

Chapter Five Utilities

Introduction

Utilities, as defined herein and for purposes of the plan, include all lines and facilities used to distribute, collect, transmit, or control electric power, natural gas, petroleum products, information (telecommunications), water, and sewage. Most utilities in Whatcom County are operated by special-purpose districts, private companies, or by cities. The County's responsibility for utilities provided by other agencies ranges from regulating land use to managing activities in public rights-of-way.

Electricity, natural gas, petroleum, and some other utilities treated herein are inherently regional and are regulated directly and indirectly at several levels, including by the Washington Utilities and Transportation Commission (WUTC) and the Federal Energy Regulatory Commission (FERC). At every level, changing regulations affect the way utilities will be managed through the planning period. Changes in the utility marketplace, together with new and varying utility needs, can be expected to affect the way other utilities are marketed, transmitted, and used.

Purpose

This section contains policies to guide Whatcom County in reviewing private utility development proposals and regional transmission proposals, and in reviewing and regulating utility services and facilities provided by other public agencies and the private sector. This section also provides a general framework for utility-specific comprehensive plans including those prepared by entities other than Whatcom County. The cities, Puget Sound Energy, Cascade Natural Gas, Public Utility District No. 1 (Whatcom PUD) and other special-purpose districts are encouraged to use the Whatcom County Comprehensive Plan in preparing their own plans and capital improvement programs.

It is the intent of this plan to support providers of electricity, natural gas, petroleum, telecommunications, and other utilities in fulfilling their public service obligations required by state law to provide service on demand to existing and future customers. It is also the intent of this plan to minimize any negative effects resulting from the provision of that service on the residents, infrastructure, and the environment of the county.

GMA Goals and Countywide Planning Policies

The goals, policies, and action plans in this chapter contribute to achieving several of the GMA planning goals, including those considering urban growth, reduction of sprawl, open space and recreation, and public facilities and services. The chapter has been written to satisfy those goals while also meeting the intent and requirements of the Countywide Planning Policies (CWPP) and general guidelines of Visioning Community Value Statements.

Although CWPPs do not address all utilities as a separate category, various types of utilities are addressed within a number of sections. Specifically, the policies encourage sharing of corridors for utilities, trails, and other transportation rights-of-way. The CWPPs also call for cities to develop plans, in cooperation with existing water purveyors and other municipal corporations providing water or sewer services, affording urban-level water and sewer services within their Urban Growth Areas (UGAs). The interlocal agreements specified in the policies must address reasonable criteria for annexation and ensure adequate services including water and sewer utilities. The CWPPs specify that cities will not extend water and sewer utilities without an adopted program for annexation and an adopted Capital Facilities Plan. Exceptions may be made in cases where human health is threatened. The CWPPs require that if water extensions are made, they must be consistent with the service area boundaries and other provisions of the *Coordinated Water System Plan*. Outside of Urban Growth Areas, cities and other public and private utilities may extend water only at rural levels of service. If rural levels of service are extended, availability of pipeline capacity to meet local supply needs shall not be used to justify development counter to countywide land development patterns and shall not be considered in conversions of agriculture land, forestry, or rural lands. These and other water quantity and quality issues covered in the CWPPs are addressed directly and supported in the goals, policies, and action plans of this chapter.

The Growth Management Act, in conjunction with CWPPs, clearly identifies the County in a decision-making role when it comes to utility provisions. This is implemented through the County's authority to set urban growth boundaries and can be specified through the Interlocal Agreements assigned in the CWPPs. It should be noted that the CWPPs are locally adopted and could be subject to change in the future.

GMA Requirements

The Growth Management Act mandates that counties required to plan under the act adopt comprehensive plans including "a utilities element consisting of the general location, proposed location, and capacity of all existing and proposed utilities, including, but not limited to, electrical lines, telecommunication lines, and natural gas lines." The utilities element will include maps illustrating existing and proposed facilities and define goals and policies concerning those facilities and future proposed locations for utility facilities and corridors. By future proposed locations, it is the interpretation of Whatcom County that "proposed" means projects that have been submitted to the appropriate Whatcom County agency seeking permits or approval. See **Map 5-1**, which shows existing and planned electrical facilities; **Map 5-2**, natural gas facilities; and **Map 5-3**, communications facilities.

This plan does not address all the issues regarding energy or energy policy. As required by GMA, this plan addresses only those issues that are considered utility issues of Whatcom County. Therefore, this document does not address coal, automotive-oriented, or other non-utility energy issues except with regard to transmission corridors.

