to the rural areas of the County and to the Urban Growth Areas of other cities in the County, thus creating additional urban and rural sprawl with minimal regulation of aesthetics or urban design.

*Alternative 2 – Infill:* This alternative would focus new growth in the existing City and Urban Growth Area and would be expected to result in a higher density urban living environment with more attention paid to design and the effect that new development has on existing neighborhoods.

*Alternative 3 – Adjusted UGA Boundary:* This would expand the existing low-density development pattern of the UGA thus creating additional urban and rural sprawl with little to no regulation of aesthetics or urban design.

*Alternative 4 – Infill and Adjusted UGA:* Under this alternative, new growth would be directed into the existing City and Urban Growth Area, but would require a minor expansion of the UGA. It would be expected to have similar effects as alternative 2, but with slightly less attention paid to design of the urban environment than alternative 2.

The aesthetic impact of urban growth would be further mitigated under all alternatives considered if Whatcom County were to adopt and implement Bellingham's Residential Multifamily Design Guidelines throughout the UGA, or even the Urban Fringe.

### **2.13 HISTORIC AND ARCHAEOLOGICAL RESOURCES**

Archaeological resources often remain buried until unearthed scientifically or by accidental discovery, which sometimes occurs through development activity. As all alternatives must accommodate the projected 20-year growth, there will be increased pressure to build on vacant land, which may have archeological significance. There also will be pressure to redevelop properties, possibly resulting in impacts to historic structures.

*Alternative 1 – No Action:* The No Action alternative (and any alternative that does not provide sufficient land and densities in the City and the UGA to accommodate projected population growth) is expected to push development pressure further from the City thus increasing impacts to archaeological resources. Infill development would continue at existing densities until the City reached build-out, which would then create a focus on redevelopment within the urban area with potential impact to historic resources.

*Alternative 2 – Infill:* This alternative would focus new growth in the existing City and Urban Growth Area and would be expected to result in the least amount of land converted from vacant to built, thus having the least amount of impact on archaeological resources. The Infill alternative would be expected to concentrate development in appropriate areas with urban design guidelines applied to new high-density development.

*Alternative 3 – Adjusted UGA Boundary:* This would expand the low-density development pattern and would be expected to increase land conversion from vacant to built. This alternative would be expected to have the most significant impact to archaeological resources. Infill development would continue at existing densities until the City reached build-out, which would then create a focus on redevelopment within the urban area with potential impact to historic resources.

*Alternative 4 – Infill and Adjusted UGA:* Under this alternative, new growth would be directed into the existing City and Urban Growth Area, but would require a minor expansion of the UGA. It would be expected to have similar effects as alternative 2, but would require additional land for development and could thus create slightly more impact to archaeological resources than alternative 2.

### **2.14 TRANSPORTATION AND CIRCULATION**

Population growth is expected to create additional demand and traffic congestion on City and County transportation arterials under all four alternatives. The Growth Management Act requires that project-specific transportation improvements be constructed or financed concurrent with new development to mitigate impacts. New development cannot be required to pay for pre-existing or regional transportation network deficiencies.

*Alternative 1 – No Action:* This alternative cannot accommodate the adopted growth projection for population and housing. This alternative would be expected to push development and transportation impacts into surrounding cities, urban growth areas, and rural areas of the County. Alternative 1 would also be expected to result in continued dependence on private automobiles, increased traffic congestion on City and County arterials, increased commuting times, increased air pollution from additional motor vehicles and miles traveled, reduced efficiency and cost-effectiveness of public transportation, and costly capital improvements of the transportation network.

*Alternative 2 – Infill:* This alternative would direct growth into higher density, compact urban areas and maximize efficiency and cost-effectiveness of public transportation and create the need for pedestrian and bicycle capital improvements to the transportation network. Alternative 2 would also be expected to create additional opportunities for pedestrian-, bicycle-, and transit-oriented development; potentially decrease commuting times for drivers, transit riders, and bicyclists; reduce dependence on private automobiles.

*Alternative 3 – Adjusted UGA Boundary:* This alternative would expand the existing low-density UGA development pattern and would be expected to increase auto-dependent land uses, vehicle trips generated, vehicle miles traveled, traffic congestion, and vehicle emissions. This alternative would also be expected to reduce the efficiency and cost-effectiveness of public transportation, require costly capital improvements and maintenance of the transportation network, and thus create the most significant transportation impacts over the 20-year planning period.

