

King County Water District No. 20  
2022 Water Comprehensive Plan (Final Draft December 2023)

Service Area

King County Water District No. 20 (District) was established on November 14, 1925. Since its initial establishment the District has expanded by annexation and merging with other districts. The most recent merger occurred in 2019 with King County Water District No. 45. As of December 2020, the District served 10,451 retail water customers and six wholesale accounts.

The District's Retail Water Service area is approximately 10,492 acres. This area serves portions of four cities (Burien, SeaTac, Seattle, and Tukwila) as well as unincorporated King County. The unincorporated King County portion is approximately 2,900 acres or 27.5 percent of the service area.

Water System

The water system is a fully metered network of transmission and distribution mains. Approximately 152 miles of water main distribute the water throughout the system with 15 connections to Seattle Public Utilities (source) and nine intertie connections with other purveyors. Additionally, the system has an underground reservoir, 22 pressure-reducing valve stations, and 1,525 fire hydrants.

The District has no formal potable water rights and purchases all potable water from Seattle Public Utilities (SPU). The District signed a Full Requirements Contract with SPU that will be in effect until January 1, 2062. Currently, there are fifteen (15) intertie connections to the SPU regional system. SPU's water comes from two regional river watersheds and the Highline Well Field.

Water Connections

As of December 2020, the District had a total of 9,899 retail water service connections comprised of 8,974 residential, 781 multi-unit, 611 commercial/school/government, and 93 irrigation connections, with six wholesale accounts.

Water Use Efficiency (WUE)

The District has implemented water conservation efforts since the late 1970s. It formally adopted its first conservation plan in October 1994, which was updated as needed. In 2010, in support of the Seattle Public Utilities Saving Water Partnership, the District adopted the 2010-2016 WUE program. The District's 2020 WUE program incorporates the previous water conservation strategy with an effort that focuses on the efficient use of water.

The District has experienced a reduction in water usage per ERU since the implementation of its conservation programs. More recently, water consumption per ERU has averaged 155 gallons (between 2016 and 2020) which is a decrease from an average of 167 gallons per day in 2008.

In addition to the mandatory elements, the District's WUE program includes:

- work with customers to identify possible water conservation measures;
- encourage customers to take advantage the SPU commercial toilet rebate program;
- provides customers with their consumption history on each water bill;
- monitors customer water use for water consumption irregularities;
- encourages and periodically provides water conservation items to single-family homes and the owners and managers of multifamily buildings for remodels or new construction;
- encourages and periodically provides water conservation items to business customers for remodels or new construction; and,

- through the Saving Water Partnership offers incentives such as free rain sensors and rebates for upgrading to new automatic irrigation system components.

#### Distribution System Leakage (DSL)

The District has continued to be under its policy of not exceeding 10 percent DSL. Over the past three years, DSL has been an average of 3.9 percent of the supply. To be conservative, DSL is projected at a rate of 6 percent for future planning purposes. To achieve this, the District has implemented an annual leak detection program that surveys approximately 55 miles of water main per year and allows the entire system to be surveyed every other year.

#### Capital Improvement Plan & Financial Analysis

All recommended projects fall within one of six categories: supply and source projects, pressure zone projects, storage facility projects, booster pump station projects, intertie projects, or distribution and transmission projects. Projects addressing immediate issues to improve system reliability and address fire flow requirements were given a high priority (short-term). Projects improving the capacity of the system and improving fire flows were given a medium priority (intermediate). Water main extensions and improvements related to proposed future development were given a low priority (long-term).

The Capital Improvements Plan identifies: 14 short-term (6-year) projects totaling \$13.42 million, 15 intermediate (7-10 years) projects totaling \$12.27 million, and 20 long-term (10-20 years) projects totaling \$9.68 million.

Many projects have been carried over from the 2010 Comprehensive Water System Plan. In most instances, projects have been delayed due to funding constraints, reprioritization, pending street projects, or other reasons.

The District has used a variety of capital funding sources over the years, including Public Works Trust Fund (PWTF) low-interest loans, revenue bonds, connection charges, rates, and reserves. Developer extensions are also a regular source of developer-funded improvements. For this planning period, short-term and immediate projects are funded through General Facilities charges, investment earnings, and rate-funded capital. Financing for long-term projects is not addressed through this plan.

#### Reclaimed Water and Regional Planning

As the District is not a sewer utility, it will depend on another entity for its reclaimed water source. The most likely user of reclaimed water is assumed be commercial customer class through irrigation (non-potable) meters. An attachment to the Plan provides an evaluation of potential uses.