Whatcom County is not a municipal purveyor of electric power or water. While this chapter addresses provision of electric power and other utilities by private and public purveyors, it does not address water supply other than as might be provided by Whatcom PUD or through other various water districts, associations, or private wells with one or more connections. Water supply and coordination affected by these organizations or parties is largely addressed in the *Whatcom County Coordinated Water System Plan (CWSP)*. Maps showing locations of water purveyors' pipelines and service areas, and locations of existing sewer system areas, are adopted as they presently exist or are modified.

Background Summary

Whatcom County is in a special situation due to its unique location between Canada and major utility users to the south. This creates a situation where utility services move through Whatcom County for their products to reach from the source to the destination. Whatcom County can be viewed as a gateway for utilities entering from Canada to reach demand elsewhere. This is especially true for natural gas, petroleum products, and electricity.

Utility services in Whatcom County are provided by a number of private and public utility operators. The main purveyor of electrical power within Whatcom County is Puget Sound Energy, but there are other providers as well, notably Whatcom PUD and the cities of Blaine and Sumas. Cascade Natural Gas provides natural gas for the county; however, there are locations throughout the county where natural gas is not available. Such locations have to rely on electricity, propane, or other means to meet their energy needs. Telecommunications are provided by multiple telephone, cable television, internet, and wireless communication companies. Water is obtained from private and public systems. Sewage treatment is primarily by septic system in the unincorporated areas of the County. There are areas of the County where consumers have the choice between multiple providers of the same utility service. Whatcom County supports free market competition for services, when such competition benefits the County consumers.

Whatcom County strongly encourages utilities to develop in a safe and rational manner based on the demand requirements of development consistent with the County Comprehensive Plan.

The 20-Year Capital Facilities Plan (Appendix E) provides additional information relating to water systems, sewer systems, and solid waste management.

Issues, Goals, and Policies

Locational Criteria for Siting Utilities

Countywide Planning Policies, open space, greenways, the environment, zoning, existing development patterns, urban growth areas, and other physical, political, business, economic, and geographical constraints, and plans will demarcate both the need for and the locations available for any new electric power and/or natural gas corridors. Electric power, communications and natural gas purveyors are part of regional systems that are demand-driven and are regulated at the State and, to

some degree, at the Federal levels. This chapter provides for general locations of utility facilities needed in the future. Precise locations will be determined in the future and will be evaluated through existing regulatory and review processes including conditional use and environmental review.

It is the County's preference that utility corridors must be located in areas of least impact to the public and environment as measured by proximity to populous and environmentally sensitive areas.

While it is in the best interest of Whatcom County citizens to plan for the location of utility services in future growth areas, every effort must be made to avoid undesirable effects of locating those facilities in areas where the health or safety of Whatcom County residents may be adversely affected, where the development is prohibitively expensive, or where environmental costs may be too high. Utility corridors shall be shared by compatible utilities when safely possible.

Goal 5A: Specify a clear process for determining appropriate locations for future needed utility facilities, including electric power facilities greater than 55 kV.

- Policy 5A-1: Use the existing conditional use, major project permit, and environmental review processes to evaluate and determine the suitability of proposed suitable locations for any new utility facilities above the distribution level during the planning period.
- Policy 5A-2: When expansion or improvements of utility systems are being considered, Whatcom County prefers the following in the order provided:
- upgrading of existing facilities in existing corridors;
 - replacing facilities in existing corridors where appropriate;
 - sharing existing corridors.
- Policy 5A-3: Encourage utility purveyors to consider underground installation of distribution facilities consistent with WUTC rates and tariffs.
- Policy 5A-4: To the extent that installation of utility facilities affects growth patterns, utility services should be located and designed appropriate to the land use designation..
- Policy 5A-5: Discourage siting utility facilities in known natural hazard areas unless public benefit outweighs the risk.
- Policy 5A-6: Ensure that utilities and power generating facilities are sited where they will not adversely impact the ecological regime needed for threatened and endangered species.

Trends in Utility Technology

Changing technology will affect the costs and types of utility services and systems available. Technologies can evolve very rapidly, particularly when breakthrough discoveries occur. It is likely that new technologies will emerge and existing technologies will evolve within the planning period.

Goal 5B: Support the development and use of new utility and information technologies.

- Policy 5B-1: Facilitate the use of new technologies by allowing flexibility in regulations and policies affecting utility facilities when it can be shown that a net benefit to the public is likely to result.
- Policy 5B-2: Support development and use of new technologies.
- Policy 5B-3: Recognize the economic opportunities and benefits communication services access provides to the community.
- Policy 5B-4: Support development regulations that are flexible and receptive to innovations and advances in communication technologies and that recognize the positive impact of moving information rather than people.
- Policy 5B-5: Work closely with major utility providers to enhance the County and private geographic information systems (GIS) databases.