*Alternative 4 – Infill and Adjusted UGA:* This alternative would predominantly direct new growth into existing urban areas, but would require a minor expansion of the UGA. This alternative would have similar effects as alternative 2, but would be expected to create slightly more transportation impacts than alternative 2.

## **2.15 PUBLIC SERVICES AND FACILITIES**

### **2.15.1. Fire Protection and Emergency Medical Service (EMS)**

Population growth and development of new housing units will place additional demands on fire protection and emergency medical services (EMS) under all alternatives considered. Annexation of UGA land to the City of Bellingham is expected to create financial and service area impacts for rural fire districts and revision of the Interlocal Cooperation Agreement between the City and County may be required to address the potential impacts of annexation. EMS calls are expected to increase under all alternatives considered, but EMS is expected to become increasingly difficult to fund outside of urban areas. Functional consolidation of rural fire districts surrounding the Bellingham urban area would eliminate duplication of administration, training, and equipment costs and is recommended under all alternatives.

*Alternative 1 – No Action* – The No Action alternative (and any alternative that does not provide sufficient land and densities in the City and the UGA to accommodate projected population growth) is expected to push growth and the impacts of growth to the rural areas of the County and to the Urban Growth Areas of other cities in the County, thus increasing traffic congestion and response time for emergency vehicles. This alternative would also be expected to create financial impacts to fire districts when built-out residential portions of the UGA annex to the City, require increased fire flow in some areas as they reach potential build-out, require recruitment and hiring of additional firefighters and paramedics and require additional emergency response equipment to maintain existing service levels.

*Alternative 2 – Infill* – would direct new growth into existing urban areas where public infrastructure capacity already exists and would be expected to maximize the efficiency of fire and emergency services while minimizing response times. Alternative 2 would require recruitment and hiring of additional firefighters and paramedics and would require additional emergency response equipment in order to maintain existing service levels, but would also be expected to result in long-term cost savings and would create the least significant impact to providing fire protection and emergency medical services.

*Alternative 3 – Adjusted UGA Boundary* - would expand the existing low-density UGA development pattern and would be expected to create increased traffic congestion and response time for emergency vehicles and require increased fire flow in some areas as they reach potential build-out. This alternative would also be expected to create challenging financial impacts as a result of annexation of built-out residential areas, require recruitment and hiring of additional firefighters and paramedics, and require additional emergency response equipment to maintain existing service levels. This alternative would be expected to create the most significant impacts to providing fire protection and emergency medical services.

*Alternative 4 – Infill and Adjusted UGA* – would predominantly direct new growth into existing urban areas, but would require a minor expansion of the UGA. This alternative would be expected to have similar effects as alternative 2, but would have slightly more impact to providing fire protection and emergency medical services than alternative 2.

### **2.15.2. Law Enforcement**

Population growth and development of new housing units are expected to create additional demand for law enforcement services under all alternatives. Annexations are expected to create fiscal and service area impacts for law enforcement agencies and a new high-capacity, maximum security County jail will be required under all alternatives. Revision of the Interlocal Cooperation Agreement between the City and County may be required to address the potential impacts of annexation.

*Alternative 1 – No Action* – cannot accommodate the adopted growth projection for population and housing. The No Action alternative (and any alternative that does not provide sufficient land and densities in the City and the UGA to accommodate projected

population growth) is expected to push growth and the impacts of growth to the rural areas of the County and to the Urban Growth Areas of other cities in the County, thus increasing traffic congestion and response time for law enforcement vehicles. The No Action alternative would require recruitment, training and hiring of additional Sheriff Deputies in the UGA as residential areas reach potential build-out. This alternative would also be expected to create financial impacts on the Bellingham Police Department and require additional City Police Officers, vehicles and law enforcement equipment if built-out residential portions of the UGA annex to the City.

*Alternative 2 – Infill* – would direct new growth into existing urban areas where public infrastructure capacity already exists and would be expected to maximize the efficiency of law enforcement services while minimizing response times. Alternative 2 would require recruitment and hiring of additional Sheriff Deputies in the UGA as residential areas reach potential build-out and require additional law enforcement response equipment to maintain existing service levels. The Infill alternative could create financial impacts on the Bellingham Police Department and require additional City Police Officers, vehicles and law enforcement equipment if built-out residential portions of the UGA annex to the City. This alternative would also be expected to result in long-term cost savings and would create the least significant impact to providing law enforcement services.

