

# *Island County Comprehensive Plan*

## **9. Utilities Element**



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**Adopted  
September 28, 1998**



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1 ***ISLAND COUNTY UTILITIES ELEMENT***

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2 ***I. INTRODUCTION***

3 ***Purpose of the Utilities Element***

4 This element has been developed in accordance with Section 36.70A.070 of the Growth  
5 Management Act to address utility services in Island County. Per WAC 365-195-320, the  
6 Utilities Element shall contain, at a minimum, “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”.

7 This utilities element is not intended to guide how, when, or precisely where utilities should be  
8 provided. The utility agencies do this themselves, based on demand for their services. It is  
9 important to note that, with the exception of the electrical utilities, detailed forecasts and plans  
have *not* been prepared by most utilities. Availability of these utilities does not determine where  
or when growth will occur; rather, the utilities discussed in this plan generally *follow*  
development.

10 In Island County, utility facility placement or siting problems have not to date generated County-  
11 wide concern or controversy. Major facilities, such as hydroelectric or nuclear generation sites,  
will likely never be proposed on Whidbey or Camano Island. The problems facing utility  
12 providers include issues such as the ability to meet anticipated local demand with modest  
transmission or distribution facilities and local siting of facilities such as electrical substations or  
cellular telephone towers.

13 ***Scope of the Utilities Element***

14 Per WAC 365-195-210, certain utilities, such as water systems, sanitary sewers, surface water  
15 management facilities, and solid waste facilities are listed as “utilities” that need to be addressed  
by jurisdictions planning under the GMA. Some of these facilities are included in the Capital  
16 Facilities Element of the Island County Comprehensive Plan; others are addressed in various  
other plans, such as the Coordinated Water System Plan, the Solid Waste Management Plan, and  
17 in plans for special Purpose Districts such as water and sewer districts.

18 For the purpose of this plan component, the definition of “utilities” is limited to three general  
19 categories: natural gas, electrical, and telecommunications facilities (including telephone,  
cellular phone, and cable television services).

20 ***Essential Public Facilities***

21 The Growth Management Act requires that each local jurisdiction planning under the Act  
22 provide a process within its Comprehensive Plan for identifying and siting “essential public  
facilities”, which are those facilities which are typically difficult to site, such as airports, solid  
waste facilities, and in-patient health facilities. The guidelines prepared pursuant to the Act  
23 suggests evaluating, in the Utility Element, whether any utilities should be classified as essential

1 public facilities, with special siting processes developed for them. The Act prohibits local  
jurisdictions from imposing outright bans on essential public facilities.

2 In the Regional GMA Inter-Utility Report which was prepared jointly by Puget Sound electrical  
3 utilities, the designation of utility (particularly electric facilities) as “essential public facilities”  
4 under the GMA is suggested. However, because most utility facilities of the scale needed in  
5 Island County will not require special siting processes, and it is highly unlikely that any new  
large-scale utility facilities, such as high-voltage electrical generating plants, will be proposed in  
Island County, no classification of utility facilities as essential public facilities is made herein.

## 6 **II. GOALS AND POLICIES**

### 7 **Goals:**

- 8 1. Facilitate the provision of utilities at levels of service and rates appropriate to  
accommodate planned development within Island County and its incorporated areas.
- 9 2. Ensure that utility service is provided in a manner that is environmentally sensitive, safe,  
reliable, economical, and aesthetically compatible with surrounding land uses.
- 10 3. Process permits and approvals for utility facilities in a fair and timely manner, and in  
accordance with predictable development regulations.
- 11 4. Improve accessibility to government through interactive audio/visual  
12 telecommunication, considering the geography of Island County.

### 13 **Policies:**

## 14 **UTILITY PLACEMENT AND PERMITTING**

- 15 1. Utility Placement and Timing
  - 16 a) When reasonable and feasible, promote the co-location of new public and private  
utility distribution facilities. Coordinate construction timing to minimize  
17 disruptions to the public and disturbances to the environment and archaeological  
resources, and reduce the cost to the public of utility delivery.
  - 18 b) Use utility corridors for joint uses, such as trails, open space, and recreation.
  - 19 c) Provide timely and effective notification of interested utilities of road  
construction and of maintenance and upgrades of existing roads to facilitate  
20 coordination of public and private utility trenching activities.
  - 21 d) Encourage efficient, cost effective and reliable utility service by ensuring that  
land will be made available for the location of utility lines, including location  
22 within public transportation corridors, consistent with franchise terms and  
conditions including the possible payment of annual fees.