Electric Power, Natural Gas, Petroleum, and Telecommunications

All Whatcom County residents should have access to utilities as defined in this section. The WUTC requires equitable availability and controls the price of electric power and natural gas services provided by investor-owned utilities. FERC does so for electric, natural gas and petroleum facilities crossing state lines. Additionally, the Energy Facility Site Evaluation Council (EFSEC), the Department of Labor and Industries (DLI), and the US Department of Energy (DOE) regulate utility siting and operations. Goals relating exclusively to natural gas and hazardous liquid lines are addressed separately.

Changes in the utilities marketplace will probably create a need for recognition of a variety of service needs and for new models of how energy is distributed, stored, and used. Regulations concerning provision of utility services to consumers should remain flexible and offer opportunities for review with respect to changes in utility industry dynamics dictated by market forces and regulations at the state and federal levels.

Goal 5C: Facilitate accessibility of utilities.

- Policy 5C-1: Support user access to natural gas, electric, and communications utilities.
- Policy 5C-2: Review the policies in this chapter as necessary in order to keep them current with market and regulatory changes.
- Policy 5C-3: Encourage the processing of utility permits concurrent with the processing of Major Development Permit and Planned Unit Development permit applications, when applicable.
- Policy 5C-4: Make use of advanced technology to assist government operations and enhance public accessibility.

- Policy 5C-5: Encourage regional planning of public facilities and utilities that will facilitate coordinated land-use management and capital facility construction.
- Policy 5C-6: Support capital facilities to correct existing deficiencies and to accommodate new growth in an efficient, cost effective, and timely fashion.
- Policy 5C-7: Public facilities and utilities will be designed and located in a manner that protects the integrity of planned land uses, existing land forms, drainage ways, natural systems, critical areas, and resource lands.
- Policy 5C-8: Extension of urban utility services shall be limited to areas designated for urban development.
- Policy 5C-9: Appropriately scale public utility systems to accommodate anticipated population growth.

Permitting Process Efficiency

Time required for permitting processes can increase development costs and can impede the timely provision of electric power and other utilities to residential, commercial, and business users. Any new utility installation requires precisely designed and selected components to complete and bring a facility on line. Careful planning is necessary to ensure the proper components are available as needed. Delays in obtaining permits can disrupt planning cycles and can result in utility services not being available when needed. Local permit processing should not interfere with or cause long delays for the provision of utilities to residents, industry, or business.

Goal 5D: Minimize the time required for processing utilities permits.

- Policy 5D-1: Maintain streamlined and simplified permitting processes relating to installation of utility facilities designed to serve existing or approved development.
- Policy 5D-2: Avoid duplication of criteria in permits.

Goal 5E: Reduce unnecessary obstacles to land use development applications.

- Policy 5E-1: County Planning and Development Services will notify and seek comment from utility operators concerning land use development applications adjacent to existing major utility facilities and will take comments received under advisement.
- Policy 5E2: Require evidence of compliance by the applicant with all relevant easement provisions as a condition of all discretionary and non-discretionary land use approvals.
- Policy 5E3: Utility companies shall provide notification of proposed projects to abutting landowners consistent with by County code.

Impediments to the Provision of Utilities

The ability of utility purveyors to meet the mandates of WUTC and FERC could be affected by all of the following: GMA regulations, goals, and policies; plat covenants, conditions, and restrictions; infrastructure requirements; zoning; Countywide Planning Policies; and environmentally sensitive areas.

Goal 5F: Identify and remove impediments to effective siting of necessary utility facilities.

Policy 5F-1: Periodically review existing regulations to identify and eliminate unintended or unreasonable constraints on the provision of necessary utilities as defined in this section.

Regulatory Controls Encouraging Energy Conservation

Conservation is considered a substantial contributor to regional and local energy supplies. Generally, there are two components of conservation: *regulatory issues* and *infrastructure*. Regulatory issues include the efficiencies created by zoning density, development standards, establishing minimum energy efficiency standards, and energy code enforcement. Infrastructure issues include existing utility facilities and privately owned equipment ranging from purveyor-owned hardware to consumer-owned appliances. While energy demand increases as a result of growth, conservation plays a large role in limiting the quantity of that new demand.

Goal 5G: Support cost-effective conservation as a significant supply factor and implement policies that promote energy conservation measures.

Policy 5G-1: Land use regulations shall be consistent with the conservation and other goals in this chapter.

Policy 5G-2: Encourage and support the use of conservation-based methods and technologies.

Policy 5G-3: Support energy conservation and energy efficiency in all proposed residential, commercial, and industrial projects by improving the energy efficiency of new construction and the existing building stock through building codes and practices, and support refurbishing and remodeling projects to include energy efficient components via expedited permitting and assistance.

Policy 5G-4: Facilitate and encourage conservation of resources, in order to delay the need for additional facilities for electrical energy and water resources, and to maintain adopted air quality standards.

