

Chapter Five UTILITIES

INTRODUCTION

Utilities, as defined here 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 and private companies, or are extended by cities. The county's responsibility for utilities provided by other agencies ranges from regulating their use of land to managing their activities in public rights-of-way.

Electric power, natural gas, petroleum, and some other utilities treated herein are inherently regional and are regulated directly and indirectly at several levels, including the Washington Utilities and Transportation Commission (WUTC) and the Federal Energy Regulatory Commission (FERC). Changing regulations at every level 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, 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 electric power, natural gas, petroleum, telecommunications, and other providers 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.

Process

In March 1991, a Utilities Planning and Advisory Committee (UPAC) was formed in response to the requirements of GMA to address utility issues with the exception of water, sewer, and solid waste issues. The committee was comprised of representatives from electric power purveyors, Cascade Natural Gas, Whatcom PUD, Whatcom County Planning Division, City of Bellingham, the small cities, and citizen groups. A list of UPAC members and their represented groups is located at the beginning of this plan.

Unlike most other GMA committees, members were not appointed by the County Executive; instead they are appointed by the County Council. The committee is comprised of a mix of utility-industry professionals and private citizens who have conscientiously attended meetings whenever called. The first meeting of the UPAC was in April 1991. The committee met monthly for approximately one and one-half years, then directed county staff to prepare a draft utility chapter

for the GMA comprehensive plan. Since then, the UPAC members have met when called together for review of subsequent drafts of the chapter, and have been consulted individually on industry-specific issues and questions. Regulations imposed at the state and federal levels and their impact on local jurisdictions' ability to plan were, perhaps, the most difficult issues the committee had to deal with. Of recent note, UPAC was reconvened in 2000 from a request by County Council to look at transmission pipeline siting issues, and has been actively involved in the 2002 update to the utility chapter.

The coordination requirements of the GMA were complied with in the process of producing this chapter. Many of the main purveyors of utilities as defined in this chapter contributed to the process by providing information and sample plans and by participation in the process itself.

Documents submitted by Cascade Natural Gas, Puget Sound Energy, (formerly Puget Sound Power & Light), and Qwest (formerly US West) as models for this chapter were used in preparing this document; these and other references consulted are listed in the bibliography for this chapter. The *Draft GMA Electrical Facilities Plan*, Puget Sound Power & Light Company Inc., September 1992, and the *Natural Gas and Hazardous Liquid Pipeline Background Report*, October 2001, were particularly useful.

GMA Goals, County-Wide Planning Policies, and Visioning Community Value Statements

The goals, policies, and action plans in this chapter contribute to achievement of 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 County-Wide Planning Policies (CWPP) and general guidelines of Visioning Community Value Statements.

Although CWPPs do not address all utilities as defined in this chapter 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. Within Urban Growth Areas this will comply with what has been adopted. 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 county-wide 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, as presently adopted, clearly identify the County in a decision-making role when it comes to utility provisions. This is implemented through the County's power to set urban growth boundaries granted by the Growth Management Act 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.

Visioning Community Value Statements do not directly or indirectly address or identify the importance of utilities of any kind. Growth Management Goals and County-Wide Planning Policies will be served by adoption of this chapter and implementation of its goals, policies, and action plans.

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 11**, which shows existing and planned electrical facilities; **Map 12**, natural gas facilities; and **Map 13**, 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 of the comprehensive plan does thoroughly address provision of electric power and other utilities by private and public purveyors, the chapter 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 pipelines and service areas of water purveyors 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 users of utility services to the south. This creates a situation where utility services move through Whatcom County for the product 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 carriers (telephone), AT&T Broadband (cable television), and a number of 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.

ISSUES, GOALS, AND POLICIES

Locational Criteria for Siting Utilities

County-Wide Planning Policies, the Visioning Process, open space, greenways, the environment, zoning, existing development patterns, Growth Management urban growth areas, and other physical, political, business, economic, and geographical constraints 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 of Whatcom County as measured by proximity to populous and environmentally sensitive areas.