The Plan includes language that demonstrates the District's support and potential participation in reclaimed water opportunities developed by appropriate utility providers. It further says that the District may review its service policies and regulations to encourage participation when the opportunity becomes available.

#### SEPA

The District completed a State Environmental Policy Act checklist and subsequently issued a Determination of Nonsignificance for the issuance of the plan on March 15, 2023; there were no appeals.

A review of the specific statutes, rules, codes, and policies to the water system plan is as follows:		
	<b>A. General water plan, King County Code (KCC) 13.24.010 and 13.28</b>	<b>Comments/findings</b>
(1)	Review is applicable to water utilities distributing or obtaining water in unincorporated King County, and/or utilities that are special purpose district created pursuant to Title 57 Revised Code of Washington (RCW). Is there a need to meet the consistency requirements of RCW 43.20.260?	<ul style="list-style-type: none"> <li>• The District does provide water in unincorporated King County.</li> <li>• The District's Water System Plan (Plan) is subject to King County Council approval under Title 57 RCW.</li> <li>• The Washington State Department of Health (DOH) needs to demonstrate consistency for the Plan under RCW 43.20.260.</li> </ul>
(2)	Consistency with King County Comprehensive Plan (KCCP) and development regulations, and policies including KCC 21A.28.040 development standards, provision of adequate supplies for anticipated growth and development.	<ul style="list-style-type: none"> <li>• The Plan is consistent as it considers zoning within Unincorporated King County and PSRC growth forecasts in projecting future water supply and capacity improvement needs and acknowledges King County provisions addressing interim water service within an urban area in situations where timely and reasonable service cannot be provided by the water purveyor.</li> </ul>
(3)	Infrastructure for existing and future service areas based on adopted land use map.	<ul style="list-style-type: none"> <li>• The Plan recognizes the adopted zoning of each of the jurisdictions.</li> <li>• The Puget Sound Regional Council growth forecasts were considered in formulating growth assumptions. These assumptions are incorporated into the modeling that identifies future needed infrastructure improvements.</li> </ul>
(4)	Review proposals for modified or expanded service areas based on compliance with utility's approved plan, and ability to meet duty to serve requirement.	<ul style="list-style-type: none"> <li>• The District is not proposing any modification to its Retail Service area.</li> </ul>
(5)	Sufficient information to demonstrate the ability to provide service consistent with the requirements of all applicable statutes, codes, rules, and regulations.	<ul style="list-style-type: none"> <li>• The Plan demonstrates an ability to provide service consistent with applicable statutes, codes, rules, and regulations.</li> <li>• The Plan provides detailed information on the operational and preventative maintenance activities and service policies demonstrating the District is proactively managing its resources and illustrating the District's ability to provide service consistent with applicable provisions.</li> </ul>

		<ul style="list-style-type: none"> <li>• The District’s water rights self-assessment form (Appendix M) indicates that the District’s forecasted water demands are within the maximum annual volume pursuant to its wholesale water contract with Seattle Public Utilities.</li> <li>• The total District Average Day Demands (ADD) and Maximum Day Demands (MDD) at the end of the 10-year planning horizon (2031) are estimated to be 2.93 MGD and 5.33 MGD, respectively, without water conservation, and 2.43 MGD and 4.42 MGD, respectively, with water conservation.</li> </ul>
(6)	Monitor and review effectiveness of purveyor conservation plans if within area covered by an approved Coordinated Water System Plan (CWSP).	<ul style="list-style-type: none"> <li>• The District is not within a CWSP.</li> <li>• The District adopted its first Water Conservation Plan in October 1994 and updated it through the year.</li> <li>• The consumption per ERU has decreased from an average of 167 gallons per day in 2008 to an average of 155 gallons per day between the years of 2016 to 2020.</li> </ul>
	<b>B. Consistency requirements: 13.24.060</b>	
(7)	State and local health requirements.	<ul style="list-style-type: none"> <li>• The water purveyor meets state and local health requirements per reporting in the SENTRY system.</li> </ul>
(8)	Creation and maintenance of logical service areas.	<ul style="list-style-type: none"> <li>• The service area boundary is logical.</li> </ul>
(9)	Elimination or prevention of duplicate facilities.	<ul style="list-style-type: none"> <li>• The District intends to provide service within its service area by means of direct connection.</li> <li>• Seattle Public Utilities provides water to the District for its direct service.</li> <li>• The District maintains interties with three adjacent water utility purveyors: Highline Water District, King County Water District No. 49, and King County Water District No. 125 – one emergency intertie; two metered/permanent open one-way interties.</li> </ul>
(10)	Promotion of most healthful and reliable services to the public.	<ul style="list-style-type: none"> <li>• Water purveyed by the District complies with DOH requirements.</li> </ul>
(11)	Provision of service at a reasonable cost, and maximization of use of public facilities.	<ul style="list-style-type: none"> <li>• The average residential bill is expected to remain within the affordability per EPA Median Household Income to water rate information.</li> <li>• The District’s 2022 rates are in the lower range of the compared local water utilities.</li> </ul>

