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BACKGROUND

Statewide Planning Goal 11: Public Facilities and Services

"To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development."

Lake Oswego adopted a Public Facility Plan (PFP) in 1997 [PA 1-97] which identifies needed water treatment and delivery facilities per OAR 660, Division 11. The applicable parts of the PFP and its subsequent updates are incorporated by reference into the Comprehensive Plan.

Lake Oswego's municipal water supply is obtained from the Clackamas River. The City's water intake and pump station are located on the North Bank of the Clackamas River in Gladstone. The City has two water right permits for Clackamas River water with priority dates of March 14, 1967 and July 5, 1975. The earlier, more senior permit, is for 50 cubic feet per second (cfs) or 32 million gallons per day (mgd). The 1975 permit is for nine cfs or 5.8 mgd. A third permit exists for 6 cfs (3.9 mgd) from the Willamette River with a priority date of July 5, 1975. The State of Oregon's minimum stream flow requirement* for the Clackamas River takes precedence over the 9 cfs permit but not the earlier 50 cfs permit. The Willamette River source would require construction of a new water intake facility.

Stream flow records indicate the likelihood of enough water being in the Clackamas River during a drought year for the City to divert its full 50 cfs water right. However, under these conditions the more junior 9 cfs right probably could not be used to augment the more senior water right. The City's ability to use water from the lower Clackamas River is limited to the 1967 and 1975 water rights. Additional water cannot be acquired from the lower Clackamas because the state will no longer issue water right permits on this portion of the river.

Water is pumped from the Clackamas River intake via a 27 inch diameter pipeline to the City's water treatment plant directly north of Mary S. Young State Park in West Linn. The treatment plant currently has the ability to deliver 16.1 million gallons per day (mgd) of finished water* to the City's distribution system.

Lake Oswego's finished water meets quality standards for the 83 possible contaminants* listed by the Federal Environmental Protection Agency. However, new federal and state rules are expected to be enacted by 1996 which will require improvements to the treatment facility to remove by-products of water disinfection, giardia cysts and related micro-organisms and to dispose of sludge resulting from the water treatment process.

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The water treatment plant is connected to the City's distribution system by a 24 inch diameter transmission line. The water distribution network consists of approximately 210 miles of transmission and distribution mains. Changes in topography and Oswego Lake, which divides the City into two parts, require ten distinct pressure zones (water service zones). Within these zones, there are thirteen storage reservoirs with a total storage capacity of 15.5 million gallons (mg). The water distribution system also includes nine pump stations.

Ongoing maintenance and improvement of the water distribution system is required to provide adequate fire protection and domestic water service. There is a need in the next five to seven years to replace several thousand feet of deteriorated and undersized waterlines, construct at least three new water storage reservoirs and build new pump stations. Over the long term, population growth will make it necessary to increase the capacity of the water intake, treatment, monitoring and transmission facilities.

Lake Oswego sells water to other users, with the Southeast Washington County Joint Water Agency being the largest customer (the Joint Water Agency was previously known as the Tigard Water District). Currently, the agency purchases about approximately 45 percent of the City's annual production of finished water. Lake Oswego consumes about 53 percent, with the remainder going to other users, such as the Lake Grove Water District. The Water Master Plan estimates that if the City continues to sell water to the Joint Water Agency, the system would have to serve 100,000 people by the year 2012; 54,000 in the Lake Oswego USB and 46,000 in the Joint Water Agency service area. This would require the capacities of the water intake, treatment and distribution systems to be increased to deliver a maximum day demand of 36.7 million gallons per day compared to a current capacity of 16.1 mgd. On the other hand, the Lake Oswego Water Master Plan estimates the maximum daily demand would be about 19.8 mgd if Lake Oswego did not serve the Joint Water Agency. In 1988, the Water Master Plan estimated Lake Oswego's water system served approximately 53,500 persons, of which 28,200 were in the City's water service area.

There are six water providers within Lake Oswego's Urban Services Boundary (USB). They include Rivergrove, Lake Grove, Skylands, Glenmorrie, Palatine and Southwood Park water purveyors. They acquire water from either the City of Portland, ground water wells, the City of Lake Oswego or from a combination of these sources. Lake Oswego's Comprehensive Plan and Urban Growth Management Agreement with Clackamas County designates the City as the ultimate provider of water service within the Urban Services Boundary. Because of this, the City and the other water providers need to work together to define the future roles each will play in providing water and how and when transfer of service will occur.