Policy 5G-5: The County shall consider funding and promoting energy education services in order to inform citizens on energy conservation and the use of renewable energy sources.

Policy 5G-6: Consider use of renewable energy sources in County facilities. Improve energy efficiency in County facilities, vehicle fleets, and

equipment consistent with the measures identified in the Whatcom County Climate Protection and Energy Conservation Plan (2007).

Goal 5H: Support cost-effective renewable energy projects and implement policies that promote renewable energy projects.

Policy 5H-1: Land use regulations shall be consistent with the renewable energy and other goals in this chapter.

Policy 5H-2: Encourage and support the development of renewable energy projects and technologies, including pursuing renewable energy supply portfolios for the County from power suppliers as well as small local renewable energy projects such as anaerobic digesters and solar and wind energy, where applicable.

Policy 5H-3: Support renewable energy incentives to businesses and groups for comprehensive renewable energy efforts.

Policy 5H-4: Locate solar energy generation equipment on County facilities where cost/benefit analyses prove advantageous over the life cycle of the facilities.

Utility Corridors

Where feasible, multiple land uses in utility corridors should be encouraged. The potential for shared use of utility corridors should be realized to the greatest practical extent. While some corridor uses have proven incompatible, others work well. Some uses are clearly mutually exclusive, but others are unaffected, and in some cases enhanced, by proximity to other uses thereby serving multiple needs.

Questions have been raised concerning potential for long-term, adverse health effects associated with exposure to 60Hz electric and magnetic fields. Many studies have been conducted concerning those effects and many are in process; results are mixed.

Goal 5J: Facilitate maintenance and rehabilitation of existing utility systems and facilities and encourage use of existing utility corridors.

Policy 5J-1: Encourage utility providers to explore expanded and/or joint use of existing utility corridors before seeking sites for new rights-of-way.

Policy 5J-2: Promote, when reasonable and feasible, the co-location of new public and private utility distribution facilities in shared trenches/corridors, as well as coordination of construction timing.

Policy 5J-3: Allow for recreational use of utility corridors where practical.

Policy 5J-4: Encourage utility companies to notify impacted residents of vegetation control measures.

Goal 5K: Be responsive to new information on electric and magnetic field (EMF) research progress.

Policy 5K-1: As new information regarding EMF becomes available consider the need for new standards.

Policy 5K-2: Educate the public with regard to any new information concerning possible EMF health effects.

Goal 5L: Support direct and indirect economic benefits to Whatcom County originating with energy or utilities in general.

Policy 5L-1: Recognize economic benefits derived from coordination of utilities with established and projected residential, commercial, and industrial growth patterns in the County.

Policy 5L-2: Require a utility proponent to show how the proposal provides local or regional benefit.

Natural Gas and Hazardous Liquid Transmission Pipelines

Transmission of hazardous liquids and gases by pipeline is an efficient and convenient transportation mode for transporting these products. However, pipelines pose a risk of ruptures and uncontrolled leaks of products which are highly flammable, explosive, or toxic and therefore require careful consideration of pipeline siting, nearby land uses, and protection of pipelines from excavation damage.

The goals of Whatcom County regarding pipelines are: to protect the health, safety and welfare of County residents; to provide predictability for future pipeline siting; and to encourage communication and coordination with pipeline operators, landowners, and county, state and federal agencies.

The County is not able to control all issues regarding pipelines, as there are other agencies with jurisdictional authority (such as the Energy Facility Site Evaluation Council and the Federal Energy Regulatory Commission), as well as demand from areas outside of Whatcom County, which preclude the County from having the ultimate authority. Nonetheless, goals and policies for the County are appropriate and incorporated herein.

The following goals and policies shall apply to all natural gas and hazardous liquid transmission pipelines as defined by state and federal regulations. The goals and policies presented herein should be interpreted in conjunction with the general utility policies of this chapter where applicable, with priority and deference given to these policies which are specific to natural gas and hazardous liquid pipelines where they appear contradictory. *The Natural Gas and Hazardous Liquid Pipelines Background Report* contains more detailed information regarding pipelines and related issues. Map 5-2 indicates a notification area of 1,000 feet (500 feet from each side of the pipeline) for natural gas and hazardous liquid transmission pipelines, which may be of value to the public.

Goal 5M: Protect the citizens and the environment of Whatcom County through informational, educational, and regulatory measures.