*Alternative 3 – Adjusted UGA Boundary* - would expand the existing low-density UGA development pattern and would be expected to create increased traffic congestion and response time for law enforcement vehicles. This alternative would also require recruitment, training, and hiring of additional Sheriff Deputies to serve the expanded UGA and would require additional law enforcement response equipment and possibly a Sheriff's Office Field Office in the expanded UGA to maintain existing service levels. The Adjusted UGA Boundary alternative would create financial impacts on the Bellingham Police Department and require additional City Police Officers, vehicles and law enforcement equipment if built-out residential portions of the UGA annex to the City and create a need for a north Bellingham Police Station. This alternative would be expected to create the most significant impacts to providing law enforcement services.

*Alternative 4 – Infill and Adjusted UGA* – would predominantly direct new growth into existing urban areas, but would require a minor expansion of the UGA. This alternative would be expected to have similar effects as alternative 2, but would have slightly more impact to providing law enforcement services than alternative 2.

### **2.15.3. Parks, Recreation, and Open Space Facilities**

Under all alternatives, there will be an increasing need for parks, trails and recreational facilities as well as increased pressure to develop potential open space areas. As areas develop, there will be decreasing opportunities to acquire or preserve open space and parkland. There will also be increased use of the existing facilities and open space areas. As the land supply decreases, the cost of acquiring land for parks or open space is expected to increase.

The Infill and Adjusted UGA and Infill alternatives may increase the amount of multi-family residential units and thereby increase and concentrate the demand for activity centers, parks and open space. The No Action alternative will increase the need for recreational facilities and parks within Bellingham. The Adjusted UGA and Adjusted UGA and Infill alternatives may allow lower density development and decrease the opportunities to acquire additional park and open space properties.

*Alternative 1 – No Action* – cannot accommodate the adopted growth projection for population and housing. This alternative would be expected to push development pressure further from Bellingham thus increasing the need for public parks, open space, and recreational facilities outside of the Bellingham urban area.

*Alternative 2 – Infill* – would direct new growth into existing urban areas and would be expected to create higher density, compact urban areas and increasing the need for public parks, open space, and recreational facilities in Bellingham and the UGA. This alternative would increase the need to upgrade existing parks and recreational facilities and require additional open space areas. As the land supply decreases, the cost of purchasing new parks, open space, and recreational facilities would be expected to increase.

*Alternative 3 – Adjusted UGA Boundary* - would expand the existing low-density UGA development pattern and would be expected to create a greater need for new parks, open space, and recreational facilities in the UGA and the Urban Fringe.

*Alternative 4 – Infill and Adjusted UGA* – would predominantly direct new growth into existing urban areas, but would require a minor expansion of the UGA. This alternative could have similar effects as alternative 2, but would be expected to create slightly less impact to public parks, open space, and recreational facilities within the urban area.

### **2.15.4. Public Schools**

Population growth and the development of new housing units will increase demand for public school teachers, services, and facilities throughout the planning area under all alternatives considered. School district boundaries are not anticipated to change and individual districts will experience different pressures from population growth and residential development. Land values are expected to increase under all alternatives considered, which will make land acquisition more costly and difficult for public school districts. This is expected to increase the need to renovate and upgrading existing public school facilities within the planning area.

*Alternative 1 – No Action* – cannot accommodate the adopted growth projection for population and housing. The No Action alternative (and any alternative that does not provide sufficient land and densities in the City and the UGA to accommodate projected population growth) is expected to push growth and the impacts of growth to the rural



areas of the County and to the Urban Growth Areas of other cities in the County, thus increasing the need for public school teachers, services, bussing programs and facilities outside of the Bellingham urban area. This alternative would be expected to have more impact on the Meridian, Ferndale, and Mt. Baker School Districts than on the Bellingham School District.

*Alternative 2 – Infill* – would direct new growth into existing urban areas and would be expected to create higher density, compact urban areas and increasing the need for public school teachers, services, and facilities in Bellingham and the UGA. This alternative would increase the need to renovate and upgrade existing schools and possibly purchase and convert existing buildings for school use within the City and UGA. A higher density, compact urban area that is designed to be pedestrian, bicycle, and transit-friendly could allow more students to walk, bike, or ride transit to school and potentially reduce school bus transportation costs. This alternative would be expected to have more impact on the Bellingham and Meridian School Districts than on the Ferndale and Mt. Baker School Districts.