While it is in the best interest of the citizens of Whatcom County to plan for 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:

- (i) upgrading of existing facilities in existing corridors;
- (ii) replacing facilities in existing corridors where appropriate;
- (iii) 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 reflect designated growth areas.

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 flow regime needed for fish, including threatened and endangered fish 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. Fiber optics are a good example; it is generally accepted that fiber optics technology is changing the way we communicate, and is doing so rapidly and in a widespread manner. It is likely that new technologies will emerge and existing technologies will evolve within this planning period.

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

Policy 5B-1: Facilitate the use of future 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 technology 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) data bases.

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: Include utility permits in processing of Major Development Permit and Planned Unit Development permit applications.
- 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 which 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 which 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 will be carefully staged in order to discourage new development in areas that are premature in terms of planning, timing and funding.
- Policy 5C-9: Extension of urban governmental services and utilities will be confined to areas planned for urban development and be consistent with the optimal land use and urban growth area plan.
- Policy 5C-10: Public utility systems will be appropriately scaled 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: Streamline and simplify permitting processes relating to installation of utility facilities designed to serve existing or approved development.
- Policy 5D-2: Eliminate 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.

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 (how much? where?); County-Wide Planning Policies; Visioning Community Value Statement scenarios; 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: Review and revise existing and proposed regulations for consistency with conservation and the 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.
- 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 achieve improved air quality.

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

Policy 5H-1: Review and revise existing and proposed regulations for consistency with renewable energy and the other goals in this chapter.

Policy 5H-2: Encourage and support the development of renewable energy projects and technologies.

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

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: Require 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 essential transportation mode for transporting these products. While pipelines offer an efficient and convenient method of transport, potential for ruptures and uncontrolled leaks of products which are highly flammable, explosive, or toxic requires careful consideration of pipeline siting and protection of pipelines from third party damage.

The goals of Whatcom County regarding pipelines are: to provide safety for County residents and to provide predictability for future pipeline siting.

The County is not able to control all issues regarding pipelines, as there are other agencies with jurisdictional authority (such as EFSEC and FERC), 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. This shall include pipelines which operate at a hoop stress of twenty percent or more of the specified minimum yield strength or as may be amended hereafter by federal regulations. Such a pipeline would by federal, state, and local definition be classified as a transmission line. 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 and is adopted by reference. The Utilities Committee concluded notification was the most appropriate method to meet the County's goals, as opposed to imposing setbacks or other restrictions which would limit landowners use of land on the remote possibility an event would occur. Map 12 indicates a notification area of 1320 feet (660 feet from each side from 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 intervenor 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 materials 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 update 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.

- Policy 5M-3: Develop 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 provided. Whatcom County's GIS department 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 "townhall" style public meetings as a part of County land use development permit for a new or major transmission pipeline expansion.
- Policy 5M-6: Require transmission pipeline proponents to notify all fire districts, 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 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 in Whatcom County.
- GOAL 5N: Develop locational siting criteria specific to special conditions regarding transmission and large distribution pipelines.**
- Policy 5N-1: Utilize a GIS-based siting criteria for evaluating transmission pipelines which is consistent with comprehensive plan policies for transmission pipelines and the recommendation in the *Natural Gas and Hazardous Liquid Pipeline Background Report*.
- Policy 5N-2: Encourage transmission pipelines to follow adjacent to established corridors where possible. Require applicant justification for proposed deviations.
- Policy 5N-3: Transmission pipeline are discouraged in urban growth areas, small towns, crossroads commercial, and other areas of intense rural development which would render such pipeline siting inappropriate.

- 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 in the Comprehensive Plan are preferred locations for transmission pipelines.
- 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: For natural gas transmission pipelines, encourage siting of critical facilities and high occupancy facilities pursuant to the regulations of WAC 480-93-020, and 480-93-030 (not closer than 500' from a 500 psi pressure or greater pipeline, not closer than 100' from a pipeline with a pressure between 250 and 499 psi) and as hereafter amended.