1 e) Coordinate land use and facility planning to allow eventual siting and  
2 construction of distribution lines within rights-of-way which are being dedicated  
or within roads which are being constructed or reconstructed.

3 f) Encourage communication among the Washington Utilities and Transportation  
4 Commission (WUTC), and utilities regulated by the WUTC, regarding the  
requirements of the Growth Management Act, especially the requirement that  
5 service be provided concurrently with or in advance of demand.

6 g) Encourage system design practices intended to minimize the number and duration  
7 of interruptions to customer service, including underground lines where  
practicable.

8 2. Permitting

9 a) Implement timely, predictable, and reasonable permit processes for utility service.

10 b) Review and amend existing regulations as necessary to allow maintenance, repair,  
11 installation and replacement of utilities, where consistent with the overall goals of  
the Comprehensive Plan.

12 c) Work with utility providers to enhance County and private Geographic  
Information Systems (GIS) development to help increase efficiency in permit  
processes.

13 **CONSISTENCY WITH URBAN GROWTH AREAS AND LAND USE PLANNING**

14 1. Planning for utilities is the primary responsibility of the utility providers and must be  
coordinated with the County Comprehensive Plan.

15 **CONSERVATION, ENVIRONMENT AND HUMAN HEALTH**

16 1. Facilitate and encourage conservation of resources to delay the need for additional  
utility facilities.

17 2. Once in place, continuing maintenance of utility facilities may disturb sensitive areas.  
Utility facilities should therefore be located outside such sensitive areas.

18 While harmful biological effects due to proximity to utility facilities such as electrical  
19 transmission lines or cellular tower sites have not been conclusively demonstrated,  
significant concerns remain, and study of the issues is ongoing. It is impractical to  
20 adopt specific standards at this time, as there is no scientific consensus as to what  
distances or levels might be appropriate. To address these environmental and health  
concerns, the County and affected utilities should.

21 a) Promote siting of facilities with respect for natural features, sensitive areas, and  
water quality and quality.

22 b) Monitor research into the health effects of emissions from utility facilities.

23 c) Adopt standards as necessary to protect the public from known health hazards.

1       **NEW TECHNOLOGY**

- 2           1. Exercise flexibility in reviewing proposals using innovative new technologies.
- 3           2. Consider changes to regulations and policies as appropriate to allow new utility technologies.

4       **III. REGULATORY ENVIRONMENT**

5       ***State and Federal Regulation of Utilities***

6       It is recognized that utility activities and development are also subject to regulation by various State and Federal agencies. While Island County acknowledges the roles and authorities of these agencies, it retains its right to prohibit throughout petroleum products pipelines within Island County.

7       Following is a listing of the major utility-regulating authorities, their roles and relevant laws:

8       **Washington Utilities and Transportation Commission**

9       The Washington Utilities and Transportation Commission (WUTC), composed of three members appointed by the governor, is empowered to regulate utilities (including, but not limited to, electrical, gas, telephone, telecommunications, and water companies). State law (WAC 480) regulates the rates and charges, services, facilities and practices of utilities. Any change in customer charges or service provision policy requires WUTC approval. Pursuant to the recent findings/conclusions of Washington State Supreme Court in *Electric Lightwave, Inc., and Digital Direct V. WUTC*, the WUTC does not have the authority to grant exclusive or quasi-exclusive areas of service to telephone companies.

10       **Federal Energy Regulatory Commission**

11       The Federal Energy Regulatory Commission (FERC) is an independent five-member commission with the US Department of Energy. FERC establishes rates and charges for the interstate transportation and sale of natural gas, for the transmission and sale of electricity, and the licensing of hydro-electric power projects.

12       **Natural Gas Policy Act of 1978**

13       The central theme of the National Gas Policy Act (NGPA) is encouragement of competition among fuels and suppliers across the country. As a result, natural gas essentially has been decontrolled. The NGPA also contained incentives for developing new natural gas resources, and tiered pricing structure aimed at encouraging the development of nationwide transmission pipelines. The result of the Act has been that many consumers are now paying less for natural gas than they were in 1980.