- Policy 5M-1: Seek intervener status on all pipeline proposals which may not be within the County's regulatory authority, so as to preserve the County's legal right to retain a voice in the proposal. The County will review a pipeline proponent's application and file comments with the reviewing bodies according to the appropriate procedure and within the timelines provided. Staff shall engage in continual and ongoing communication with the regulatory authorities regarding the project as the need or occasion arises.
- Policy 5M-2: Carefully scrutinize new or updated franchise agreements. Review and evaluate model franchise agreements, if available, for provisions to be incorporated into negotiation discussions regarding proposed provisions in future franchise agreements. Consider the adoption of a franchise agreement ordinance for consistency and guidance if multiple new agreements are anticipated.
- Policy 5M-3: Provide information, education, and notification programs to alert the public of pipeline location and safety considerations when making land purchase or development decisions adjacent to transmission pipelines.
- Policy 5M-4: Require transmission pipeline operators to provide accurate 'as-built' pipeline maps as a condition of approval for any county development permit. In addition to scaled plan maps which shall be accurate to the parcel level, pipeline information (pipe size, allowable pressure, fuel type, etc.) shall also be required. Whatcom County's GIS staff is to provide update copies of all major pipeline routes to Whatcom County's Division of Emergency Management.
- Policy 5M-5: Require, early in the transmission pipeline permitting process, that the proponent provide funds to the County, adequate to cover the cost of an informational session which will be conducted by an independent third-party to be selected by the County on the topics of eminent domain and right-of-way acquisition. Pipeline proponents shall also be required to conduct "open house" and "town hall" style public meetings as a part of any land use development permit process for a new or major transmission pipeline expansion.
- Policy 5M-6: Require transmission pipeline proponents to notify all fire, water, and sewer districts and jurisdictions with urban growth areas where the siting of new pipelines crosses those service areas.
- Policy 5M-7: Monitor transmission pipeline construction to ensure pipelines are installed in accordance with all applicable critical area regulations.
- Policy 5M-8: Encourage the Office of Pipeline Safety to enact stronger safety measures for transmission pipelines, and to encourage pipeline applicants to voluntarily enact stronger safety measures than required by federal law.

- Policy 5M-9: Require land division and land use applicants to show transmission pipelines on application maps when any part of the property involved in the application is located within 500 feet of the centerline of the pipeline corridor.
- Policy 5M-10: Encourage communication between property owners and transmission pipeline operators to minimize the risk of inadvertent damage to transmission pipelines and to provide guidance to property owners about minimizing further risk through site design or construction. Require notification of transmission pipeline operators at the earliest possible stage of application review (at least concurrent with other land use application notifications).
- Policy 5M-11: Require protection of the pipeline corridor by prohibiting land disturbance and construction within defined rights-of-way except by express written consent from the pipeline operator.
- Policy 5M-12: Verify applicant's use one-call locator services in accordance with state law prior to issuing any land disturbance or construction permits abutting pipeline rights-of-way, and require physical protection of the pipeline corridor during construction.
- Policy 5M-13: Encourage ongoing coordination and communication between pipeline operators and the emergency response community including the Local Emergency Planning Committee, Health Department, Fire Districts, and Sherriff Department to promote education, awareness, emergency response and evacuation planning with regard to the environmental and health impacts of potential spills or leaks. Require pipeline operators to share detailed specifications about their pipelines and products with the emergency response community to facilitate better emergency preparedness.

Goal 5N: Develop locational siting criteria specific to special conditions regarding transmission and large distribution pipelines.

- Policy 5N-1: Use GIS-based siting criteria for evaluating transmission pipelines consistent with the policies for transmission pipelines and the recommendations in the *Natural Gas and Hazardous Liquid Pipeline Background Report*.
- Policy 5N-2: Encourage transmission pipelines to locate adjacent to established corridors where possible. Require applicant justification for proposed deviations.
- Policy 5N-3: Transmission pipelines are inappropriate and discouraged in urban growth areas and areas of intense rural development.
- Policy 5N-4: No transmission pipeline facilities should be constructed or located in critical areas without fully mitigating the project impact.

- Policy 5N-5: Designated agricultural and forestry lands are preferred locations for transmission pipelines, provided special attention is paid to facilitating and not impeding agricultural drainage.
- Policy 5N-6: Restrict the location of transmission pipelines in high-risk landslide areas where evidence of instability could be ascertained by recent events or verifiable geological conditions.
- Policy 5N-7: Prohibit new land uses with high on-site populations that are difficult to evacuate or new essential public facilities from being located nearer than 500 feet from the centerline of a transmission pipeline.
- Policy 5N-8: Require expanded land uses and facilities located nearer than 500 feet from the centerline of a transmission pipeline to not increase the level of risk from a pipeline failure and use site design, building, technological, and/or operational techniques to reduce or minimize risk.
- Policy 5N-9: To allow continued use of property, especially agriculture, pipelines must be installed and maintained deep enough and in a manner that maximizes the ongoing use of the land consistent with the zoning in place at the time the pipeline was approved.