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 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 land 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 can be referenced in WAC 246-290 and WAC 246-291. In general, Health regulations define a public water system as all systems *except* those serving only one single family residence and 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.

As of 1998, 29,196 people (almost 20% of the county's population) were served by individual wells. Additionally, 128,304 people (over 80% of the population) were served by public drinking water systems (Whatcom County Coordinated Water System Plan, Feb. 2000, p. 3-6).

Most county residents obtain water from a municipality or district. There are, however, many people who obtain water from one of the over 350 smaller, privately owned public water systems.

The largest purveyor in the county is the City of Bellingham. Bellingham directly supplies water to about 76,000 people, relying 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 could enable

it to continue its role as a major purveyor in the future. Bellingham has indicated concerns about stormwater in the Geneva area and the County fully supports creation of a stormwater district, even in the absence of annexation.

The Public Utility District No.1 (PUD), which obtains water from the Nooksack River, has the second largest collection of right 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 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. New 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 planning and a mesh of land use/zoning with supply availability. Some of the planning tools which exist to help accomplish this, include:

- the Water Resource Inventory Area (WRIA) 1 Watershed Management Project, including the WRIA 1 Watershed Management Plan (due in 2003) and the computer-based Decision Support System model that can aid in evaluating different scenarios associated with water quantity, water quality, fish habitat and in-stream flow conditions;
- the various protection and management strategies discussed in the *Chapter Eleven: Environment, Water Resource Section*;
- comprehensive water plans that have been developed by some of the water purveyors;
- the Capital Facilities Plans and Interlocal Agreements developed by the Cities and County under the *Growth Management Act*;
- the use of short term planning area boundaries within urban growth areas; and
- the *Coordinated Water System Plan*.

The *Coordinated Water System Plan* was completed in February 2000 and was adopted by the State Department of Health in August 2000. The plan, written by some of the local water purveyors, agencies and others, was intended to help ensure more efficient planning for water supplies throughout the county. It identifies recommendations and requirements related to

system design and planning, joint facilities and interties, system service areas, satellite system management, conservation, and general resource management.

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 controlling water in any way to protect the best interests of the citizens of Whatcom County. Specifically, the WRIA 1 Watershed Management Project has been initiated 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.

This plan is based on the assumption that agriculture is important to the County as identified in the Visioning Process and that water will be available to serve the agricultural community. The plan also assumes that adequate water will be available to serve the proposed Urban Growth Areas. It is recognized that certain actions are needed to ensure supplies to those areas. These actions will be pursued and the Urban Growth Areas will be revisited as part of the seven year review process to determine if the boundaries are consistent with water availability.

Identified urban growth areas are served by public water either within an approved water service area or logical service boundary. Where gaps or shortfalls exist in planning or capital facilities, the County will use short term planning area boundaries to assure adequate levels of urban services. Water rights are always an 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 ability of purveyors to meet service objectives. It is not the intent of the County to second guess a projection in an approved or pending plan. 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 which 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 pro-active participation in processes leading to solution of water-related conflicts including the WRIA 1 Watershed Management Project.

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

Policy 5P-2: Encourage and participate actively 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, industrial areas (including the Gateway

Industrial Transportation Corridor), Small Towns or Resort/Recreational Subdivisions.

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/rights.

GOAL 5Q: Work with Whatcom County PUD and other water purveyors to provide service to all existing and designated urban growth or industrial areas.

Policy 5Q-1: Work with the PUD, Birch Bay Water and Sewer District, Blaine, Ferndale, Ecology, and other jurisdictions as appropriate, to ensure adequate water supplies to the Urban Growth Area and designated industrial areas in northwest Whatcom County. Consider all options, including but not limited to, extending a water transmission pipeline from Ferndale to the District, to convey water from the PUD's and /or Ferndale's water rights, 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: Review Urban Growth Areas at least every seven years to ensure appropriate actions have occurred to provide 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: Where necessary, to protect public health or the environment, utility extensions may be made.

