

# Chapter VII

## UTILITIES

### VII-1 EXISTING CONDITIONS

#### Overview

GMA requires that comprehensive plans contain a utilities element. This element should include the general location, and capacity of all existing and proposed utilities, including, but not limited to, electrical lines, telecommunications lines, and natural gas lines.

This chapter focuses on the existing conditions of public and private utilities in Mason County. Utilities that appear in this chapter include: electricity, natural gas, and telecommunications, including cellular communications. Water, sewer, storm water and solid waste, which are also often considered as utilities, are discussed in the Capital Facilities Chapter VI. Figure VII-1 shows the general location of existing or proposed utility districts, major electrical transmission lines, electrical distribution substations, natural gas pipelines and service areas, telecommunications service areas, cellular communication tower sites.

Planning policies related to utility provision can be found principally in Sections III-9 and VI-2.

#### Public and Private Utilities

Most land uses require the presence of utilities, whether they be residential, commercial, industrial, or even agricultural. Utilities are categorized based on ownership of the utility, that is whether they are publicly or privately owned. Public utilities generally provide services to a specific area. There are publicly owned community water, sanitary sewer systems, stormwater management systems, and solid waste management systems in Mason County. These public utilities and private water and sewer systems are discussed in the Capital Facilities chapter of the Plan. Chapter VI. In Washington State, electricity is also often a publicly owned utility. This is true in Mason County where two public utility districts provide this service. The electrical utilities are discussed below in this chapter.

Private utilities in Washington State, such as US West Communications and Cascade Natural Gas, are regulated by the Washington State Utilities and Transportation Commission (WUTC).

The State of Washington Department of Health, as well as local Health Departments, define an approved water system serving more than one residence as "public" even though the system may be owned and operated by a private person or company.

**Electricity**

Public Utilities District No. 1 and Public Utilities District No. 3 provide electrical power to residents of Mason County. Both districts purchase power from the Bonneville Power Administration and distribute it to their customers. Neither public utility district has power production facilities. The Bonneville Power Administration and the City of Tacoma both have transmission facilities in Mason County. The City of Tacoma also has an electrical generation facility near Hoodport, which uses water drawn from Lake Cushman. Neither utility provides local service in Mason County. The electrical power for Mason County is supplied through the regional transmission grid (which is the interconnected network of transmission lines and other supporting equipment) at 500,000 volt and 230,000 volts from generation plants operated by BPA along the Columbia River. Transmission to Mason County is through the Olympia Transmission Substation through 230,000 volt power lines which go to the BPA Shelton Transmission Substation, where service is split to serve East and West of the Hood Canal. Both the Shelton and Belfair urban growth areas are served by 230,000 volt power lines. The network connects to the PUDs through switching stations and then to distribution substations. The electrical power carried by the high voltage lines is transformed to lower voltages for distribution to PUD's neighborhood distribution substations and on to the user. Both PUD's provide annual capital improvement programs either directly from user revenues, or from the sale of bonds which are redeemed by user revenues.

***Public Utility District No. 1***

The service area for Mason County Public Utility District 1 (PUD No.1) begins approximately one mile west of Twanoh State Park, on the south side of Hood Canal, and extends along the Canal to the Mason/Jefferson County line. The service area stretches along Hood Canal for approximately 50 miles. The district encompasses several river valleys including the Skokomish, Lilliwaup, Hamma Hamma, Duckabush and Dosewallips. PUD No. 1 serves the communities of Lilliwaup, Hoodport, Potlatch, Union and the Skokomish Indian Reservation.

PUD No. 1 provides power to approximately 4,200 customers. In 1993, PUD No. 1 supplied a total of 58.7 million kilowatt hours. The district currently has a 20 year purchase agreement with the Bonneville Power Administration, which will provide for their projected power requirements through the year 2002. The district also purchases power from the Lilliwaup Falls Hydro Facility. PUD No. 1 has substations located at Potlatch, Duckabush, Hoodport, the Skokomish river valley and Union.

PUD No. 1 provides approximately \$300,000 in capital improvement projects annually. Facilities upgrades are expected to serve future populations. PUD No. 1 does not serve either urban growth area. The utility is demand driven - that is, it expands its activities to respond to the demand as needed or as projected. Substations and distribution networks are constructed or improved to meet electrical demand. Customers needing to be connected to the service would generally cover the costs of the

connection, which will vary by site. Once service is connected, costumers is the same class of service (for instance, residential) would generally pay the same rate. However, with the deregulation of electrical services, the rate structure, service providers, and service provisions are likely to change. Transmission lines are usually placed in public road right-of-ways, or as provided for by new land developments.