14       **Northwest Power Planning Council**

15       The Northwest Power Planning Council (NWPPC) focuses on the generation of electricity; however, its policies have implications for gas too.

1       **State Environmental Policy Act (SEPA)**

2       Per WAC 197-11-800(24), many utility activities are exempt from environmental review  
3       under SEPA. This includes, except on lands covered by water, the installation of  
4       communications lines (telephone, cable television); installation or construction of electric  
5       facilities with an associated voltage of 55 kV or less, including underground installation of  
6       existing lines or upgrade of existing 55 kV lines to greater voltages; the installation of natural  
7       gas distribution lines (as opposed to transmission lines); and maintenance, repair,  
8       replacement, operation, or other activity related to the above, provided such activity does not  
9       raise the level of the action above the exemption threshold.

6       **Federal Communications Commission (FCC)**

7       The FCC regulates and licenses agencies and utilities, such as television, radio,  
8       telecommunications and cable TV providers.

8       The above is a listing of some of the major regulations and regulatory authorities with  
9       jurisdiction over utilities. Utility providers are also subject to other State and Federal regulations  
10      regarding rates, construction and service standards, and competition.

10      ***Local Regulation of Utilities***

11      Local authorities may choose to regulate utilities subject to review under the State  
12      Environmental Policy Act (SEPA), based upon established thresholds, zoning, shoreline  
13      management, and utility accommodation or land development ordinances.

13      Island County regulates placement of utility facilities within County rights-of-way in ICC 11.01,  
14      the Land Development Standards. All utilities discussed in this plan are subject to these  
15      requirements when placing facilities within County rights-of-way. Placement of utilities on  
16      public or private property is regulated under Island County's Site Plan Review, Short Platting,  
17      Subdivision, and Planned Residential Development regulations.

16      ***IV. INVENTORY AND ANALYSIS***

17      This section describes existing utility systems within the County and describes improvements  
18      that are necessary to meet anticipated demand consistent with the County's growth projections.  
19      Descriptions of these systems are supplemented with maps which illustrate the utility systems  
20      and any anticipated or proposed improvements necessary to provide adequate service to the  
21      community. Also discussed are issues relating to siting and health that are particular to each  
22      type of utility.

20      Most of the information contained in this inventory is excerpted from plans developed by the  
21      utilities themselves. Detailed written plans were not available from all utilities, and efforts were  
22      made through direct contact with utilities providers to gain information regarding existing and  
23      proposed facilities. This inventory does not include all of the data or information available, but  
24      attempts to present the relevant information in an organized and useful format.

1       **NATURAL GAS**

2               **CASCADE NATURAL GAS CORPORATION**

3               Cascade Natural Gas Corporation (CNG), a privately owned for-profit corporation, is the  
4               sole provider of natural gas in Island County. CNG obtains natural gas from the  
5               Northwest Pipeline Corporation, which owns and operates an interstate pipeline that links  
6               major deposits of natural gas in Alberta, Canada and New Mexico.

7               Washington State requires gas providers to demonstrate that existing rate payers will not  
8               subsidize new customers. Thus, gas transmission line extensions are not planned in  
9               advance but are initiated only when there is sufficient customer demand.

10              As of 1990, Cascade Natural Gas Corporation served 1,412 residential and 376  
11              commercial accounts in its Island County service area.

12              **Existing System**

13              Natural gas is supplied to the County through a 6-inch high-pressure line which follows  
14              SR 532 onto Camano Island. A limited service area exists on northeastern Camano  
15              Island. A submarine 6-inch high-pressure main originates at Brown's Point on Camano  
16              Island and connects Whidbey Island at Strawberry Point (Figure 1). Service on Whidbey  
17              Island is limited to the City of Oak Harbor, NAS Whidbey Island, and surrounding  
18              unincorporated areas within reasonable distance of the transmission main.

19              **Future Demand and Proposed Facilities**

20              The location, capacity and timing of any improvements to the existing Cascade Natural  
21              Gas Corporation distribution system are driven purely by demand. This means that  
22              future connections are not planned in advance; rather, connections are initiated by  
23              customer requests. This includes installation service for new development and  
24              conversion from electricity or oil to natural gas. Also, unlike some utility providers,  
25              natural gas service may legally be refused to potential customers if the extension is not  
26              cost-effective to the company.