Policy 5Q-7: The County will work with 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 supplies of water are available prior to their approval by the County.

Policy 5R-2: Work with purveyors to assist them in modifying their system 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, Small Towns, Resort/Recreational Subdivisions, or the Gateway Industrial Transportation Corridor, unless there are serious public health or environmental concerns.

Policy 5T-2: For those areas designated for inclusion as a Small Town or Resort/Recreational Subdivision 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 boundaries of the Small Town or Resort/Recreational Subdivision.

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 Small Towns,

Resort/Recreational Subdivisions, and industrial areas (including the Gateway Industrial Transportation Corridor).

Policy 5T-4: Support the development of new technology and alternative sewage disposal methods as an alternative to expensive sanitary sewer systems to assure ground water quality is maintained.

Solid Waste Management

Whatcom County is responsible for managing solid waste generated by any activities in the county. Over 44% of the county's solid waste stream is recycled through public and private efforts. Two privately operated facilities process unseparated county solid waste. This product will then be delivered to a private landfill located outside Whatcom County. Local landfill options are limited to construction waste and demolition debris at a private site on Hemmi Road. No solid waste is deposited at the county-owned Cedarville landfill site which was closed in 1990. A private organization leases a portion of the Cedarville site for a solid waste drop box location for "self-haulers." There are three other drop-box locations in the county; Birch Bay, Point Roberts, and Lynden drop boxes are privately operated (two of these drop-boxes, at Birch Bay and Point Roberts, are on land leased to the operators by Whatcom County). The county will continue to use a private waste disposal system within the GMA planning period assuming no unforeseen and/or uncontrollable circumstances.

All solid-waste-management background information, goals, policies, and action plans in this chapter have been extracted directly, or interpreted from, the *Whatcom County Comprehensive Solid Waste Management Plan*, 1999. 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 recycle-ables, 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 re-use or transport to a hazardous waste landfill in Oregon. The County and City also jointly maintain a clean green yard waste facility open to all County residents.

GOAL 5U: Support waste prevention for both solid and hazardous substances 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: Using existing and future technologies, make available safe, effective, economical, and environmentally sound techniques for solid and hazardous waste disposal.**
- Policy 5W-1: Support best-management practices for disposal of household, commercial, and industrial solid and hazardous wastes.
- Policy 5W-2: Establish 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 11: Environment* and is not included in this Utilities Chapter.

UTILITIES - ACTION PLAN**Conservation**

1. Provide a mechanism for the county and utility providers to cooperatively support education programs for both citizens and government officials on conservation issues, and promote awareness regarding location of all types of utility facilities.
2. Support conservation efforts within county government.
3. Directly support communities to work with utility providers in promoting utility conservation.
4. Work with state utility regulators to facilitate energy conservation efforts.
5. Review and enforce existing energy codes.
6. Work with utility purveyors to define ways for conservation to positively influence Whatcom County's economic development through specific conservation efforts and economic savings obtained through conservation.
7. Adopt land-use implementation strategies such as development standards and incentives, and investigate multiple problem solving aimed at conserving water and energy.
8. Adopt conservation standards for new construction.

Alternative Energy Sources

9. Adopt solar access ordinances such as solar orientation and solar design standards.
10. Adopt ordinances enabling and facilitating alternative sources of energy.

Permitting Process

11. Expedite utility-oriented permitting processes.

Utility Facilities

12. Establish screening and landscaping standards for utility facilities.
13. Direct growth and appropriate utility facilities to designated urban growth areas.
14. Map existing and proposed utility corridors and establish appropriate notification zone for each type of corridor. Notify applicants for development permits of proximity to utility corridors.

Task Forces

15. Direct the county Health Department to do the following concerning EMF:
 - monitor research;
 - plan and accomplish public education concerning EMF; and

- review regulations and policy.