Water Supply

Whatcom County residents obtain domestic water from public and private water systems. For the purpose of this discussion, the term "public" refers to the State Department of Health (Health) definition, and not to ownership of the system. This distinction is important and can often be confusing. Public systems, as defined by the State Health Department, must comply with specific regulations designed to protect the health of people using the supply. Private systems do not have to meet these same requirements. However, the County Council, acting as the Board of Health, adopted the Whatcom County Drinking Water Ordinance in 2002, which established standards for private water systems used for new development. This ordinance includes siting criteria, such as setbacks from septic tanks, and initial water quality sampling requirements. It does not impose on-going water quality monitoring on private water systems.

The complete definition of a public water system is found in WAC 246-290 and WAC 246-291. In general, State Health regulations define a public water system as all systems *except* those serving only one single family residence or a system with four or fewer connections all of which serve residences on the same farm. However, the regulations do allow systems with only two connections to be exempted from State Health rules at the discretion of local/State Health. Whatcom County has taken advantage of this allowance and, in certain circumstances, does not require residential systems with two services to meet public systems requirements. However, these two-party wells that are exempt from state rules must still comply with the County's Drinking Water Ordinance.

Over 80 percent of Whatcom County residents obtain potable water from a municipality or public water system. The rest obtain their drinking water from

private water supplies including wells, surface water, and rainwater catchment.. Water is critical to Whatcom County agriculture; irrigation is necessary for all high-value crops. Livestock must be watered year round, and dairy equipment and facility cleanup also go on all year. Some industries are also large-scale water users, and they may need both potable and non-potable water.

Four major water systems, Whatcom County PUD #1, City of Bellingham, Lake Whatcom Water and Sewer District and City of Lynden, draw surface water from the Nooksack River and Lake Whatcom. Most of the rest rely on groundwater as their source. This is not as distinct a difference as it seems, since Whatcom County water resources are an interconnected system. Water supply for public water systems in the county is identified in the *Coordinated Water System Plan*. The current Whatcom County Coordinated Water System Plan (CWSP) coordinates the plans of the county's public water purveyors (e.g., forecasting demand, identifying supplies and service areas) with the objective of ensuring the County has an adequate supply of potable water to serve planned domestic, commercial, and industrial uses, provided by public water systems. The CWSP must be consistent with this Comprehensive Plan, including land use designations, permitted densities, and related growth management policies, including identifying sufficient water supplies to accommodate projected growth for the next 20 years.

The largest purveyor in the county is the City of Bellingham. Bellingham directly supplies water to about 76,000 people, relying primarily on water from Lake Whatcom and the Middle Fork of the Nooksack River via a diversion pipeline. However, Bellingham also sells water to Water District 2, Water District 7, Water District 10 and the Lummi Water & Sewer District. If water sold to these districts were included, Bellingham provides water to approximately 88,000 people. The City also has the largest collection of water rights of all purveyors in the county. This large water right portfolio could enable it to continue its role as a major purveyor in the future.

The Public Utility District No. 1 (PUD), which obtains water from the Nooksack River, has the second largest collection of rights in the county. The PUD is a public water utility authorized under RCW Chapter 54 which provides retail service within its designated service boundary and has the potential to provide wholesale water on a county-wide basis. The PUD currently provides both direct retail and wholesale water supplies to customers within the county. The PUD holds water rights for municipal water supply purposes – including residential, commercial, industrial, and agricultural use. Pursuant to state law, the PUD develops and provides water supply within its service area in accordance with authoritative demand and/or population projections.

The PUD will consider petitions for service or assistance from all areas in Whatcom County which are not presently claimed by cities, water districts, or other purveyors operating within the county. The level of service to be provided to PUD customers requesting service or new supply will be consistent with their water rights and relevant capital facility and/or land use plans and policies in existence at the time of service extension.

Regardless of size, public or private, many water purveyors in Whatcom County face common challenges in meeting existing and future demands. Water quality concerns which have been identified include nitrates, arsenic, bacteria, iron/manganese, sea water intrusion, and pesticides/VOCs. Quantity concerns include legal limitations on supplies and questions regarding actual amounts and depletion of water. Regulatory requirements under the Safe Drinking Water Act, for example, further challenge the ability of purveyors to meet new demands.

