

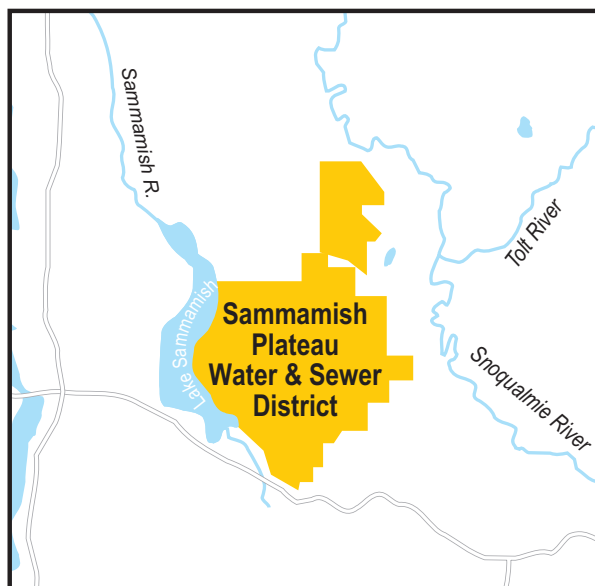
Executive Summary



The Sammamish Plateau Water and Sewer District (District) has prepared this Water Comprehensive Plan (Plan) as a road map to guide the District into the future and ensure that it continues to provide high-quality water service to the customers in its water service area. The Plan has been prepared in accordance with the Washington State Department of Health regulations as presented in WAC 246-290-100.

There have been several changes in both the state and the community since the District's last Water Comprehensive Plan was prepared. Some of these changes that affect the District's water system planning are:

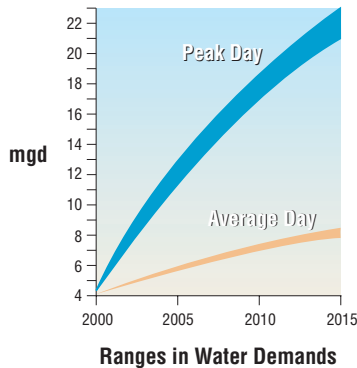
- **Growth Management Act (GMA), passed by the State Legislature in 1990.** The GMA requires municipalities to establish the boundaries within which "urban services" will be provided and to evaluate the capacity of their utility systems to accommodate the projected demands for these services.
- **Washington State's 1994 Conservation Planning Requirements.** This document specifies the requirements for the development of demand forecasts and conservation programs to better leverage existing water supplies.
- **Three moratoriums imposed on the issuance of Certificates of Water Availability between 1989 and 1998; currently, the District has established a Water Allocation process to issue the remaining available water certificates.** The rapid growth in the District's service area, combined with the limitation on receiving new water rights from the Department of Ecology, has forced the District to limit the Certificates of Water Availability that can be issued for new connections. Without new water supplies in the next 3 to 4 years, the District will be unable to serve any new water connections in the rapidly expanding area.
- **Incorporation of the City of Sammamish in 1999 and annexation of an area within the District by the City of Issaquah in 2000.** Portions of the District's service area are located within the two cities, which means that the District must coordinate activities with both cities and with King County, and must comply with applicable land use policies and standards.



The District, governed by a three-person Board of Commissioners, has been supplying drinking water to its customers on the Sammamish Plateau for more than 50 years. The District's water service area is composed of two distinct areas, designated the Plateau Zone and the Cascade View Zone. The system includes a total of 17 wells, 7 storage tanks, and more than 230 miles of transmission and distribution pipelines, and currently serves more than 40,000 people.

Policies

This Plan includes the consideration and development of new policies. In accordance with the guidance provided in the Growth Management Act, this Plan is



designed to be consistent with other applicable City and County plans. With this Plan, the District is seeking certification from the Department of Health to become a Satellite Management Agency and to provide contract services. To safeguard the health of its customers, the District is proposing to adopt a policy to chlorinate its water sources and maintain a chlorine residual in the distribution system. Also, in accordance with WAC 246-290-490, the District is proposing a cross-connection control program that authorizes the District to enforce the program and that is structured to protect the health of water consumers.

Demand Forecast

The key to developing an effective water system plan is the ability to forecast future demands on the system. The District is not a land use agency, and therefore must plan to meet the water demands that will result from land use and zoning designations established by King County and the Cities of Issaquah and Sammamish. To bracket the uncertainty associated with these demands, a range of forecasts was prepared using District data, assumptions of water conservation savings, and population projections developed by the Puget Sound Regional Council. Water demands in the District's service area are projected to reach a potential high of 21 million gallons per day by the year 2014. However, because there are a number of unknown factors, such as the effects of the Endangered Species Act, updated county population forecasts, and final zoning determinations by the cities, the population and water demand forecasts will be reassessed in 2003 or 2004.