27              Cascade Natural Gas Corporation projects net Island County customer growth (both  
28              Camano and Whidbey Islands) to occur at the approximate rate of 150 to 200 customers  
29              per year within existing service areas. The majority of this is to occur in the Oak Harbor  
30              area, as there is limited accessibility to the Camano Island facilities. No major new  
31              facilities, upgrades, or extension of services beyond existing service areas is planned or  
32              anticipated within the next 20 years, but the utility is willing to serve major new  
33              development outside existing service areas if the development occurs relatively close to  
34              existing mains.

35              See Figure 1 for graphical information regarding Cascade Natural Gas Corporation  
36              facilities in Island County.

1       ***ELECTRICAL UTILITIES***

2       Electricity is vital to any community, yet its benefits are commonly taken for granted, and the  
3       vast network of generating facilities, transmission lines, switching stations, and distribution  
4       lines are rarely given a thought until the lights go out in a November windstorm. Electrical  
5       service providers must coordinate and plan their activities to a much greater degree than less  
6       critical utilities, such as cable television. Under State law, electrical utilities must provide  
7       electricity upon demand.

8       The Northwest derives two-thirds of its electricity from hydro-power. Diminishing natural  
9       resources, lack of available sites for new generating stations, and growing needs pose  
10      significant regional challenges for electric utilities. Local issues involve siting of  
11      transmission systems, substations and distribution lines. Recognizing the need for integrated  
12      and cooperative planning, the five major electrical utilities in the Pacific Northwest (Puget  
13      Sound Energy, Snohomish county PUD, the Bonneville Power Administration, Seattle City  
14      Light, and Tacoma Public Utilities) developed a long-term plan. Prepared specifically for  
15      local jurisdictions planning under the GMA, the Regional GMA Inter-Utility Report  
16      (November, 1992) addressed major facility needs over the next twenty years for the Puget  
17      Sound region. The joint plan represents a commitment by these utilities to work closely with  
18      each other and with local jurisdictions.

19      Being regional in scope, the Inter-Utility Report does not address in detail those transmission  
20      facilities which are considered local, such as 115kV (kilovolts, or 1,000 volts) transmission  
21      lines which serve distribution substations. Currently, all transmission lines serving Island  
22      County are 115kV.

23      An electric power network, from large generating stations to the outlet on the wall, involves  
24      a series of “step-downs”, through transformers. From any of a number of Columbia River  
25      hydroelectric generators, 500kV (and lower voltage) transmission lines terminate at  
26      transmission substations, where the voltage is typically stepped down to 115kV. At  
27      distribution substations, the voltage is stepped down to distribution levels, usually between  
28      4kV and 35kV. For service lines to individual customers, this voltage is reduced to 120 or  
29      240 volts by transformers on utility poles.

30      Electrical facilities of less than (55kV) are generally referred to as distribution facilities,  
31      while facilities of greater than 55kV are referred to as transmission facilities. For the  
32      purposes of this inventory, only transmission facilities and other major facilities are  
33      addressed.

34      Possible health effects from proximity to electrical transmission facilities have been given  
35      substantial attention during the last decade or so. Although research is ongoing, electrical  
36      and magnetic fields of the type and levels found near electrical power facilities have not been  
37      conclusively demonstrated to cause adverse effects in humans. In response to these  
38      concerns, new facilities are sometimes designed or located to reduce exposure to electric and  
39      magnetic fields. The Environmental Protection Agency has not adopted any standards  
40      relating to electrical or magnetic fields

1           **SNOHOMISH COUNTY PUBLIC UTILITY DISTRICT**

2           Since 1949, Camano Island has been provided electrical utilities by the Snohomish  
3           County PUD, the second largest publicly-owned utility in the Pacific Northwest in terms  
4           of number of customers. The three elected commissioners of the district set policies and  
5           adopt rates and charges for services. The main offices of the PUD are located in Everett,  
6           with five regional offices, including one in Stanwood. As of 1993 Snohomish County  
7           PUD was serving nearly 222,000 customers through 4,806 miles of line (282 miles of  
8           transmission) as of 1992, the PUD served 5,464 residential and 302 commercial  
9           connections on Camano Island.

6           **Existing System**

7           Camano Island, being primarily rural in nature, does not have sophisticated urban  
8           electrical utility needs, and an inventory of existing facilities is relatively brief.