Meeting existing and future water demands throughout the county will require careful integration of land use and water resource planning. The County's strategy to meet existing and future water demands throughout the county include:

- Periodically updating the Coordinated Water System Plan to identify future supply, demand, and delivery requirements for the public water systems that supply the majority of potable water supplies in the County;
- Implementing the WRIA 1 Management Project's 2005 WRIA 1 Watershed Management Plan, the 2007 WRIA 1 Detailed Implementation Strategy, and the 2010 Lower Nooksack Strategy, including pursuing water rights negotiations, developing a groundwater model to better understand groundwater supply potential and continuity with surface waters, and identifying future non-public water system needs such as agriculture and private well owners;
- Adhering to the various protection and management strategies discussed in *Chapter Eleven: Environment, Water Resource Section*;
- Incorporating the updated comprehensive water plans developed by water purveyors; and
- Implementing the Capital Facilities Plans and Interlocal Agreements developed by the cities and County under the *Growth Management Act to facilitate delivery of water to urban growth areas*.

Although the various tools noted above will assist in helping to meet water demands, there is work to be done in both completing the specific elements and ensuring their consistency with each other.

With so many uncertainties and so few clear answers, caution is necessary in making water-related decisions. It is likely that much dialogue, coordination, and clear understanding will be necessary to work through a myriad of water-related issues and decisions. Changing priorities, organization, and regulations at state and federal levels make comprehensive decision-making yet more arduous. County staff and elected officials must participate in all processes aimed at quantifying, regulating, or managing water in any way to protect the best interests of our citizens. Specifically, the WRIA 1 Watershed Management Plan, WRIA 1 Detailed Implementation Plan, and Lower Nooksack Strategy were developed to address issues of water quantity, water quality, fish habitat, and in-stream flows. Additionally, Whatcom County created the Water Resources Division of the Public Works Department in 1999 to address water issues.

Water rights are a significant issue in planning for adequate facilities. Treaty rights with the tribes, minimum instream flows for adequate protection of fish, and use and protection pursuant to state water laws all affect the issuance of new water rights. The County will review plans periodically to ensure consistency with the growth and population projections of this plan, and changes in the availability of water or permits that may affect the ability to serve.

Because of concerns about water supply and requirements of state law, development will be contingent on providing evidence of adequate water supplies.

Goal 5P: Resolve county water issues through proactive participation in processes leading to a solution of water-related conflicts.

Policy 5P-1: Plan for interlocal agreements with other agencies to manage failing water associations that fall into receivership.

Policy 5P-2: Encourage and actively participate in forums, workshops, and other water-related planning activities.

Policy 5P-3: Discourage extension of urban levels of water service to areas not designated as urban growth areas or Rural Communities, except in those limited circumstances shown to be necessary to protect basic public health and safety and the environment and when such services are financially supportable at rural densities and do not permit urban development.

Policy 5P-4: The County should periodically examine its role as a potential purveyor of water and sewer service in order to determine if increased involvement may be needed to help solve some of the utility problems in the county.

Policy 5P-5: Investigate the opportunity for multiple solutions to other issues such as flood management when looking towards acquiring additional water supplies and rights.

Policy 5P-6: Evaluate and, where feasible, support alternative supplies of water such as desalinization, re-use of treated wastewater, and storage of floodwater. Investigate reservoir holding ponds that take advantage of floodwater when needed for beneficial uses such as fisheries, agriculture, domestic and industrial water supplies.

Goal 5Q: Work with water purveyors to provide service to all existing and designated urban growth or industrial areas.

Policy 5Q-1: Work with the appropriate jurisdictions to ensure adequate water rights and supplies to the Urban Growth Areas and designated industrial areas in northwest Whatcom County. Consider all options, including but not limited to, extension of water service areas, conjunctive management of surface and groundwater, artificial storage and recovery and reclamation of wastewater.

Policy 5Q-2: Ensure provision of urban levels of water service to urban growth within areas designated for urban growth.

- Policy 5Q-3: Periodically review Urban Growth Areas to ensure adequate water supplies.
- Policy 5Q-4: Encourage annexation of areas zoned for urban densities concurrent with extension of urban level services.
- Policy 5Q-5: The County should work closely with purveyors and the State Department of Health in the development and review of Comprehensive Water Plans to ensure consistency with land use and urban growth area needs.
- Policy 5Q-6: The County will work with the Department of Ecology, City of Bellingham, the Port of Bellingham, the PUD, and local, regional, and state economic development agencies to ensure an adequate water supply to areas planned for industrial development.
- Goal 5R: Ensure that potable water supplies required to serve development are available at the time the development is available for occupancy and use.**
- Policy 5R-1: Building permit applicants, new subdivisions, short plats, and binding site plans will be required to provide evidence that adequate and legal (in consultation with the Department of Ecology) supplies of water are available prior to their approval by the County.
- Policy 5R-2: Work with purveyors to assist them in modifying their systems, as required, to support the land use element of the comprehensive plan.