Water Quality

The District currently complies with existing drinking water regulations, but in addition, the District continually looks to the future to anticipate upcoming regulations and how they might affect the utility and its operations. Recommendations in the Plan include:

- Monitor the development of the Groundwater Disinfection Rule
- Evaluate the need for and/or treatment alternatives for compliance issues associated with the Disinfectants/Disinfection Byproducts Rule
- Install chlorine disinfection in the entire system, regardless of source water, to protect customer health
- Install manganese sequestering/removal systems as required
- Consider fluoridation of the water system, particularly portions receiving surface water
- Collect additional data to confirm that the District complies with the lower federal arsenic detection limits



Water Conservation

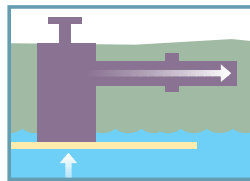
The District understands how important it is to conserve water and to make the best use of water resources. The District is committed to reducing its per-connection consumption by 1 percent per year over the next 10 years. This will be achieved by a combination of plumbing code revisions, rate increases and rate structure revisions, and other measures such as appliance rebates and irrigation audits. All of these measures are designed to comply with or exceed the state *Conservation Planning Requirements*. In addition, the District recently hired a

Conservation and Water Resources Coordinator to implement the proposed conservation program.



Water Resources

The District currently relies solely on groundwater to meet its demand, but the anticipated growth is expected to increase demand beyond the currently developed supplies. The District has evaluated more than 30 water supply alternatives, with combinations of groundwater, groundwater recharge, groundwater water rights, interties, reclaimed water, conservation, and surface water elements. After evaluating the myriad of supply combinations, the District decided to pursue three separate supply strategies, which contain common elements in the implementation phase during the first few years of the Capital Improvement Program. Because these strategies have common elements, the District can continue to monitor changes in both the regulations and the community while moving forward to procure additional supplies.



The three supply strategies all meet the District's needs and include: (1) continuing to pursue additional groundwater rights and groundwater recharge, (2) connecting to the regional surface water system south of the District and either blending surface water with groundwater or keeping a portion of the service area isolated from the surface water, or (3) connecting to the regional surface

water system north of the District, but isolating a portion of the service area to keep it solely on groundwater.

Of the supply strategies described above, the District's Board of Commissioners would prefer to continue to obtain and use groundwater supplies. However, implementation of the groundwater strategy is adversely affected by the current circumstances regarding Department of Ecology's approval of new groundwater rights.

To protect its existing groundwater sources, the District updated the Wellhead Protection Program for the Valley and Plateau wellfields. The District will work with the Cities of Issaquah and Sammamish to promote land use decisions that limit medium- and high-risk activities located within the designated wellhead protection areas.

Transmission, Distribution, and Storage Analyses

Transmission, distribution, and storage analyses were conducted through the development of an extensive hydraulic analysis. The hydraulic model evaluated current and future water requirements, analyzed present facilities, and anticipated the impact of future changes, such as the introduction of regional surface water into the service area. On the basis of the modeling, the District is proceeding with implementation of two additional reservoirs, which will provide the storage needed to meet the District's ultimate water demands, once an additional water source is procured. A contingency tank site has been identified in the event that additional supply is not obtained in a timely manner. While most of the District's transmission and distribution systems are adequate, some areas need to be increased in size to accommodate future water supply and to meet fire flow requirements. In addition, the District has embarked on a program to replace small-diameter PVC, steel, and galvanized pipes, as well as eventually to replace all AC pipe within the water system. A new emergency intertie with the City of Issaquah is also proposed.



Capital Improvement Program

The Plan contains the District's Capital Improvement Program that was developed to guide the growth of the utility's water system through the year 2005 and beyond. Four CIPs are included within the program to allow for variation of the next new water supply to be obtained by the District. Over the next 2 to 4 years, the Board will make decisions at key milestones about the supply alternatives. Included in the 6-year CIP are:

- Water supply strategies that range from development of additional groundwater facilities to a regional surface water connection
- Comprehensive water conservation program
- New reservoirs to give the District additional flexibility to meet demands
- Conveyance projects including new distribution and transmission main upgrades and replacements, and pump stations
- Treatment projects for disinfection and manganese removal

Capital Improvement Program

Description	2000 to 2005 ^a
Supply	\$2,284,000 to \$16,830,000
Conveyance Systems	\$10,412,000 to \$12,750,000
Reservoirs	\$5,880,000 to \$12,429,296
Pump Stations	\$3,261,000 to \$4,471,000
Treatment Systems	\$2,753,000 to \$3,201,000
General	\$9,530,000 to \$9,530,000
Total	\$34,120,000 to \$59,211,296

^a A range of costs is presented because the cost of the facilities will vary depending on the supply alternative chosen.

Operation and maintenance costs will vary from \$40,000 in 2000 to between \$513,000 and \$1,127,000 in 2005, depending on the supply facilities that are constructed. It is estimated that the District will require three additional staff members to operate and maintain the future proposed facilities.

Financial Evaluation

The District is in excellent financial health, and the financial plan presented herein ensures that the District can continue meeting all state financial requirements. In addition, the Board has adopted a position that Growth Should Pay for Growth, thereby keeping necessary rate increases to existing customers at the lowest possible level. To accomplish this, the Plan recommends that the General Facility Charge be increased by the end of 2001 to support the construction and implementation of future facilities. In addition, an equalizing charge will be imposed on each new Equivalent Residential Unit that connects to the water system. The remaining funds for capital expenditures will be obtained through revenue bonds and rate increases of 16.8 percent in 2002 and 2003 and 15.5 percent in 2004 and 2005. These rate increases are made under the assumption that the District will pay for a Regional Pipeline starting in 2002.