Education and Information

16. Develop and implement a notice to use the “one-call” system place conspicuously on County land use development permits requiring excavation. Provide “one-call” brochure to applicant with permit materials.
17. Design an educational program and handouts which explain the importance of using the “one-call” system.
18. Enhance the County’s permitting system by developing a standard procedure to provide copies of project plans to utility companies for opportunity to review and comments.
19. Educate the public with regard to landowner rights that are applicable to utilities, including information about eminent domain.

Transmission Pipelines

20. Develop GIS data linked to county permitting system to allow, at a minimum, for permits requiring excavation within 100 feet of a pipeline are to be flagged. The permit applicant can be informed to the existence of the pipeline with a notice place conspicuously on the permit and “one-call’ materials are to be included with permits.
21. Apply GIS-based siting criteria for evaluating pipelines to any and all future pipeline proposals.

Water Supply

22. Encourage implementation of the Coordinated Water System Plan.
23. Develop interlocal agreements with local surface and groundwater management agencies to ensure adequate water supplies in urban areas.
24. Establish an interlocal agreement with Whatcom County PUD, Water District 10, and other interested Satellite System Management Agency (SSMA) candidates, consistent with the recommendation from the CWSP, to manage failing water associations that fall into receivership.
25. Actively participate in all appropriate water-related meetings, forums, and coalitions.
26. Evaluate and, where feasible, support alternative supplies of water such as desalinization, re-use of treated wastewater, and storage of flood water. Investigate reservoir holding ponds that take advantage of flood water when needed for beneficial uses such as fisheries, agriculture, domestic and industrial water supplies.
27. Review urban growth areas every seven years to ensure adequate water supplies are available and revise boundaries accordingly.
28. The county shall review new residential projects requiring land use or construction permit approval for the availability of an adequate water supply.

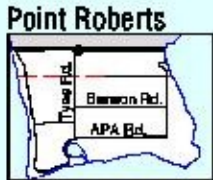
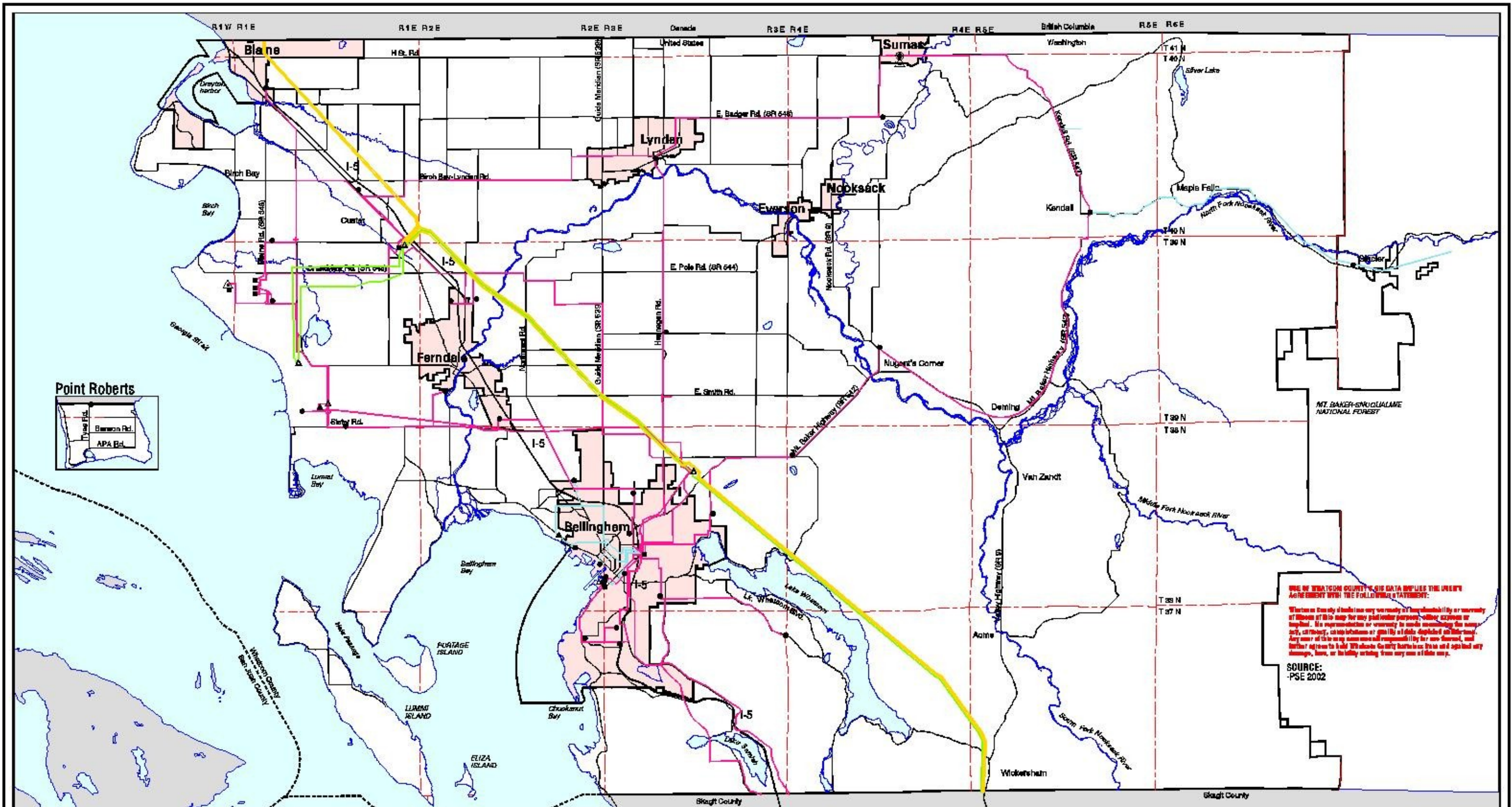
29. The county shall notify purveyors of potential inconsistencies between their water system plans and the comprehensive plan, and shall work with them to find acceptable solutions.
30. The county shall work with rural water system operators to achieve level of service and construction standards for rural systems that are consistent with rural densities and service expectations.