### *Public Utility District No. 3*

Mason County Public Utility District No. 3 (PUD No. 3) provides electrical power to all areas of Mason County except those serviced by PUD No. 1. It provides electrical power to approximately 24,400 customers. In 1993, PUD No. 3 supplied a total of 493 million kilowatt hours. PUD No. 3 has a purchase agreement with BPA that provides for their projected power requirements though the year 2001.

There are substations located at Collins Lake, Union River, Belfair, Bayshore, Mason (Shelton), Dayton, Kamilche and Mountain View. There is also an additional substation under construction at Mason/Benson Lake. The PUD currently plans major upgrades in the Collins Lake, Union River and Kamilche areas over the next five years.

Substations and distribution networks are constructed or improved to meet electrical demand. The utility is demand driven - that is, it expands it activities to respond to the demand as needed or as projected. Customers needing to be connected to the service would generally cover the costs of the connection, which will vary by site. Once service is connected, customers in the same class of service (for instance, residential) would generally pay the same rate. However, with the deregulation of electrical services, the rate structure, service providers, and service provisions are likely to change. Each substation can support industrial activity. PUD No. 3 provides approximately \$4.5 million in capital improvement projects annually.

The PUD has not identified any lands needed for future expansions. Existing transmission lines are generally located in road right of ways. The PUD does not normally purchase or condemn rights-of-ways for their utility lines, but hopes to continue to use public rights-of-way for their utility lines in the future. The location of electrical lines on property being developed is determined by the property owner, although the county subdivision regulations provide for utility easements. These usually include the roadways and along lot lines. The utility recommends installation below ground. Although installation is more expensive, the benefits include greater reliability, lower maintenance costs, and improved aesthetics.

### *Natural Gas*

#### *Cascade Natural Gas*

Cascade Natural Gas Corporation provides natural gas throughout Mason County. It has offices in Shelton and Port Orchard. The Shelton office serve all of downtown Shelton, northwest along Shelton Springs Road to Sanderson Field, west to US Highway 101 and Shelton Valley Road, and south to Arcadia Road and along Deegan

Road approximately 1/2 mile. The Shelton service area also includes the Oak Park and Lake Limerick areas. The Port Orchard office serves to the Belfair area.

Cascade Natural Gas serves approximately 1,450 commercial and residential customers in Mason County. It reviews potential areas for service expansion annually and bases annual capital improvement programs on expected population growth. Cascade Natural Gas also provides service and main extensions for distances greater than those provided by Cascade's extension policy on a customer cost share basis. Cascade Natural Gas does not plan for individual connections, but responds to requests for service which might be for new development or for conversion from other energy sources. System expansions generally use existing right-of-ways or public road right-of-ways. Transmission capacity can be expanded through existing lines or by adding or enlarging lines. Cascade Natural Gas serves 16 counties in Washington State.

Their storage facilities are located outside of Mason County at sites near Chehalis and Plymouth, Washington, and serve all of their system in Washington. A major supply line for the company runs through Mason County by the Shelton Urban Growth Area and the Belfair Urban Growth Area. No specific system expansions are planned in Mason County at this time, but the company has a policy of expanding its supply system to serve additional customers. Routes for expansions of service depend on the demand, available rights-of-way, environmental permitting issues, and opportunities created by new development, or the work in right-of-ways by other utilities or the county or state.

### *Telecommunications*

Several companies provide local telephone service in Mason County. They include Hood Canal Telephone Company, Inland Telephone Company, and US West Communications. US West, however, serves over 90% of Mason County Residents. The following map identifies provider service area information. Existing transmission lines are generally located in road right-of-ways. The location of telephone lines on property being developed is determined by the property owner, although the county subdivision regulations provide for utility easements. These usually include the roadways and along lot lines.

#### *Hood Canal Telephone Company*

The Hood Canal Telephone Company provides local telephone service in the Union area from Twanoh State Park to the Purdy Cut-off along SR-106. The utility serves approximately 930 residential and commercial customers. It currently has all major capital facilities in place to meet the service requirements of its customers.

#### *Inland Telephone Company*

The Inland Telephone Company provides local telephone service in the Dewatto area.

