Utilities

The Growth Management Act (GMA) requires local comprehensive plans to include a utilities element. Capital facilities planning under GMA involves a significant measure of fiscal and financial planning. The utilities element, in contrast, does not require that these important financial issues be addressed directly.

The utilities element was primarily intended to assure proper coordination of public land use planning and infrastructure planning by the non-public system providers such as the natural gas distributors and the telephone companies. These agencies have their own independent utility planning and management operations and policy-making boards.

This element does include general policy direction concerning the public water supply and wastewater systems which are critical support infrastructure for urban development. However, the capital facilities plan, which addresses all public facilities necessary "to support development," includes sections devoted to the existing inventory and forecast of future needs for these infrastructure systems. The county has compiled an inventory of these systems with the cooperation of the provider agencies (see the reference to these technical reports in the introduction to this plan).

This utilities element draws heavily from a variety of sources including the multi-county planning policies of Vision 2040, the Countywide Planning Policies, past subarea planning efforts, and the policy recommendations from the provider agencies and various advisory groups formed over the years. These sources supply both guidance and a consistency check for evaluating this element against the other elements of this plan. The set of assumptions and forecasts concerning population and employment growth over the next twenty years have provided the primary indicator of future demand for the systems addressed in this element.

Most of the distribution components of the utility systems are located within road and street rights-of-way, creating a direct link with the transportation element and an indirect link with the land use element. A major objective of this element is to stimulate advance planning of future corridor needs by utility system planners in order to give adequate notice to local jurisdictions.

Utility Systems - General

The utility systems of water supply, wastewater collection and treatment, and electric power are widely considered as essential infrastructure to support urban development, and will be treated accordingly in this plan. There are some general goals, objectives, policies, and implementation measures that apply to all three utility systems, and these are presented in this section and the next. Utility-specific issues and corresponding goals, objectives, and policies are discussed in sections to follow.

Snohomish County is not a provider of public water, wastewater or electric power infrastructure, however, as a major land use regulator, it is well suited to play a leadership role in overall coordination of the provider agencies. The county is also ultimately responsible for water service (water supply) if a water district fails or becomes financially insolvent. The GMA calls upon counties to be regional service providers and inter-jurisdictional infrastructure planning coordination is one such service. The county has assumed this role by managing the preparation of the Coordinated Water System Plan which involved over 25 water system operators in north and east

Snohomish County and through its compilation of the countywide sewer and water system inventory.

The county has statutory authority to review and approve sewer and water district comprehensive system plans which providers are required to prepare before undertaking capital projects. Snohomish County will exercise this authority to assure consistency with its own comprehensive plan. County review authority does not extend to municipal systems, but Snohomish County does participate in utility system planning conducted by cities that may impact development in unincorporated areas.

Concurrency review is not currently utilized for non-county facilities, however, an adequacy test for utility infrastructure is utilized by Snohomish County in reviewing development applications. This generally involves a review of development proposals to ascertain their impact upon existing or planned utility systems.

GOAL UT 1 Enhance the efficiency and quality of service from utility providers through the review of utility, land use, transportation and natural environment planning documents.

Objective UT 1.A Pursue improved coordinated facility planning processes among the various utility providers serving Snohomish County.

UT Policy 1.A.1 The county shall perform coordinated and timely reviews of utility system comprehensive plans, amendments, and associated environmental documents proposed by the utility providers.

1.A.2 The county shall maintain the "Countywide Utility Inventory Report," which summarizes key information from the utility system plans prepared by provider agencies.

Objective UT 1.B Achieve and maintain consistency between utility system expansion plans and planned land use patterns.

UT Policies 1.B.1 The county shall map future utility facility and corridor locations on the maps for UGA plans and rural/resource lands where feasible.

1.B.2 The county shall maintain consistency between district utility plans and the county's comprehensive plan; it shall also endeavor to maintain consistency between city utility plans that serve unincorporated areas and the county's comprehensive plan.

1.B.3 The county shall ensure that public facilities are located in compliance with the Shoreline Management Program.

Public Water Supply

The relative ease with which small public water systems ((~~have been~~)) were established in the past has resulted in numerous public and private water purveyors operating around the county. They range in size from the City of Everett, which operates a regional water supply system that wholesales water to many other systems, to two-household associations which are essentially shared wells. There are also numerous municipal, district, and private systems which may operate supply sources, treatment facilities, storage facilities, or simply the distribution network serving its customers.