9           A 115 kV transmission main extends from Stanwood, across Davis Slough, following SR  
10          532 to Terry’s Corner where it turns south and follows East Camano Drive for  
11          approximately 4 miles until it veers west along Camano Hill Road. After about 1.5  
12          miles, the line travels overland and terminates near the intersection of Monticello Drive  
13          and Elger Bay Road. Two substations, one near Terry’s Corner and the other at the  
14          terminus of the transmission main, comprise the remainder of PUD’s transmission  
15          facilities on Camano Island. A distribution network spreads from the main transmission  
16          facilities.

13          **Future Demand and Proposed Facilities**

14          By 2000, the utility anticipates serving 6,360 residential and 360 commercial  
15          connections, and by 2010, 7,750 residential and 430 commercial (based on an average of  
16          2% per year anticipated growth rate over the twenty-year planning period). To meet  
17          these demands, Snohomish County PUD intends to install a 115 kV transmission line  
18          between the Lake Goodwin and North Stanwood substations within the next ten years.  
19          Within the next fifteen years, the utility intends to install a double 115 kV line between  
20          the Stanwood and Terry’s Comer (North Camano) substations; a third substation on  
21          Camano Island, between the existing Terry’s Corner and South Camano substations; is  
22          likely within the next 20 years. The anticipated growth rate used by the PUD may be  
23          low. Island County estimates a 2.8% compound growth rate on Camano Island (1990-  
24          2016).

24          See Figure 2 for additional information on the PUD’s existing and proposed facilities on  
25          Camano Island.

21          **PUGET SOUND ENERGY**

22          With roots dating to the 1880s, Puget Sound Energy is one of the oldest investor-owned  
23          utilities in the Northwest, and, with nearly 800,000 customers, it is the largest electric  
24          utility in Washington. Its service area spans approximately 4,500 square miles in nine  
25          Washington counties. About 40% of Puget Sound Energy’s electrical needs are met by

1 hydroelectric projects on the Columbia River. The remainder is generated by smaller  
2 hydroelectric, coal, gas, or oil-fired facilities.

3 Puget Sound Energy has developed a detailed “Draft GMA Electrical Facilities Plan -  
4 Island County/Whidbey Island”. This document was used to prepare the following  
5 inventory. As of December 1997, Puget Sound Energy served approximately 36,100  
6 customers (approximately 32,050 residential and 4,050 commercial, industrial and other)  
7 on Whidbey Island. Puget Sound Energy also transports power to the Whidbey Island  
8 Naval Station (a Bonneville Power Administration customer).

### 6 **Existing Facilities**

7 Whidbey Island is served exclusively by Puget Sound Energy. Power for Whidbey  
8 Island is generated by Columbia River hydroelectric projects in Eastern Washington and  
9 British Columbia, along with other facilities in Whatcom and Skagit Counties, including  
10 gas-fired combustion turbines at the Texaco refinery near March Point on Fidalgo Island.

11 From the March Point substation, two 115 kV lines cross Deception Pass and terminate at  
12 the Whidbey Substation in Oak Harbor. From this substation, two 115 kV lines run south  
13 to the Greenbank Substation, then continue on to the Freeland Substation. From  
14 Freeland, a single 115 kV line runs east to the South Whidbey Substation near Langley,  
15 then on to the Langley Substation located about midway between Langley and Clinton.  
16 Puget Sound Energy has a total of three transmission substations and eight distribution  
17 substations serving Whidbey Island. (See Figure 3)

18 Whidbey Island’s sole generating facility is a diesel combustion turbine located at the  
19 South Whidbey Substation near Langley. Originally installed to maintain transmission  
20 voltage levels at the south end of the island, the generator now serves as a backup power  
21 source for part of the south island area when transmission service from the north is  
22 interrupted. Re-supplied via tanker truck from the mainland, the generator has a three  
23 day supply of fuel. The generator has a limited service area which can be further reduced  
24 by transmission line outages, and can be put completely out of service should weather or  
25 road conditions prevent refueling. Whidbey Island is thus largely dependent on mainland  
26 sources of power. Puget Sound Energy has a service center and business office in Oak  
27 Harbor.

### 18 **Future Demand and Proposed Facilities**

19 Using Island County’s growth projections, Puget Sound Energy has forecast future  
20 demand for electrical service. By 2010, Puget Sound Energy anticipates serving  
21 approximately 45,600 customers (40,500 residential and 5,100 other) on Whidbey Island.