		<ul style="list-style-type: none"> <li>• Does have a Senior/Low Income per unit (30 percent discount) on base water rate.</li> </ul>
(12)	King County Comprehensive Plan and other pertinent county adopted plans and policies.	<ul style="list-style-type: none"> <li>• The plan acknowledges zoning associated the areas the District serves in unincorporated King County and the cities of Burien, SeaTac, Seattle, and Tukwila. The plan also considers PSRC growth forecasts that are meant to reflect growth targets as adopted through the King County Countywide Planning Policies.</li> <li>• The plan also acknowledges the South King County Growth Water Management Plan and the WRIA 9 Habitat Plan.</li> </ul>
(13)	Basin-wide or multi-basin water plans, sewerage plans, or both when approved by the Washington State Department of Ecology (Ecology) or Department of Health (DOH).	<ul style="list-style-type: none"> <li>• The District has not been involved in multi-basin water plans.</li> <li>• The District neither collects nor treats wastewater.</li> </ul>
(14)	Applicable state water quality, water conservation, and waste management standards.	<ul style="list-style-type: none"> <li>• Applicable standards are met.</li> <li>• The District has experienced a reduction in water usage per ERU since the implementation of its conservation programs. More recently, water consumption per ERU has averaged 155 gallons (between 2016 and 2020) which is a decrease from an average of 167 gallons per day in 2008.</li> <li>• The District’s three-year rolling average distribution system loss (DSL) has been 3.9 percent of the supply. This is below the DOH requirement.</li> </ul>
(15)	Water Resources Act (RCW 90.54).	<ul style="list-style-type: none"> <li>• The District plans to continue and improve upon its existing conservation (efficiency) program in compliance with DOH’s Water Use Efficiency Rule.</li> </ul>
(16)	Growth Management Act (GMA) (RCW 36.70A).	<ul style="list-style-type: none"> <li>• The retail service area, as of December 2020, has a total of 9,899 retail water service connections comprised of 8,974 residential, 781 multi-unit, 611 commercial/school/government, and 93 irrigation connections.</li> <li>• The District receives an “unspecified” allotted maximum number of connections from the State Department of Health.</li> <li>• The entire service area is within the Urban Growth Area.</li> </ul>
(17)	Groundwater management plans.	<ul style="list-style-type: none"> <li>• This criterion is inapplicable because the District obtains all its source water from Seattle Public Utilities.</li> </ul>

(18)	Federally approved habitat conservation plans and recovery plans under the Endangered Species Act (ESA).	<ul style="list-style-type: none"> <li>This criterion is inapplicable because the District obtains all of its source water from the Seattle Public Utilities.</li> </ul>
(19)	Requirements for salmon recovery under Ch. 77.85 RCW, and other plans, including regional water supply or water resource management plans.	<ul style="list-style-type: none"> <li>This criterion is inapplicable because the District obtains all its source water from the Seattle Public Utilities.</li> </ul>
	<b>C: Countywide Planning Policies</b>	
(20)	FW-5: Adopt comprehensive plans that are consistent with the Countywide Planning Policies as required by the Growth Management Act.	<ul style="list-style-type: none"> <li>The assumptions incorporated into the water system plan consider Puget Sound Regional Council growth projections and acknowledge the adopted land use designations/zoning for the cities and unincorporated area the District serves.</li> </ul>
(21)	DP-14: All jurisdictions shall accommodate housing and employment targets by ensuring water, sewer, transportation, and other infrastructure plans and investments among agencies, including special purpose districts are consistent in location and timing with adopted targets as well as regional and countywide plans.	<ul style="list-style-type: none"> <li>The District Plan demonstrates that it can accommodate its proportional share of population and employment growth of the cities and unincorporated King County within its service area as forecasted by the Puget Sound Regional Council.</li> </ul>
(22)	PF-3: Coordinate among jurisdictions and service providers to provide reliable and cost-effective services to the public.	<ul style="list-style-type: none"> <li>District signed a Full Requirements Contract with Seattle Public Utilities that will be in effect through January 1, 2062.</li> <li>The District has fifteen (15) metered connections to the SPU supply system.</li> <li>In addition to interties with SPU, the District has nine interties with three adjacent water purveyors.</li> </ul>
(23)	PF-5: Develop plans for long-term water provision to support growth and to address the potential impacts of climate change on regional water resources.	<ul style="list-style-type: none"> <li>The increased water usage associated with population growth within the District can be met through the District's contract for wholesale water from Seattle Public Utilities through a contract that extends to January 1, 2062.</li> </ul>
(24)	PF-8: Plan and locate water systems in the Rural Area that are appropriate for rural uses and densities and do not increase the development potential of the Rural Area.	<ul style="list-style-type: none"> <li>The District's service area does not include any rural area.</li> </ul>
(25)	PF-9: Recognize and support agreements with water purveyors in adjacent cities and counties to promote effective conveyance of water supplies and to secure adequate supplies for emergencies.	<ul style="list-style-type: none"> <li>The District has agreements with Water District No. 49 and Water District No. 125 that provide an emergency water supply.</li> </ul>