The water purveyors in Snohomish County are primarily cities and water districts, which are both local governmental units with the power to raise revenues through taxes or user charges. Water associations are another (non-governmental) means for citizens to act collectively to operate and maintain a water supply system, particularly smaller systems that are not expecting to expand, and a few medium-sized associations are operating in Snohomish County. Sixteen of the county's twenty cities provide public water supply service directly to their citizens, while the remaining four cities contract with water districts to provide the service.

There are also ten water districts, and a large number of water associations and companies that service Snohomish County citizens. Most of the water companies and associations, however, only serve ten or fewer customers and are not included in the inventory report. Most of these smaller, private associations are accounted for in the North Snohomish County Coordinated Water System Plan.

The Tulalip Tribes operates a public water system within the Tulalip Reservation. Several associations and private companies also operate water supply systems in the county. Some larger private systems are included in this element because of their size, potential for future expansion, and possible conversion to public district status.

The primary source of supply for much of the county is the Sultan River/Spada Lake/Lake Chaplain water works complex operated by the City of Everett. The North Snohomish County Coordinated Water System Plan (CWSP) provides the framework for system planning and resource management for most of the urbanizing areas of the county not served by the Everett system. This major planning effort emerged from state legislation adopted in 1977 which attempts to slow the proliferation of small systems and encourage consolidation of existing systems to improve the overall management of the state's potable water resources and the health of its citizens.

This planning effort has resulted in improved dialogue between large and small providers to rural and small town residents in north and east Snohomish County on such topics as uniform construction standards, level of service in rural areas, and other issues.

The evolution of the water supply network through the state and Snohomish County demonstrates that public water supply systems are not exclusively urban services. This idea is further reinforced by recurring concerns over increasing levels of natural contaminants in groundwater supplies. The CWSP established the concept of a rural level of service for public water supply systems that is tied to domestic use rather than fire protection. This leads to smaller pipes, greatly reduced storage requirements, and generally less costly systems that can be economically supported in low-density rural areas.

GOAL UT 2 Work with provider agencies of Snohomish County to help ensure the availability of a reliable, high quality water supply for all households and businesses within the county in a manner that is consistent with the comprehensive plan and protection of the natural environment.

Objective UT 2.A Ensure that all new developments have a potable water supply meeting state water quality standards with sufficient capacity to serve domestic requirements.

UT Policy 2.A.1 The county shall review development proposals requiring land use or construction permit approval for the availability of an adequate water supply.

Objective UT 2.B Assist provider agencies in modifying their system plans as required to support the land use element of the comprehensive plan.

UT Policies 2.B.1 The county shall notify provider agencies of potential inconsistencies between their system plans and the comprehensive plan, and shall work with them to find acceptable solutions.

2.B.2 The county should continue to work with rural water system operators to achieve level of service and construction standards for rural systems that are consistent with rural densities and service expectations.

Wastewater Collection and Treatment

State laws and environmental regulations play a major role in the design and construction of wastewater treatment facilities which create high system costs and special economies of scale. The resulting number of public wastewater collection and treatment systems in Snohomish County is considerably smaller than the number of public water supply systems. Residential densities of at least three dwelling units per acre are generally needed to financially support the construction costs for wastewater collection systems. Similarly, average flows of at least 0.5 million gallons per day are needed to support the construction and operation of secondary treatment facilities.

Conversely, lower flows and rural densities can usually be served, given satisfactory soil and slope conditions, by decentralized disposal systems such as individual septic systems and small package plants. The thresholds noted above support the position that sanitary sewers constitute an urban service that is necessary and appropriate within urban growth areas, but is usually inappropriate outside of them. Sanitary sewers are generally treated as urban facilities.

There are twenty-six providers of wastewater collection and/or treatment service in operation in Snohomish County.

The remaining housing units, most of which are in rural areas, are served by individual septic systems. The public systems are all owned and operated by a municipality, a

sewer or water district, or King County (METRO).

Sixteen of these systems operate their own treatment facilities, several of which serve portions of other jurisdictions. This results from the importance of topography rather than political boundaries to these systems and a regionalization trend encouraged by the federal government during the 1970s and 1980s through its clean water grants for treatment plant construction and upgrading projects. More centralized approaches frequently makes good financial sense because of the high costs of treatment plant construction and operation.

