UTILITIES ELEMENT

TABLE OF CONTENTS

UTILITIES ELEMENT

I. INTRODUCTION

1. Growth Management Act Requirements

The Growth Management Act (GMA) requires jurisdictions to prepare a utilities element that addresses "the general location, proposed location and capacity of all existing and proposed utilities, including, but not limited to, electrical lines, telecommunications lines, and natural gas lines."

2. Purpose of Utilities Element

The Utilities Element inventories the general location of existing and proposed utilities, and analyzes the capacity to serve planned land uses. The GMA defines utilities as integrated facility systems that serve the public by means of a network of wires or pipes, and ancillary structures. Included are systems for the delivery of natural gas, electricity, and telecommunications services, water systems, and sewage disposal. Utilities are distinguished from other capital facilities as essential services necessary to support basic life needs. The high cost of utility infrastructure necessary to deliver the utility service limits competition. Residents pay a fee for utility services while other capital facility services such as police and fire protection are funded by the whole community through taxes.

Water supply, sanitary sewers and storm sewers may also be considered as "public facilities" and the Growth Management Act requires that jurisdictions consider the capital improvement aspect of these utilities in the Capital Facilities element. Accordingly, the Capital Facilities Element provides level of service standards, projects capital facility needs and includes utility capital improvements in the 6 year Capital Facilities Plan. Utilities are either publicly or privately owned. Private utilities are regulated by a variety of entities. The natural gas and telephone utilities are regulated by the Washington Utilities and Transportation Commission, and cellular telephone communication companies are licensed by the Federal Communication Commission. Utility providers are primarily responsible for planning utility services.

However, the City will incorporate utility plans into its comprehensive planning efforts in order to coordinate the quality and delivery of services with anticipated patterns of land use. It may also assist utility providers in identifying ways of improving services provided in the City. The information included in this element will assist in ensuring the orderly and efficient provision of utility services to the City and in the City Planning or Urban Growth Area (UGA).

The following utilities are addressed in this Element:

1. Water Supply;
2. Sanitary Sewer;
3. Stormwater and Drainage;
4. Electricity;
5. Natural Gas; and
6. Telecommunication System.

Figures or maps showing the locations of utilities are included in appropriate sections of this Element. The maps are simplified to show only major facilities. More detailed and updated maps of the utilities are available from the City of Brier.

II. EXISTING CONDITIONS AND CAPACITY

1. Water Supply

a. Existing conditions

The City of Brier is provided with municipal water by the Alderwood Water and Wastewater District. The District service area encompasses approximately 60 square miles. The District is responsible for constructing, repairing, maintaining and servicing water lines as well as providing potable water to the City's residents, as established by Ordinance No. 336.

Alderwood Water and Wastewater District purchases treated water from the City of Everett. The City of Everett water supply originates in Spada Lake in the Sultan Basin and is "preset" in Lake Chaplan after passing through Snohomish County PUD's water power generating system.

In August of 1983 the City of Everett completed a 100 million-gallon per day water treatment plant, which was planned to have sufficient capacity to meet the water needs of its supply area until approximately the year 2000. Since then, Everett has completed additional improvements – ensuring sufficient capacity for the District's customers:

> "Everett has recently reviewed its source of supply and concluded that it is sufficient to meet the forecast regional needs through 2050 and beyond. The City is planning transmission line improvements over the next 20 years that will maintain and/or improve supply capacity to meet their customers' needs, including the [Alderwood] District." [1]

The District has three water storage reservoirs that serve Brier. The reservoirs are located at 156th Street SW and 36th Street W in Lynnwood. The three reservoirs have 73 million gallons of available capacity for the 635 zone which includes the City of Brier. [2]

The Water mains that serve the City are mapped on **Figure 1**. The City and the District maintain more detailed and updated maps of water system facilities.

The District estimates there are approximately 2200 water service connections in the City of Brier, as of August, 2004. [3] The per household water demand in 2002 was about 240 gallons per day. The City of Brier's average daily demand is approximately 528,000 gallons. The current (2000) peak daily demand for the District is 23.6 million gallons per day. [4]

The District's 2002 Water System Plan details some deficiencies due to low pressures in the 635 zone. The low-pressure areas vary from 23 to 29 pounds per square inch (psi) (just under the minimum service criteria of 30 psi) due to high ground elevations (compared to the hydraulic grade in the pressure zone). Although there is no history of customer complaints in these low-pressure areas, the District is exploring options to increase water pressure. Planned improvements will enhance the level of service in these areas by 2030.

Fire flow analyses were conducted throughout the District, including at two locations in the City. This analysis was performed with the hydraulic analysis model using 2030 peak day demand conditions. The results showed that the distribution system is able to meet the current fire flow needs as well as those required for future growth within the City.

[1] 2002 Water System Plan, Alderwood Water and Wastewater District, January 2003, page ES-3.
[2] Brigitte I. McCartney, P.E., Interim District Engineer, Alderwood Water and Wastewater District, August 17, 2004.
[3] IBID
[4] 2002 Water System Plan, Alderwood Water and Wastewater District, January 2003, page 4-10, Table 4-7.