Sewage Treatment

Whatcom County does not currently own, operate, or maintain a sewage treatment facility or associated pumping stations or pipelines. Sewage treatment in the unincorporated county is primarily by septic system. While adequately designed and installed on-site septic systems can be appropriate for rural-level development, maintenance of such systems varies from excellent to none-at-all. Poorly maintained septic systems are a source of ground and surface water pollution and have been identified at both the state and the local level as significant contributors to high nitrate levels in soil and coliform bacteria in surface water. Some systems can be in a failure mode for years before being noticed. "Package" sewage treatment systems and multiple-user septic systems may be a desirable alternative to the single-user, on-site system. Larger sewage treatment facilities are more appropriate for urban levels of growth. Whatever type of system is used, adequate maintenance is the best deterrent to system failure and to pollution of ground and surface water.

Goal 5S: Reduce the incidence of on-site sewage treatment system failure through system management and enforcement of standards.

- Policy 5S-1: Support state on-site sewage system regulations (WAC 246-272) which requires that local health departments implement a program ensuring proper maintenance and operation for all on-site systems.

- Policy 5S-2: The maintenance and operation program should be phased in beginning with high priority areas designated by the County Council. In implementing this policy, Lake Whatcom and Drayton Harbor are high priority areas.
- Policy 5S-3: The development and implementation of the maintenance and operation program should consider use of the private sector where possible.
- Goal 5T: Support development of new sewage treatment facilities, including new pipelines and extensions of existing pipelines, to areas designated for urban-level growth.**
- Policy 5T-1: Discourage extension of sewer lines in areas not designated as urban growth areas or Rural Communities, except in those limited circumstances shown to be necessary to protect basic public health and safety and the environment and when such services are financially supportable at rural densities and do not permit urban development.
- Policy 5T-2: For those areas designated as Rural Communities and wishing to infill, work with the communities to create sewer and water districts as necessary to manage both utilities. Public water and sewer service shall be limited to areas where existing lot sizes and development patterns make public water and sewer appropriate and shall not be extended outside of the Rural Community.
- Policy 5T-3: Assist sewer and water districts in environmental review and mitigation and in preparing grant applications to obtain package sewer services that can be developed in a phased and cost-effective manner to serve designated Rural Communities.
- Policy 5T-4: Support the development of new technology and alternative sewage disposal methods as an alternative to expensive sanitary sewer systems to assure groundwater quality is maintained.

Solid Waste Management

State law (RCW 70.95.010) requires counties to plan an integrated solid waste management system that emphasizes waste reduction and recycling. Management of solid waste that cannot be recycled can be incinerated or placed in a landfill. Whatcom County Health Department is the lead planning agency for solid waste planning in the County as of January 1, 2015, taking on the responsibility formerly with the Public Works Department. The County prepared a Comprehensive Solid and Hazardous Waste Management Plan in 2008 and began the process of updating the plan in 2014. That plan has been prepared to meet the requirements of RCW 70.95.

Private collection, processing, and disposal services managed in accordance with the provisions of county ordinances and city contracts constitute Whatcom County's solid waste management system. Adopted Disposal and Collection Districts, and a

Service Level Ordinance serve as the foundation for county waste management. The Lummi and Nooksack Reservations and the Newhalem area are not included in the County's waste management plan.

Generally, County waste management system priorities are met by waste prevention, recycling and source-separated composting, market development to increase local use of recyclables, collection, transfer, export, and land-filling.

The county includes several waste-prevention programs as part of its highest waste management priority, including waste reduction and re-use, education, legislation, and governmental waste-prevention activities. Education is directed at school-age children through in-school programs; at shoppers; and at the general public through awareness programs, videos, demonstration sites, and awards programs.

Whatcom County and the City of Bellingham jointly provide a hazardous waste management program including education, technical assistance, and operation of a moderate risk waste (MRW) facility. The MRW facility receives household hazardous waste and small quantities of commercial hazardous waste and prepares the waste for off-site treatment.

Goal 5U: Support waste prevention for both solid waste and hazardous waste as a primary focus prior to waste management.

Policy 5U-1: Support solid waste source reduction activities including conservation education programs, source reduction programs for county agencies, a waste exchange and materials re-use clearinghouse, and home composting and other activities related to yard debris.

Goal 5V: The County's waste diversion goal is to reach 50 percent source-separated recycling, with additional diversion potentially available through waste processing of non-source-separated recyclables.

Goal 5W: Make safe, effective, economical, and environmentally sound techniques for solid and hazardous waste disposal available using existing and future technologies.

Policy 5W-1: Support best management practices for disposal of household, commercial, and industrial solid and hazardous wastes.

Policy 5W-2: Maintain and enforce standards for disposal of bio-solids, including management of the amount of heavy metals and other pollutants and management of impacts to sensitive areas.

Stormwater Management

Stormwater management is treated in *Chapter 10: Environment* and is not included in this Utilities Chapter.