Sewage Treatment

31. Establish a maintenance management program for all new and existing septic treatment systems.
32. Require no-protest agreements from all developers for sewer service LIDs.

Solid Waste Management

33. Monitor changes in technology and in the marketplace that could change the economics of solid waste management and waste-to-energy projects.
34. Implement the recommendations of the *Whatcom County 1999 Comprehensive Solid Waste Management Plan*.



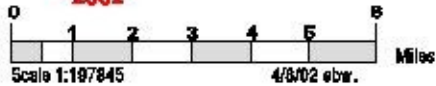
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SOURCE: PSE 2002



Whatcom County Comprehensive Plan



Legend

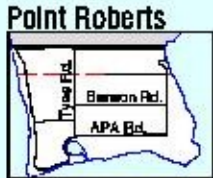
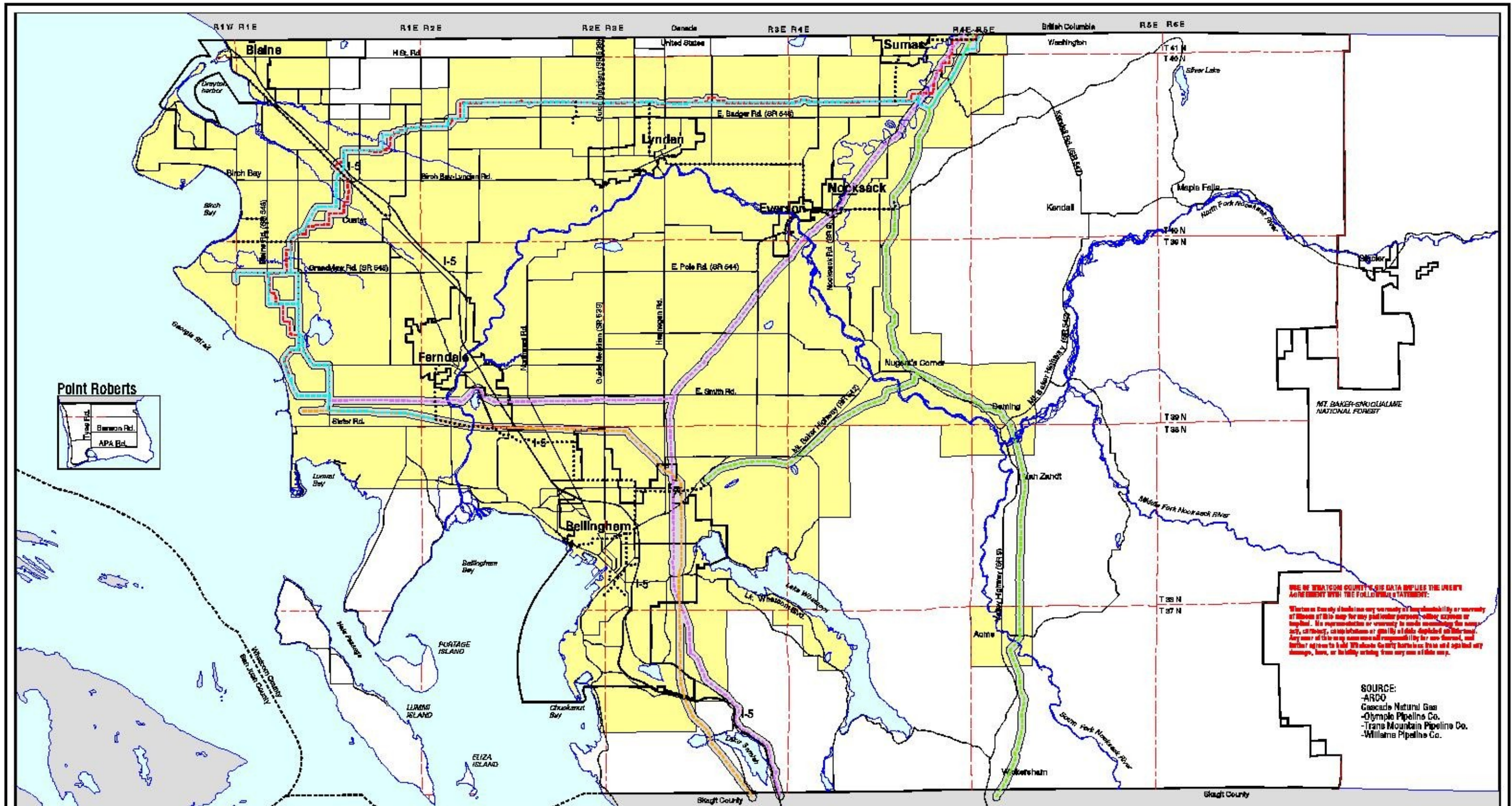
- 55KV Transmission Line
- 115KV Transmission Line
- 230KV Transmission Line
- 500KV Transmission Line

- PSE Generation Station
- Other Generation Station
- PSE Trans. Switch Station
- PSE Trans. Sub Station

- Other Trans. Station
- PSE Dist. Sub Station
- Other Dist. Station

Map #11

Power Transmission & Generation Facilities

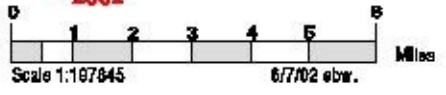


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SOURCE:
 -ARCO
 -Cascade Natural Gas
 -Olympic Pipeline Co.
 -Trans Mountain Pipeline Co.
 -Williams Pipeline Co.



Whatcom County Comprehensive Plan



Legend

- Cascade Natural Gas Service Area Boundary
- Natural Gas/Oil Transmission (660' Corridor Buffer)
- ARCO
- Trans Mountain
- Williams
- Olympic
- Cascade Natural Gas
- Natural Gas Distribution

Map #12
Natural Gas and Oil Transmission and Distribution'