(26)	PF-10: Implement water conservation and efficiency efforts to protect natural resources, reduce environmental impacts, and support a sustainable long-term water supply to serve the growing population.	<ul style="list-style-type: none"> <li>• The water conservation and efficiency efforts of the District meet the statutory minimum required by WAC Ch. 246-290.</li> <li>• The District’s three-year rolling average distribution system loss (DSL) has been 3.9 percent of the supply.</li> <li>• This is below the DOH requirement of 10 percent WAC Ch. 246-290.</li> </ul>
(27)	PF- 11: Encourage water reuse and reclamation, especially for high-volume non-potable water users such as parks, schools, and golf courses.	<ul style="list-style-type: none"> <li>• The Plan does not identify potential non-potable water users within the District.</li> <li>• The Plan does include statements of support for water reuse should potential reuse opportunities become available.</li> </ul>
<b>D: King County Comprehensive Plan (KCCP)</b>		
(28)	F-107: With special purpose districts or local service providers, plan for provision of services to rural areas and Natural Resource Lands, consistent with rural standards and needs.	<ul style="list-style-type: none"> <li>• The District’s service area does not include any rural area.</li> </ul>
(29)	F-201: All facilities and services should be provided in compliance with provisions and requirements of the Endangered Species Act and the Clean Water Act.	<ul style="list-style-type: none"> <li>• The District doesn’t directly obtain surface water; it obtains it through Seattle Public Utilities.</li> <li>• The District meets the Clean Water Act through its compliance with DOH regulations.</li> </ul>
(30)	F-209: In the Rural Area, services provided by agencies should support a rural level of development and not facilitate urbanization.	<ul style="list-style-type: none"> <li>• See #24 above.</li> </ul>
(31)	F-210: capital facility plans, and capital improvement programs prepared by all other agencies for services to unincorporated King County are consistent with the KC Comprehensive Plan.	<ul style="list-style-type: none"> <li>• The modeling that identified potential capital improvement incorporated land use and growth assumptions that reflected King County zoning and considered PSRC growth forecasts, consistent with the KC Comprehensive Plan.</li> </ul>
(32)	F-221: King County shall initiate a sub-area planning process with any service provider that declares, in its capital facilities plan, an inability to meet service needs within service area.	<ul style="list-style-type: none"> <li>• Not applicable as the District did not identify an inability to meet service needs within its service area.</li> </ul>
(33)	F-223: If a service deficiency is identified in a service provider's existing service area, King County and the applicable service provider shall remedy the deficiency through a joint planning process addressing capital improvement programs and long-term funding strategies.	<ul style="list-style-type: none"> <li>• Not applicable as the District did not identify an inability to meet service needs within its service area.</li> </ul>