22 Puget Sound Energy anticipates a need for a third 115 kV line from March Point to North  
23 Whidbey by 2010. Intended for a different route than the two existing lines, the new line  
24 will reduce the likelihood of losing power over the entire island, as has happened during  
25 severe winter storms. The line would be initially energized at 115 kV, but would be  
26 designed for later upgrade to 230 kV to accommodate future load growth.

1 A second 115 kV line is under construction (to be completed in 1998) from the Freeland  
2 Substation to the South Whidbey Substation will provide a second transmission path to  
the south island area. This second line will improve transmission system reliability  
resulting in fewer outages in the historically vulnerable south island area.

3 Puget Sound Energy anticipates the need for up to four additional distribution substations  
4 to accommodate projected load growth by 2010. Three of these stations are anticipated  
to be sited such that additional transmission lines (beyond those discussed above) will not  
5 be required. A fourth substation proposed for the south end of the island would be  
integrated into the existing system by a new 115kV transmission line (route to be  
6 determined). The timing of installation of any of these facilities will be dependent on  
actual future land use development patterns and densities.

7 While it is recognized that it is the responsibility of the utility to plan for future growth,  
8 and to determine what facilities might be necessary to support projected growth, the exact  
location of these facilities are subject to local and State regulation (see, for example,  
9 Goals and Policies, Section II). Thus, it may be necessary for Puget Sound Energy to  
consider alternative corridors and locations for proposed facilities.

10 Puget Sound Energy has provided an inventory and analysis of existing facilities and  
11 future facility needs for the Island County service area based on growth projections  
provided by the County; these materials were used to develop Figure 3.

## 12 **TELECOMMUNICATIONS UTILITIES**

### 13 **TELEPHONE**

14 Two standard telephone utilities serve Island County. GTE-NW serves all of Camano  
15 Island and northern and central portions of Whidbey Island. Whidbey Telephone's  
existing service area begins at Greenbank and covers the southern part of Whidbey  
16 Island. Recently Whidbey Telephone's franchise was expanded to include all of  
unincorporated Whidbey and Camano Islands.

17 The provision of telephone services is driven by the needs of its customers. As the  
18 population grows, telecommunication facilities will be upgraded to ensure adequate  
service levels. It is also possible that facilities will be upgraded as technology advances.  
Telephone companies already provide, or will likely soon provide, additional services  
such as "cable television" and access to computer networks such as the Internet.

19 Like investor-owned gas and electric companies, telephone companies are regulated by  
20 the WUTC, which ensures reliable service is provided at reasonable rates. It would be to  
the economic advantage of Island County to have rates restructured to eliminate  
21 intra-county toll charges.

22 Standard telephone facilities include a central plant, which houses switching gear (often  
23 in the same building as central offices), remote switching stations, microwave and the  
familiar utility poles and overhead lines. Underground installation of telephone lines and  
use of efficient fiber optic systems is becoming more common as technology advances  
and the regulatory framework responds to aesthetic concerns.

1           **TELEPHONE: GTE-NW**

2           GTE-NW's service area in Island County includes the incorporated areas of the City of  
3           Oak Harbor and the Town of Coupeville. Most of GTE-NW's major facilities are located  
4           on the mainland. GTE-NW has office facilities located in Oak Harbor.

5           **TELEPHONE: WHIDBEY TELEPHONE**

6           Whidbey Telephone is an independently owned and operated telephone utility serving  
7           roughly the southern half of Whidbey Island, with main offices in Freeland. In addition  
8           to its standard telephone service, the company also provides marine communications and  
9           access to the Internet. Whidbey Telephone has added an extensive network of optic fiber  
10          systems to its existing wire line system.

11          **Future Demand and Proposed Facilities**

12          Existing telephone facilities and some minor upgrades, mainly at the distribution level,  
13          will adequately serve the County's needs during the planning period, and no major new  
14          major facilities are planned by either GTE or Whidbey Telephone.

