

Our Water. Our Future.

A Summary of
Seattle's 2007 Draft Water System Plan

Seattle
 Public
Utilities

Summer, 2006

Dear Customer,

Every six years, Seattle Public Utilities develops new and updated information on our water system and talks to customers about it. We address many issues in this plan: How are we ensuring high-quality water for people and fish? Do we have enough water for the future? How could climate change impact that outlook? What is the right level of water conservation? How much do we need to invest to maintain our pipes and other facilities? What will this do to rates? These questions and others are what SPU and its wholesale customers want to talk to you about.

This August, we are holding a series of public meetings to answer your questions as best we can, share our analysis with you, and explain how we plan for the uncertainties ahead to guide investments and meet regulatory requirements.



Chuck Clarke
Director, Seattle Public Utilities

A Timeline for Decisions

Public review of the Draft 2007 Water System Plan is occurring from July 20 through August 31, 2006.

After the public review period, the draft plan will be reviewed by City of Seattle Mayor Greg Nickels and the Seattle City Council for approval by the end of the year. The King County Council will be reviewing it in the fall.

Upcoming dates include:

- August 29 – hearing before the Seattle City Council’s Environment, Emergency Management and Utilities Committee
- September 12 – vote by the Seattle City Council’s Environment, Emergency Management and Utilities Committee

What is the Water System Plan?



The Water System Plan provides direction for improving, managing, and operating the Seattle regional water system. It also describes how SPU will meet demand in the future for customers in Seattle and wholesale customers who provide water in neighboring cities and water districts. The plan shows how SPU can ensure high-quality water, meet demand in the future, maintain water services at low cost, and continue environmental stewardship into the future.

Six-year updates of the Water System Plan are a requirement of the Washington State Department of Health. The plan must be consistent with local and regional land use plans and meet the requirements of the Growth Management Act. It must also contain a conservation goal, which is a new requirement for municipalities.

The *Draft 2007 Water System Plan* will go through a public and agency review process. Comments from the public are due August 31st. Details about where to send comments are on the last page of this summary.

The draft plan includes important new and updated policies for SPU as well as action plans for each business area within the water utility. This *Draft 2007 Water System Plan* reinforces SPU’s commitments to:

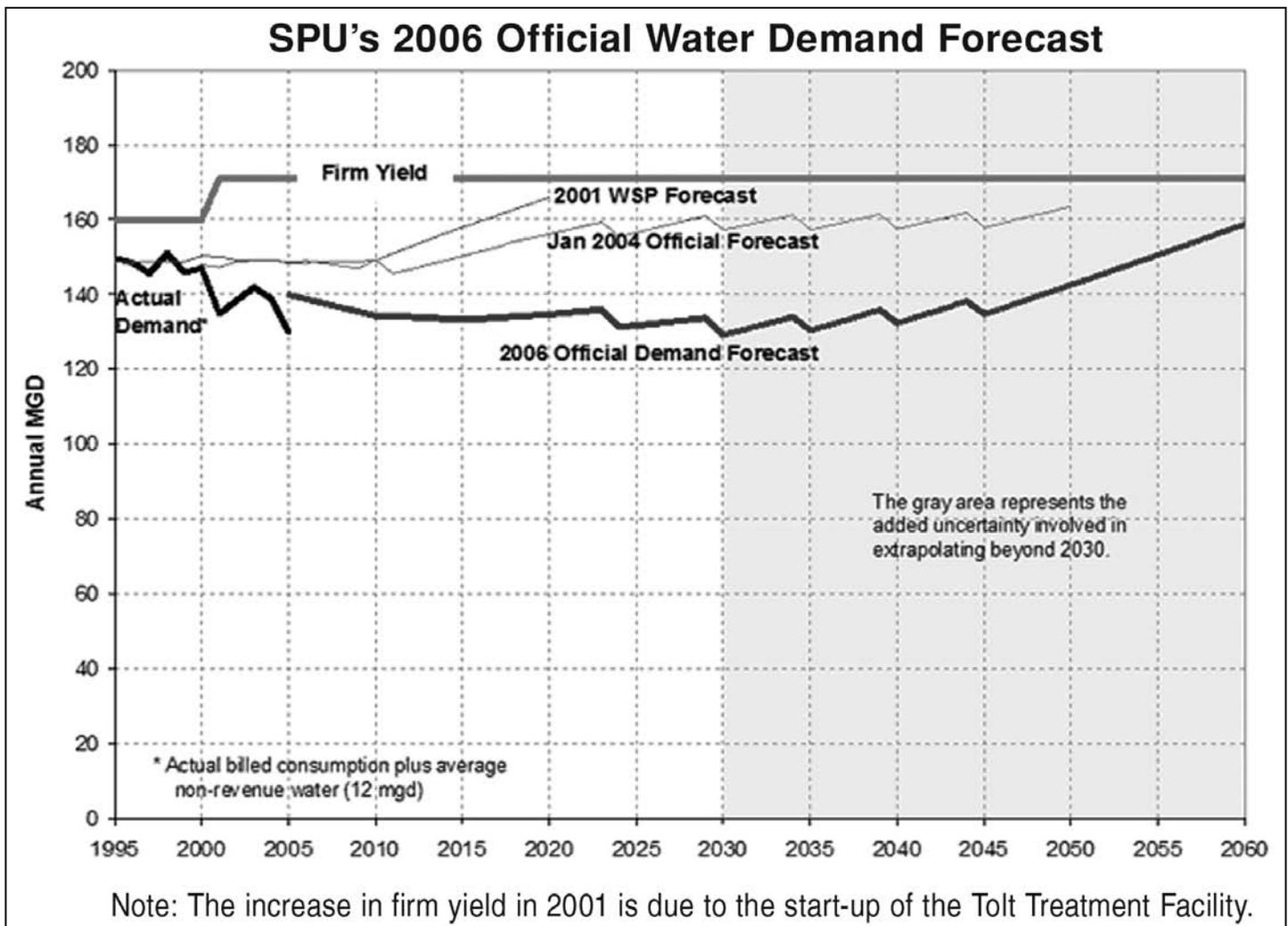
- Ensure long-term high-quality water supply while protecting instream resources.
- Use Asset Management principles in business decisions throughout the utility to stretch available resources and make the best use of resources in the long-term.
- Continue to be a leader in providing water conservation services to all of our customers.
- Focus on customers and incorporate their expectations in our business decisions.
- Work together with other regional water providers to address regional water issues.

Highlights You will find in the Water System Plan:

- Sets a twenty-year regional water conservation commitment through 2030 – 15 million gallons per day of average annual cumulative savings.
- Considers uncertainties about population growth, economic activity and climate change.
- Forecasts, as shown below, no new water supply source needed until after 2060 – due to declining requirements of Cascade Water Alliance and commitment to conservation.
- Estimates that water rates through 2015 will pay off financing for infrastructure improvements and ongoing operations, and be higher than the rate of inflation.
- Predicts that after 2015 water rates should stabilize and begin decreasing in real terms.



Landsburg Fish Passage on the Cedar River



As part of the 2007 Draft Water System Plan, we updated the forecast for water demand for our retail and wholesale customers. The bottom dark line is the 2006 official demand forecast. It indicates that demand for water will stay below current levels until the late 2040s when income effects and population growth cause total demand to increase. The two forecasts above that -- light demand lines for 2001 and 2004 -- show how much things have changed in the last few years. The main changes are the declining block contracts for the Cascade Water Alliance and additional water savings. The top line -- the firm yield line indicating water supply -- is at 171 million gallons a day. The bottom line: supply will exceed forecasted demand until beyond 2060.

Establishing Our Conservation Goal

For many years, SPU has been pursuing conservation as a way of extending precious water supplies to meet demands for people as well as instream resources. Our customers have made this effort a resounding success. Current water use is as low as it was in the early 1960s despite substantial growth in the population of our service area. A significant reason for this achievement is the implementation of many conservation efforts that so many of you have participated in.