Only the small rural towns of Index, Gold Bar, and Darrington are not served by municipal sewer systems. The City of Mill Creek is served by the Alderwood Water and Sewer District and the Silver Lake Water and Sewer District. The remaining 16 cities maintain their own collection systems serving all or part of their corporate limits, with 11 also operating their own treatment facilities. Some of these city systems also extend service to unincorporated residents living within reach of their collection systems and within the established urban growth areas. There are, additionally, currently six sewer and/or water districts within Snohomish County providing wastewater collection to both city and county residents and businesses, four of which also operate treatment plants. The Tulalip Tribes also operates its own wastewater treatment plant.

Another important service provider is King County METRO which provides wastewater treatment for sections of south Snohomish County There are 15 other wastewater treatment plants serving the urban areas within Snohomish County. The Everett and Edmonds plants both serve as regional facilities serving areas and jurisdictions outside of their municipal boundaries. Treatment plants operated by the Alderwood Water and Wastewater District, Lake Stevens Sewer District, and the Mukilteo Water and Wastewater District also serve areas within two or more municipal jurisdictions. The remaining treatment plants are city-operated plants serving their individual jurisdictions. The time, expense, and permitting difficulties involved in siting and constructing new wastewater treatment plants will limit the number of new plants built in Snohomish County during the next twenty years. Future increases in demand for wastewater treatment caused by growth and by conversion of existing development from individual systems to public sewers may likely be accommodated by expansion of existing plants or new wastewater treatment technologies.

GOAL UT 3 Work with cities and special districts to produce coordinated wastewater system plans for both incorporated and unincorporated areas within UGAs that are consistent with the land use element and city plans.

Objective UT 3.A Utilize wastewater system plans as a basis for orderly development or expansion within UGAs in accordance with the Countywide Planning Policies.

UT Policies

3.A.1 The county shall review new development proposals within urban growth areas requiring land use or construction permit approval for the availability of an adequate public wastewater collection and treatment system. Package wastewater treatment plants and sanitary sewer systems shall be approved by the State Department of Health.

3.A.2 The county shall only permit new individual wastewater treatment systems (such as septic systems) within UGAs to serve single-family homes on legal lots in existence at the effective date of this plan except as may be provided under development regulations which are consistent with LU Policy 2.A.1 related to the phased implementation of minimum urban densities within the un-sewered portion of UGAs, under limited conditions.

Objective UT 3.B Discourage inappropriate development patterns and densities in rural areas by restricting public sewer systems outside of designated urban growth areas.

UT Policy

3.B.1 The county shall prohibit new municipal sanitary sewer systems beyond Urban Growth Areas except as allowed under Countywide Planning Policy DP-6.

3.B.2 Snohomish County should encourage the development and use of innovative technologies for the treatment of wastewater that support the comprehensive plan and enhance the environment.

Electric Power

All electric power in Snohomish County is provided by Snohomish County Public Utility District #1 (PUD), a special purpose public agency which is governed by an elected Board of Commissioners in accordance with state enabling legislation. Electric load forecasting and facility planning is conducted by the PUD as part of its regular planning and management operations. The peak load typically experienced on cold winter days is a primary design consideration in planning new generation, transmission, and the larger distribution facilities. Population and employment forecasts from the PSRC and the state Office of Financial Management (OFM), which provide the foundation for GMA comprehensive planning, are also utilized by PUD and other providers for electric load forecasting.

The Snohomish County PUD has a goal of meeting a portion of its projected increase in demand through aggressive conservation programs. These energy conservation investments will also create economic diversification opportunities and keep the money spent on conservation within the community.

Transmission line corridors of Puget Power and Seattle City Light occupy substantial lands within Snohomish County. Future projects outlined by Puget Power to increase capacity and reliability of the regional power grid elements in Snohomish County utilize existing corridors and rights-of-way.

Electromagnetic fields (EMF) are associated with electrical appliances and facilities in general, and high voltage transmission lines, in particular, and have been the subject of considerable, but as yet inconclusive, research by various health organizations. This EMF issue is being closely watched by the industry and by national health and environmental agencies. Snohomish County will also monitor this research for new findings that could impact the comprehensive plan.