15          **CELLULAR TELEPHONE SERVICE**

16          Cellular telephone service is becoming increasingly popular. A cellular system consists  
17          of cells (a geographic area served by a transmitting and receiving tower), cell sites (the  
18          tower site, also including a base station radio and interconnecting equipment), a  
19          switching station (which receives and distributes signals from the cell sites via  
20          conventional land lines and microwave signals), and, of course, the cellular phones  
21          themselves. Cellular phones can operate only within the range of a given cell site. Thus,  
22          in order to cover broad service areas, cell sites must be located close enough to one  
23          another so that service is uninterrupted as the user moves from one location to another.

24          Cellular towers can pose siting problems. The towers can be free-standing structures, but  
25          are often placed on top of existing structures where convenient; this is more common in  
26          urban areas, and creates less of a visual impact than free-standing towers. As service  
27          expands or changes, existing cell sites may need to be reconfigured.

28          Because of growing use of digital technology, existing cell sites will be able to serve  
29          greater capacity than with the existing analog system. Thus, capacity is not anticipated  
30          to be a problem in the future.

31          At the Federal level, cellular phone facilities are regulated by the Federal  
32          Communications Commission (FCC), which has jurisdiction over the public airwaves,  
33          assigning frequencies and licensing operators. The FCC requires that transmitting towers  
34          be located such that transmission of signals is unobstructed. Local jurisdictions can  
35          regulate tower siting to the extent that a Federally-licensed use is not impeded. Thus, a  
36          local jurisdiction can deny approval of a tower at a particular site, but cannot impose an  
37          outright ban on towers within its jurisdiction.

1 The Federal Aviation Administration (FAA) and WSDOT Aviation Division also review  
2 proposed towers when they exceed 200 feet in height (above ground level) or when the  
3 proposed location is within 20,000 feet of a major airport (serving military and  
4 commercial aircraft) or within 10,000 feet of a smaller airport. While not having the  
5 authority to deny potential sites, the FAA coordinates its review process with the FCC,  
6 who may deny a particular site if the FAA objects.

7 There are two providers of cellular telephone service in Island County - A T & T  
8 Wireless Services and US WEST. Figure 4 is a map of existing and known proposed  
9 cellular telephone facilities.

## 10 **CELLULAR: A T & T WIRELESS SERVICES**

### 11 **Existing System**

12 Interstate Cellular Telephone Company, doing business as A T & T Wireless Services,  
13 operates three towers in Island County (see Figure 4).

### 14 **Future Demand and Proposed Facilities**

15 No information is available regarding major new facilities planned by A T & T Wireless  
16 Services

## 17 **CELLULAR: US WEST**

### 18 **Existing System**

19 US WEST has provided cellular phone service in Island County since 1990, and currently  
20 operates two existing cell sites in the County - one on North Whidbey near Polnell Point,  
21 and one near Freeland. The Freeland cell site is currently undergoing upgrade. Coverage  
22 of Island County is also provided by cell sites located near Anacortes, Port Townsend,  
23 Lake Goodwin (near Smoky Point), and Everett.

24 See Figure 4 for additional information regarding major cellular telephone facilities  
25 operated by US WEST.

### 26 **Future Demand and Proposed Facilities**

27 US WEST has indicated that minimal additional facilities are required within the  
28 planning period to cover additional demand for its cellular phone services. A proposed  
29 cell site, to be located on NAS Whidbey Island, would be exempt from local regulation  
30 regarding siting. Another is planned for South Whidbey, near Clinton, on top of an  
31 existing fire station.

## 32 **CABLE TELEVISION (CATV)**

33 Cable carries data via coaxial cable from trunk lines, which originate at a “head-end site”,  
34 which processes information and generates it through the distribution system. Though  
35 the term “cable” implies wiring throughout the system, many cable systems also utilize

1 satellite dishes and microwave antenna. Cable distribution lines are often run using  
2 leased overhead utility poles, but underground installation of cable systems is becoming  
3 more common.

4 Six cable companies serve Island County. Cable companies and cable service change  
5 often, and require relatively minor facilities. No new major facilities will be required for  
6 CATV providers to meet anticipated growth in Island County. Therefore, detailed  
7 information regarding CATV providers is unnecessary.  
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1 Figure 1 Cascade Natural Gas Service Areas and Transmission Facilities

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1 Figure 2 Snohomish County PUD Generalized Location of Existing and Future Electric Facilities

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1 Figure 3 Puget Sound Energy and Future Electric Facilities

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1 Figure 4 Cellular Telephone Existing and Future Cellular Tower Sites

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