*Alternative 3 – Adjusted UGA Boundary* - would expand the existing low-density UGA development pattern and would be expected to create a greater need for new school teachers, services, and facilities for the Ferndale, Meridian and Mount Baker School Districts. Sprawling, low density development would increase school bus transportation routes, time, and costs. This alternative would be expected to have more impact on the Meridian, Ferndale, and Mt. Baker School Districts than on the Bellingham School District.

*Alternative 4 – Infill and Adjusted UGA* – would predominantly direct new growth into existing urban areas, but would require a minor expansion of the UGA. This alternative could have similar effects as alternative 2, but would be expected to create slightly more impact to public school districts in the planning area. This alternative would be expected to have more impact on the Bellingham and Meridian School Districts than on the Ferndale and Mt. Baker School Districts.

#### **2.15.5. Public Libraries**

Population growth and infill developments are expected to place additional demands on the Bellingham and Whatcom County public library services under all alternatives. The Bellingham Library administration and the City of Bellingham have determined that a new 70,000 square foot library is needed at a different location in the downtown area, but in close proximity to the Civic Center. The Whatcom County Library System is experiencing an increase in the use and demand for public library services at all of its branches. In recent years, there has been an influx of ethnic immigrants, including Russians, Hispanics, and East Indians and the Whatcom County Library System is experiencing an increase in the demand for library materials that are either translated to or produced in the native languages of these people, especially Russian.

## **CHAPTER 2: SUMMARY OF IMPACTS EXPECTED**

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Whatcom County is also becoming increasingly attractive as a retirement location, and if this continues there may be a corresponding increase the demand for the library's Outreach Program to retirement communities and nursing homes and the home delivery service for those who are confined to their homes.

*Alternative 1 – No Action* - cannot accommodate the adopted growth projection for population and housing. The No Action alternative (and any alternative that does not provide sufficient land and densities in the City and the UGA to accommodate projected population growth) is expected to push growth and the impacts of growth to the rural areas of the County and to the Urban Growth Areas of other cities in the County. Generally, this alternative would be expected to require new library facilities in Bellingham to maintain existing service levels, create additional pressure for branch libraries in suburban areas, and require additional County library facilities.

*Alternative 2 – Infill* - zoning would be adjusted, where appropriate, in both the City and the existing UGA to achieve higher residential densities. Generally, this alternative would be expected to create a need for substantial new library facilities in Bellingham to maintain existing service levels and require modest improvements to County libraries.

*Alternative 3 – Adjusted UGA Boundary* - would expand the existing low-density UGA development pattern and would be expected to require new library facilities in Bellingham, create additional pressure for branch libraries in suburban areas, and require new or expanded public library facilities in the Urban Fringe and rural areas of Whatcom County.

*Alternative 4 – Infill and Adjusted UGA* – would predominantly direct new growth into existing urban areas, but would require a minor expansion of the UGA. This alternative could have similar effects as alternative 2.

### **2.15.6. Water Supply**

The City of Bellingham currently provides public water supply throughout the city limits and significant portions of the UGA. The Growth Management Act does not allow the Urban Fringe and other rural areas lying outside of UGA's to be served with municipal water unless there is a public health emergency. Population growth and the development of new housing units will create an increased demand for water supply and treatment capacity under all alternatives considered. The pattern of development envisioned under each alternative would have different impacts on the provision of water supply throughout the City and UGA.

*Alternative 1 – No Action* – The City currently has sufficient water supply and treatment capacity for infill development allowed under existing zoning, but Bellingham will not be able to accommodate the adopted growth projection for 31,600 additional residents and 14,100 additional housing units by employing this alternative. The No Action alternative (and any alternative that does not provide sufficient land and densities in the City and the UGA to accommodate projected population growth) is expected to push growth and

the impacts of growth to the rural areas of the County and to the Urban Growth Areas of other cities in the County. Alternative 1 would be expected to create an increase in private wells and community water systems in the rural areas of the County.

*Alternative 2 – Infill* – would direct growth into higher density, compact urban areas and maximize efficiency and cost-effectiveness of public water supply systems. Alternative 2 would be expected to require additional water storage reservoirs, water pressure zones, and expansion of the City’s water treatment system. Some water mains and trunk lines would have to be increased in size to provide an adequate amount of fire flow as the capacity is continually lowered by new development. The Infill alternative would also be expected to maximize the capacity and efficiency of the public water supply system while minimizing the costs of maintenance and repair to the overall system. Alternative 2 would have the least significant impact to the provision of public water facilities and would best achieve GMA goals.