GOAL UT 4

Assist electric utility providers in fulfilling their public service obligations through planning for adequate system capacity to accommodate forecasted growth in a manner that is consistent with the comprehensive plan and protection of the natural environment.

Objective UT 4.A

Update the utilities element at least every five years to reflect changing regulatory conditions, electric load forecasts, and technology in cooperation with the provider agencies.

UT Policy 4.A.1 The county shall indicate the general location of existing and proposed major components of the electric system on the maps for UGA plans and rural/resource lands.

Objective UT 4.B

Site transmission and major distribution corridors and substations to minimize potential adverse societal, environmental, and economic impacts on the community.

UT Policies 4.B.1 The county shall encourage the joint use of utility corridors consistent with limitations of applicable law and prudent utility practice.

4.B.2 The county shall coordinate in the long term its roadway projects and other capital facility projects with planned electrical system expansions and extensions where shared sites or rights-of-way may be appropriate.

Natural Gas

Natural gas is an energy resource whose historic role in the Pacific Northwest has been relatively small because of the abundance and low cost of hydroelectric power. That situation has changed with the region's growing awareness of hydroelectric power's limitations. Natural gas could have an expanding role in the Puget Sound region as a domestic space and water heating medium.

Natural gas is delivered to customers by means of pipelines usually located with other public infrastructure within street rights-of-way. Natural gas is produced and delivered by private companies subject to federal and state regulation. Natural gas companies are not required by statute to make their product available to all potential customers like electric utilities. This results in a market driven utility which must have a firm customer base before it will extend service into an area. Older neighborhoods that were developed without natural gas infrastructure must organize and demonstrate to the gas company that sufficient demand exists for the service to justify the expense of extending new lines.

Commitments from developers and builders to provide gas connections to new homes, apartments, and businesses are generally easier to arrange, particularly as the cost of electric energy continues to rise. Most developments in southwest Snohomish County near a supply pipeline are connected to the natural gas distribution network.

The principal distributor of natural gas in Snohomish County is Puget Sound Energy (PSE). The area in which it may provide service (Certified Boundary Area) includes all of the southwest UGA and extends north to Marysville, northeast to Granite Falls, and southeast along SR-2 to Gold Bar. PSE purchases natural gas from the Williams Northwest Pipeline Company whose principal line runs north and south through Snohomish County, east of Lake Stevens, and connects major gas fields in British Columbia with major demand centers to the south. PSE takes its supply from gate stations located along the Northwest pipeline where pressures are reduced and from which the gas is transmitted to PSE's major demand centers via intermediate pressure lines. Pressures are further reduced at several town border stations before the gas is distributed to customer service lines.

Telecommunications

Telecommunications networks are privately owned, publicly regulated utilities that are driven by market forces more than statutory requirements. The principal system providers in Snohomish County are Verizon (telephone) and Comcast (cable TV). Major system components include switching gear and satellite receiving stations for signal processing. These may be characterized by small to medium sized buildings and receiving towers which may have some limited environmental effects on neighboring properties.

Potentially significant issues for telecommunications planning concern emerging technologies and their impact on facility networks, and the importance of the information highway in federal infrastructure planning and investment decisions. It is too early to tell exactly how these changing circumstances may affect local comprehensive planning.

GOAL UT 5 Enhance the efficiency and quality of utility service by coordinating facility planning among the various private utility purveyors serving Snohomish County.

Objective UT 5.A — Utilize existing transportation and utility corridors to accommodate necessary transmission system expansions.

UT Policy 5.A.1 The county shall promote, where feasible, the co-location of public and private utility distribution facilities in shared trenches, and coordinate construction timing to minimize disruptions and costs.

Objective UT 5.B — Facilitate utility system design practices that maximize user options and minimize the frequency and duration of service disruptions.

UT Policy 5.B.1 The county shall establish standards and regulations which permit the development of alternative energy and communications infrastructure.

Objective UT 5.C — Accommodate regional utility corridors and facilities through the siting process for essential public facilities.

Objective UT 5.D — Achieve and maintain consistency between private utility system expansion plans and planned land use patterns.

UT Policies 5.D.1 The county should identify future private utility facility and corridor locations on the maps for UGA plans and rural/resource lands.

5.D.2 The county shall maintain consistency between private utility system plans and the county's comprehensive plan.

5.D.3 The county should ensure that private utilities are located in compliance with the Shoreline Management Program.