(34)	<p>F-231: King County supports coordination of regional water supply planning, sales of excess water supplies among municipalities in the region, water quality programs and water conservation, reuse, and reclaimed water programs to support growth in the UGA and ensuring water availability for resource lands.</p>	<ul style="list-style-type: none"> <li>• District receives its water from Seattle Public Utilities. The Full Requirement Contract is through January 1, 2062. Full Water Requirements per the contract is “All of the water needed by Water Utility to meet the needs of its present and future water customers within its service area as shown in Water Utility’s comprehensive plan.”</li> <li>• Water is transmitted through the District’s system from Seattle Public Utilities to provide it to King County Water District 125.</li> <li>• The District has an intertie with Highline Water District to provide water as needed.</li> <li>• The District is committed to continuing its water conservation efforts.</li> </ul>
(35)	<p>F-232: Water utilities that obtain water from, or distribute water in unincorporated King County, and water utilities formed as special purpose districts under Title 57 RCW are required to submit water system plans to the county for review and approval and shall describe in their plans how they intend to meet their duty to provide service within their retail service area.</p>	<ul style="list-style-type: none"> <li>• The District does provide water to unincorporated King County areas.</li> <li>• The District is a special purpose district formed under Title 57 RCW.</li> <li>• The Plan states the District is committed to providing retail water service to all property within its defined retail service area in a timely and reasonable manner.</li> <li>• The Plan acknowledges its duty to serve within its retail service area if specific conditions are met.</li> <li>• The Plan defines Timely and Reasonable Water Service.</li> </ul>
(36)	<p>F-246: King County supports interties that allow the transfer of water resources among water utilities to meet the projected demands for growth where such interties meet the requirements of RCW 90.03.383 and are also consistent with any applicable locally adopted comprehensive plans, regional water supply plans, adopted groundwater management plans, watershed plans, approved Coordinated Water System Plans, Endangered Species Act response requirements and Clean Water Act requirements.</p>	<ul style="list-style-type: none"> <li>• See #22 above.</li> </ul>
(37)	<p>F-249: Utilities with more than one thousand service connections required to submit water system plans for approval to King County shall include an evaluation of reclaimed water use opportunities by completing King County's Water Reclamation Evaluation Checklist.</p>	<ul style="list-style-type: none"> <li>• A completed King County Water Reclamation Evaluation Checklist is provided in Appendix N – Potential Reclaimed Water User.</li> </ul>



<p>(38)</p>	<p>F-251: In its review of water system plans, the UTRC shall consider the criteria provided in K.C.C. 13.24.010, 13.24.060, and 13.24.070, and determine the plan's consistency with the following:</p> <ul style="list-style-type: none"> <li>a. Applicable provisions of the King County Comprehensive Plan, land use plans, and development regulations adopted under the Growth Management Act;</li> <li>b. Approved or adopted regional water resource plans, such as basin plans, groundwater plans, watershed-based conservation and recovery plans developed under ESA, salmon recovery plans developed under chapter 77.85 RCW, water resource plans developed under chapter 90.54 RCW, watershed plans developed under chapter 90.82 RCW, and a regional water supply plan or water resource management plan;</li> <li>c. The county's Regional Wastewater Services Plan; and</li> <li>d. Other applicable provisions of countywide plans managed by King County, as specified in UTRC guidance or checklists.</li> </ul>	<ul style="list-style-type: none"> <li>• The UTRC has reviewed the planning data and the District's operations and has found the Plan is consistent with:             <ul style="list-style-type: none"> <li>a. the King County Comprehensive Plan, land use plans, and development regulations;</li> <li>b. to the extent applicable, the basin plans, groundwater plans, and watershed-based conservation and recovery plans for the service area; and</li> <li>c. other applicable provisions.</li> </ul> </li> </ul>
<p>(39)</p>	<p>F-252: In reviewing proposals for modified and expanded service area boundaries for municipal water suppliers, the UTRC shall consider, in addition to Policy F-251:</p> <ul style="list-style-type: none"> <li>a. Compliance by the water system with its water system comprehensive plan, including water conservation elements;</li> <li>b. Whether it can meet its duty to provide service within its service area, as required under chapter 43.20 RCW; and</li> <li>c. Consistency with the service provisions of any applicable Coordinated Water System Plan, as adopted in King County Code Chapter 13.28.</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable as the District is not modifying its Retail Service area.</li> </ul>

(40)	F-253: Consistent with Countywide Planning Policies, public drinking water system surface water reservoirs and their watersheds should be managed primarily for the protection of drinking water, but should allow for multiple uses, including recreation, when such uses do not jeopardize drinking water quality standards. Public watersheds must be managed to protect downstream fish and agriculture resources.	<ul style="list-style-type: none"><li>• Not applicable as the District receives all of its water from Seattle Public Utilities.</li><li>• Water service needs met by surface water is through Seattle Public Utilities.</li></ul>
(41)	F-254: Groundwater-based public water supplies should be protected by preventing land uses that may adversely affect groundwater quality or quantity to the extent that the supply might be jeopardized. The county shall protect the quality and quantity of groundwater used as water supplies through implementation of Policies E-493 through E-497 where applicable.	<ul style="list-style-type: none"><li>• Not applicable as the District does receives all its water from Seattle Public Utilities.</li></ul>