*Alternative 3 – Adjusted UGA Boundary* - would expand the existing low-density UGA development pattern and would be expected to increase the need for and cost of providing, maintaining, and repairing water storage reservoirs, water pressure zones, water treatment facilities, and water mains and transmission lines throughout the City and UGA. This alternative would be expected to create the most significant impact on the provision of public water facilities and would be the least likely to achieve GMA goals.

*Alternative 4 – Infill and Adjusted UGA* – would predominantly direct new growth into existing urban areas, but would require a minor expansion of the UGA. This alternative would be expected to have similar effects as Alternative 2, but would create slightly more impact to the provision of public water facilities than alternative 2.

#### **2.15.7. Stormwater**

Population increase and urban growth will impact stormwater systems throughout the planning area under all growth management alternatives considered. Impact will vary under each alternative according to how much land is converted to urban development.

*Alternative 1 – No Action* - Bellingham will not be able to accommodate the adopted growth projection for 31,600 additional residents and 14,100 additional housing units by employing this alternative. The no action alternative would leave the zoning and growth areas as they are now. This alternative would be expected to push land conversion and urban development further from Bellingham and would thus create stormwater impacts over a larger geographic area.

*Alternative 2 – Infill* – would direct growth into higher density, compact urban areas and maximize efficiency and cost-effectiveness of stormwater systems. Alternative 2 would be expected to require additional stormwater detention and treatment facilities. The Infill alternative would be expected to maximize the capacity and efficiency of

stormwater systems while minimizing the costs of maintenance and repair to the overall system.

*Alternative 3 – Adjusted UGA* - would expand the existing low-density UGA development pattern and would be expected to increase the need for and cost of providing, maintaining, and repairing stormwater systems. This alternative has the potential to create the greatest impact to the UGA, Urban Fringe, and rural areas of Whatcom County.

*Alternative 4 – Infill and Adjusted UGA* – would predominantly direct new growth into existing urban areas, but would require a minor expansion of the UGA. This alternative would be expected to have similar effects as Alternative 2, but would create slightly more stormwater impact to the UGA and Urban Fringe than alternative 2.

### **2.15.8. Sanitary Sewer**

The City of Bellingham currently provides public sewer capacity throughout the city limits and significant portions of the UGA. The Growth Management Act does not allow the Urban Fringe and other rural areas lying outside of UGA's to be served with municipal sewer unless there is a public health emergency. Population growth and the development of new housing units will create an increased demand for sewer capacity under all alternatives considered. The pattern of development envisioned under each alternative would have different impacts on the provision of sewer capacity throughout the City and UGA.

*Alternative 1 – No Action* – The City currently has sufficient sewage treatment capacity for infill development allowed under existing zoning, but Bellingham will not be able to accommodate the adopted growth projection for 31,600 additional residents and 14,100 additional housing units by employing this alternative. The No Action alternative (and any alternative that does not provide sufficient land and densities in the City and the UGA to accommodate projected population growth) is expected to push growth and the impacts of growth to the rural areas of the County and to the Urban Growth Areas of other cities in the County. Alternative 1 would be expected to create an increase in private individual and community septic systems in the rural areas of the County.

*Alternative 2 – Infill* – would direct growth into higher density, compact urban areas and maximize efficiency and cost-effectiveness of public sewer capacity. Alternative 2 would be expected to require expansion of the City's sanitary sewer system. Some sewer mains and trunk lines would have to be increased in size to receive an increased amount of flow and the capacity is continually lowered by new development. This alternative would also be expected to maximize the capacity and efficiency of the public sewer system while minimizing the cost of maintenance and repair to the overall sewage system. Alternative 2 would have the least significant impact to the provision of public sewer facilities and would best achieve GMA goals.

*Alternative 3 – Adjusted UGA Boundary* - would expand the existing low-density UGA development pattern and would be expected to increase the need and cost of providing, maintaining, and repairing sewer mains and transmission lines throughout the City and UGA. This alternative would be expected to create the most significant impact on the provision of public sewer facilities and would be the least likely to achieve GMA goals.