**Its service area includes the east shore of Hood Canal from the Mason/Kitsap County Line south to Red Bluff. Inland Telephone provides single party service to business and residential customers.**

*US West Communications*

**US West Communications is the largest provider of local exchange service in Mason County, with a service area that includes all areas of the county not served by the Hood Canal and Inland Telephone Companies. The company provides telephone service to both of the urban growth areas in the county. US West generally provides a full range of telecommunication services, however services available in specific areas depend on customer demand and the capabilities of the local central offices.**

*Cellular Communications*

**Cellular communications services differ from traditional telecommunications services. Cellular communications systems use phones and other communication devices that transmit and receive radio signals on bands reserved solely for such activity. Signals are transmitted and received by low power antennae. The area over which one antenna can transmit and receive to the individual phones is called a cell. The coverage of the cells overlap so that, ideally, the user can be transferred from one cell to another without interruption of service.**

**The cellular industry is regulated by the Federal Communications Commission (FCC). Local government authority to regulate telecommunication services are also limited and defined by Federal law. In 1998, Mason County adopted an ordinance to regulate telecommunication facilities. This was a response to the Federal Telecommunications Act of 1996, which established the ground rules for increased competition in the telecommunications industry. The Act removed previous limits on the entry of new providers into an area.**

**The demand for service and new facilities for telecommunications is difficult to assess because of the changing technologies and the consumer demand for new services. Known service providers with facilities located or currently applied for in Mason County include United States Cellular, US West Cellular, Air Touch Cellular, and NEXTEL.**

# MASON COUNTY

## COMPREHENSIVE PLAN

### UTILITIES

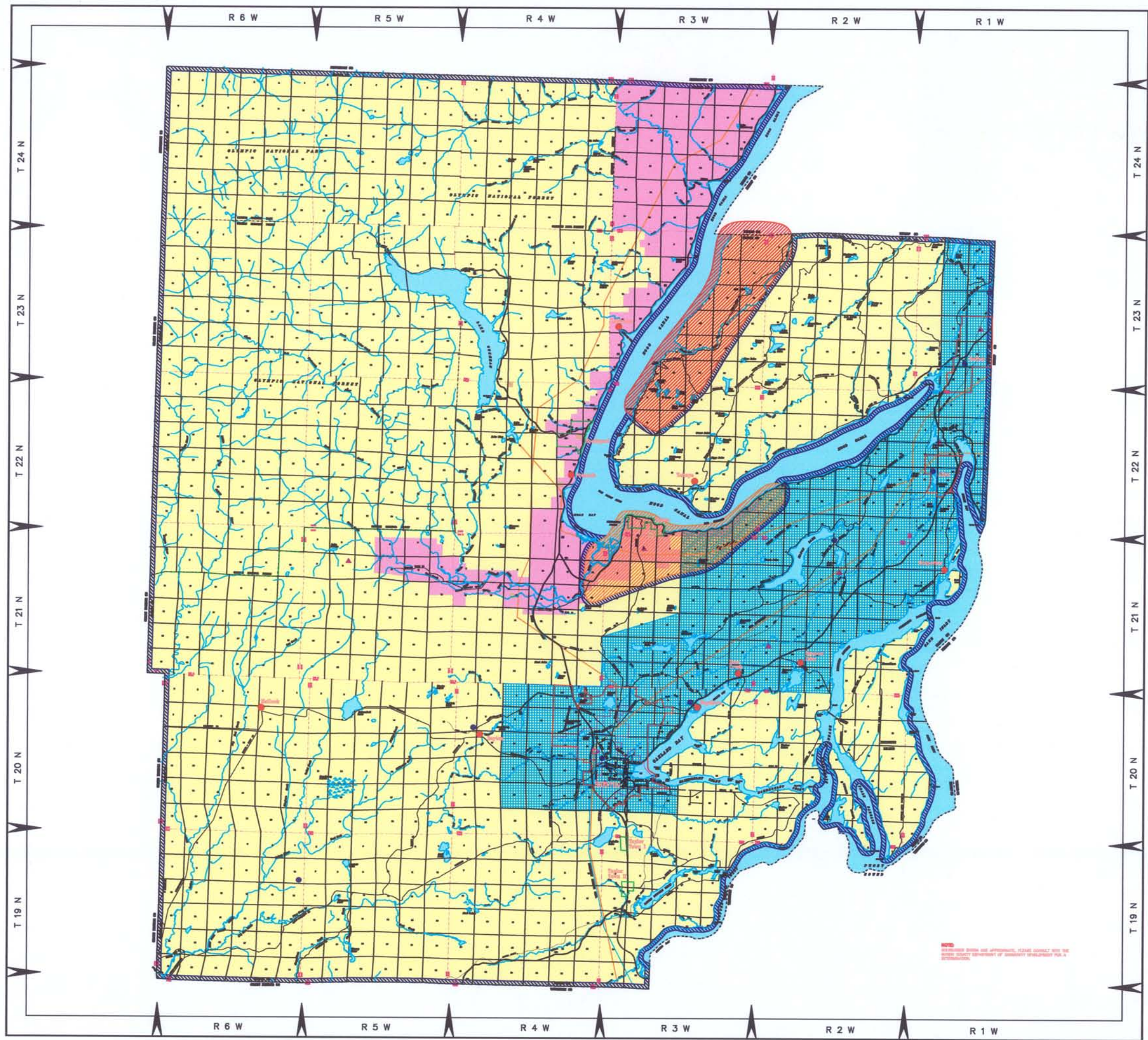
LEGEND:

- PSD #1 SERVICE AREA
- PSD #2 SERVICE AREA
- PSD #1 SUBSTATION
- PSD #2 SUBSTATION
- HOOD CANAL TELEPHONE CO. SERVICE AREA
- INLAND TELEPHONE CO. SERVICE AREA
- ON WHIP COMMUNICATIONS SERVICE AREA
- COMMERCIAL CRENSHAW COMMUNICATIONS PRINCIPAL CELL SITE
- CASCADE NATURAL GAS SERVICE AREA
- NATURAL GAS PIPELINE
- ELECTRICAL TRANSMISSION LINE
- URBAN GROWTH AREA
- RURAL ACTIVITY CENTER
- HAMILTON (APPROXIMATE LOCATION)
- ALLEN SUBAREA PLAN
- HAMILTON CITY LIMITS



MASON COUNTY, VA  
 Department of Community Development  
 Hamilton, VA  
 June, 2000

FIGURE VII - 1



NOTE: INFORMATION FROM AN APPROXIMATE, PLEASE CONTACT THE LOCAL COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT FOR A DETAILED PLAN.

## **VII-2 Demand for Private Utilities**

Private utilities, with the exception of cellular communications, are regulated by the Washington State Utilities and Transportation Commission (WUTC). The WUTC sets the levels of service that must be maintained by each of the utilities. Private utilities providers perform their own projecting and planning of needs and services. Cost of providing the service are paid by the user. However, the comprehensive plan will be an invaluable tool for utilities providers in determining future need and locations of services.

Shelton and Belfair are be the County's only Urban Growth Areas. These areas are currently provided utilities services, and the infrastructure exists to provide additional services. Utilities providers may decide to expand their facilities if projected growth exceed the current capacity to provided services at acceptable levels. Telecommunications and electrical service are particularly difficult to plan for because both industries are in the process of de-regulation. Telecommunication facilities are also strongly affected by rapidly changing technology.

## **VII-3 Utility Policies**

### ***County-Wide Planning Policies***

In 1992, Mason County and the City of Shelton, adopted the County-Wide Planning Policies (CWPP). These policies were designed to guide each agency's GMA Planning process. The CWPPs encourage the "sharing of corridors for major utilities, trails and other transportation rights of way(s)." As discussed above, all of these utilities, except for cellular telecommunications, rely on the use of existing right-of-ways, such as public road right-of-ways, and on the establishment of new right-or-ways when land is subdivided. Sharing of these right-of-ways meets most of the local distribution needs of the utilities, but calls for coordination of effort to keep costs down.

### ***Mason County Land Use Policies***

Gas, electricity, and telecommunications in Mason County are each tied into a regional system, where local capacity depends on regional capacity. The greatest growth in demand for services will be in the urban growth areas, which are near the major transmission lines.

Many of the Land Use Policies that address performance districts in rural areas provide for clustering of development. Neighborhood distribution needs will have to be met, but tThis type of development allows for more efficient provision of utilities and services. By encouraging clustering of rural development at the scale of the rural activity centers and community centers, or at the scale of an individual clustered subdivision, local distribution costs should be reduced.

**Growth is also focused in the designated urban areas of Shelton and Belfair. Additional population is also reserved for the development of fully contained communities. These urban development patterns will be more cost effective to provide with utility services.**

**Private utilities providers in Mason County project and plan for growth. The Mason County Comprehensive Plan will be a resource for each of these providers that will assist in determining the need for service expansion and new facilities.**