An adequate future supply of high quality and reasonably priced drinking water is a regional concern. The historic abundance, high quality and low cost of water in the region has resulted in the establishment of 65 entities in the Portland Metropolitan Region that supply and/or distribute water through separate systems. Today, the region is faced with increasing population growth, regulation of water use

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and higher costs to provide water. Despite the size of the region, only a handful of developed water sources supply the Portland metropolitan area. These include the Bull Run Watershed, the Clackamas and Trask Rivers and groundwater from alluvial sand and gravel and basalt aquifers. Because Lake Oswego derives its water from the Clackamas River, it is important that the City participate in regional planning efforts to project future demand and develop sound, innovative water management strategies to meet both current and long term needs of the region. To this end, Lake Oswego, and a number of other water providers, have joined resources to develop a Regional Water Supply Plan. It is anticipated the plan will be completed by 1997.

Summary of Major Issues

The following are some of the issues and changed circumstances and conditions which were considered in the 1993 update of the Comprehensive Plan.

- The Lake Oswego Water System Master Plan was completed in 1988.
- The capacities of the water intake, treatment plant and distribution systems are adequate to accommodate the current needs of Lake Oswego's service area. However, improvements to the water system are needed to address projected demand. The most substantial and expensive improvements are needed if Lake Oswego continues to sell water to meet the growing needs of the Southeast Washington County Joint Water Agency.
- Improvements are needed to the City's water transmission, storage and distribution systems to provide needed fire flows and adequate pressure in many parts of the community.
- Several water providers operate within the Urban Services Boundary. This situation requires Lake Oswego and the providers to work together to define future roles.
- An adequate future supply of high quality water and reasonably priced drinking water is an issue of regional concern for the Portland Metropolitan Area.

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GOALS, POLICIES, AND RECOMMENDED ACTION MEASURES

GOAL

The City shall ensure a reliable and adequate supply of high quality water to meet the existing and future needs of Lake Oswego.

POLICIES

1. Provide a sufficient supply of high quality water at adequate pressure to meet consumption and fire flow projections and emergency storage needs.

2. Ensure that Lake Oswego's water system is self supporting.

3. Ensure the quality of treated water meets or exceeds all state and federal standards.

4. Provide public fire hydrants with adequate flows and pressures necessary to afford fire protection to the City's residents, businesses and institutions.

5. Safeguard and enhance the Clackamas River watershed* as the City's primary water source, through coordinated efforts with other water users. The preservation of water quality shall be paramount.

6. Protect Lake Oswego's water rights on the Clackamas and Willamette Rivers.

7. Require developers to:

    a. Provide water service to meet domestic needs and fire flow requirements to all new development;
    b. Install all required public fire hydrants;
    c. Pay a systems development charge and other costs associated with extending service; and,
    d. Extend adequately sized water lines with sufficient pressure to the boundaries of the subject property where future extension of water service is anticipated or required.

8. Require unobstructed access to all public water lines and easements.

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9. Require all development in Lake Oswego to connect to the municipal water system unless the City and a water provider agree that adequate service can be provided more practically by the provider's facilities.

10. Ensure that water utility revenues are adequate to meet the operating and maintenance costs of the water system and to fund required capital projects.

11. Recognize that the City is the ultimate provider of water service within the Urban Services Boundary.

12. Require water providers and property owners outside the City to pay a systems development charge and a reimbursement fee prior to connecting to the City system.

RECOMMENDED ACTION MEASURES

i. Water storage facilities shall be designed and constructed, where practical, to minimize scale, bulk, and visual impacts on adjacent uses through methods such as setbacks, landscape screening, below grade construction and use of appropriate colors and materials.

ii. Work with other water providers within the Portland Metropolitan Area to ensure the Lake Oswego water service area and the region have an adequate future supply of high quality and reasonably priced drinking water.

iii. Ensure the costs of extending water lines and construction of other, related improvements accrue to those who benefit through measures such as:

   a. Connection fees based on the number of residential units or commercial or industrial equivalents;
   b. Methods to pay for needed line over-sizing and looping; and,
   c. Payment of a systems development charge.

iv. Ensure water storage and distribution facilities are adequately maintained to ensure a reliable supply at adequate flows and pressure, protect water quality and minimize water loss.

v. Reduce water consumption and water loss through effective conservation programs, the application of new technologies and ongoing maintenance and replacement of deteriorated lines.

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vi. Prepare a water system public facility plan and capital improvement program to prioritize extension and replacement of water lines, expansion of intake, treatment and storage capacity and other needed improvements.

vii. Develop agreements with other water providers which:

a. Define short and long term service provision roles for the City and other service providers;
b. Specify the terms and conditions of withdrawal of territory from other service providers and the transition of capital facility ownership and administration to the City;
c. Provide for coordination of plans and programs between the City and other service; and,
d. Ensure services are provided consistent with the City's adopted Public Facility Plan.

viii. Where practical, require property owners to eliminate private ground water wells in Lake Oswego as drinking water sources and require all development served by private wells to connect to the City's water system.