*Alternative 4 – Infill and Adjusted UGA* – would predominantly direct new growth into existing urban areas, but would require a minor expansion of the UGA. This alternative would be expected to have similar effects as alternative 2, but would create slightly more impact to the provision of public sewer facilities than alternative 2.

### **2.15.9. Solid Waste and Recycling**

As population increases, the amount of household, commercial, and toxic solid waste produced will also increase throughout the planning area. Attempts to recycle greater percentages of solid waste, as well as decrease the amount of solid waste generated per person, could help to alleviate impacts to providing solid waste services. The impacts on the provision of solid waste collection services and processing facilities will be different under each alternative considered.

*Alternative 1 – No Action* – cannot accommodate the adopted growth projection for population and housing. This alternative would be expected to push development pressure into other cities, UGA's, and rural areas, which would increase the cost while reducing the efficiency of providing garbage and recycling collection services.

*Alternative 2 – Infill* – would direct new growth into existing urban areas and would be expected to maximize the efficiency of providing garbage and recycling collection services while minimizing transportation, collection, and processing costs. This alternative would also be expected to result in long-term cost savings and would create the least significant impact to providing garbage and recycling collection services.

*Alternative 3 – Adjusted UGA Boundary* - would expand the existing low-density UGA development pattern and would be expected to create increased traffic congestion and time required for garbage and recycling collection. This alternative would be expected to maximize the cost while minimizing the efficiency of providing garbage and recycling collection services and therefore creating the most significant impacts to solid waste services and facilities.

*Alternative 4 – Infill and Adjusted UGA* – would predominantly direct new growth into existing urban areas, but would require a minor expansion of the UGA. This alternative would be expected to have similar effects as alternative 2, but would require more land area to accommodate the population and would have slightly more impact on garbage and recycling collection services and facilities than alternative 2.

### **2.15.10. Communication Services**

The demand for communications utilities and services would be expected to increase as population increases. The impact to communication service providers would vary under each growth management alternative considered.

*Alternative 1 – No Action* - Generally, the no action alternative would be expected to push development and population growth to the UGA, Urban Fringe, and rural areas of Whatcom County. Additional communications infrastructure facilities would be required to serve a larger geographic area.

*Alternative 2 – Infill* - Generally, an emphasis on infill development where public infrastructure capacity already exists would be expected to require retrofitting of some existing communications facilities to serve high-density, compact growth areas, within Bellingham and the UGA. Some new communications infrastructure would also be required to meet additional demand within high-density, compact growth areas, within Bellingham and the UGA.

*Alternative 3 – Adjusted UGA* - Similar to Alternative 1, expansion of the UGA boundary at existing residential densities would generally be expected to push development and population growth to the UGA, Urban Fringe, and rural areas of Whatcom County. Additional communications infrastructure facilities would be required to serve a larger geographic area.

*Alternative 4 – Infill and Adjusted UGA* – Similar to alternative 2, this alternative would be expected to require renovation of some existing communications facilities and require some new communications infrastructure to meet demand within high-density, compact growth areas within Bellingham and the UGA and the Urban Fringe Subarea.

### **2.15.11. Electricity and Natural Gas**

The demand for electricity and natural gas utilities and services would be expected to increase as population increases. The impact to electricity and natural gas service providers would vary under each growth management alternative considered.

*Alternative 1 – No Action* - Generally, the no action alternative would be expected to push development and population growth to the UGA, Urban Fringe, and rural areas of Whatcom County. Additional electricity and natural gas infrastructure facilities would be required to serve a larger geographic area.

*Alternative 2 – Infill* - Generally, an emphasis on infill development where public infrastructure capacity already exists would be expected to require retrofitting of some existing electricity and natural gas facilities to serve high-density, compact growth areas, within Bellingham and the UGA. Some new electricity and natural gas infrastructure would also be required to meet additional demand within high-density, compact growth areas, within Bellingham and the UGA.

*Alternative 3 – Adjusted UGA* - Similar to Alternative 1, expansion of the UGA boundary at existing residential densities would generally be expected to push development and population growth to the UGA, Urban Fringe, and rural areas of Whatcom County. Additional electricity and natural gas infrastructure facilities would be required to serve a larger geographic area.

*Alternative 4 – Infill and Adjusted UGA* – Similar to alternative 2, this alternative would be expected to require renovation of some existing electricity and natural gas facilities and require some new electricity and natural gas infrastructure to meet demand within high-density, compact growth areas within Bellingham and the UGA and the Urban Fringe Subarea.