Today, conservation is viewed as low-cost insurance for meeting potential future challenges from climate change, as a low-cost way to manage the resource, and as a low-cost way for customers to manage their bills. We also value the benefits that conservation

has for our natural resources. If more water is needed in the future, additional conservation would be considered as a supply option.

After a thorough review, SPU and our wholesale customers have selected a conservation goal of 15 million gallons a day of average annual savings (20-year cumulative total) from 2011-2030. The “2011-2030 Regional Baseline Conservation Program” will begin after the conclusion of our current “Regional 1% Conservation Program”, which ends in 2010. The savings from these conser-

Conservation Goal and Its Development
Water Conservation Goals and Other Savings
Average Annual Savings, in mgd

	2007	2008	2009	2010	2011	2012
Programmatic Conservation Goals						
1% Regional Program	1.12	1.12	1.12	1.12		
Seattle Ordinance 120532 (I-63 SO) ¹	0.63	0.63	0.63	0.63	---	---
2011-2030 Regional Baseline Conservation Program	---	---	---	---	0.75	0.75
Total Conservation Goal	1.75	1.75	1.75	1.75	0.75	0.75
Other Savings						
Plumbing Code	0.69	0.66	0.64	0.62	0.60	0.58
Price Savings ²	0.20	0.20	0.20	0.20	---	---
Total Other	0.89	0.86	0.84	0.82	0.60	0.58
Total Estimated Savings	2.63	2.61	2.59	2.57	1.35	1.33

¹ Savings are from SPU's direct service area and include the "Everyone Can Conserve" program, reclaimed water projects, reservoir covering and other system efficiencies, and conservation investments in City of Seattle facilities.

² After 2010, included in 2011-2030 Regional Conservation Program savings goal.

vation programs are included in our demand forecast.

With this new conservation goal, we are forecasting water demand to essentially remain flat over

the next 40 years. After that 40-year period we are predicting that water demand will once again rise and equal that of existing supply sources sometime after 2060.

Success in Water Conservation

Through 2005, 5.3 million gallons a day of savings have been achieved by the “Regional 1% Conservation Program” (Saving Water Partnership), which was developed in 2000 to help meet the region’s water supply needs. It is projected to save an additional 5.7 million gallons a day of average annual cumulative savings by the end of 2010. Highlights include:

- The WashWise program has issued over 50,000 rebates to residential customers as an incentive to purchase water – and energy – efficient clothes washers.
- Over 20,000 water efficient toi-

lets have been installed in homes, apartments, condos, businesses, office buildings, and industrial facilities. The popular “Toilet Round-up” recycled older, high water use fixtures.

- Over 3,000 efficient pre-rinse spray heads have been installed in food service facilities at no cost to customers producing significant water and energy savings.
- In 2005, 94,000 customers interested in reducing water use in their landscapes took advantage of classes, brochures and the “Lawn and Garden” hotline. “The Plant List”

was developed with assistance from the Great Plant Picks horticultural education program.

- The “Over-watering Soaks You” irrigation system rebate campaign resulted in 177,000 gallons per day of average annual savings by providing irrigation advice and rebates for upgrades in 2005.

Seattle also created 0.40 million gallons per day of average annual cumulative savings by retrofitting 14,382 low-income housing units from 2003-2005. The “Everyone Can Conserve” program is also set to run through 2010.

Planning for Uncertainty

Uncertainties surround future demand for water in the region and the potential impact of climate change on water supply. In the face of that uncertainty, as well as the uncertainty of population growth and degree of economic activity, SPU has analyzed a broad range of potential outcomes and arrived at some conclusions about supply and demand over the next 50 years. The most likely forecast tells us that demand will not exceed supply until well beyond 2060. Confidence in our demand forecast has increased over the years as we've continued to refine and develop better forecasting tools.

We recognize that beyond 2030 there is a significant degree of uncertainty in the data that comprises the demand forecast as indicated by the

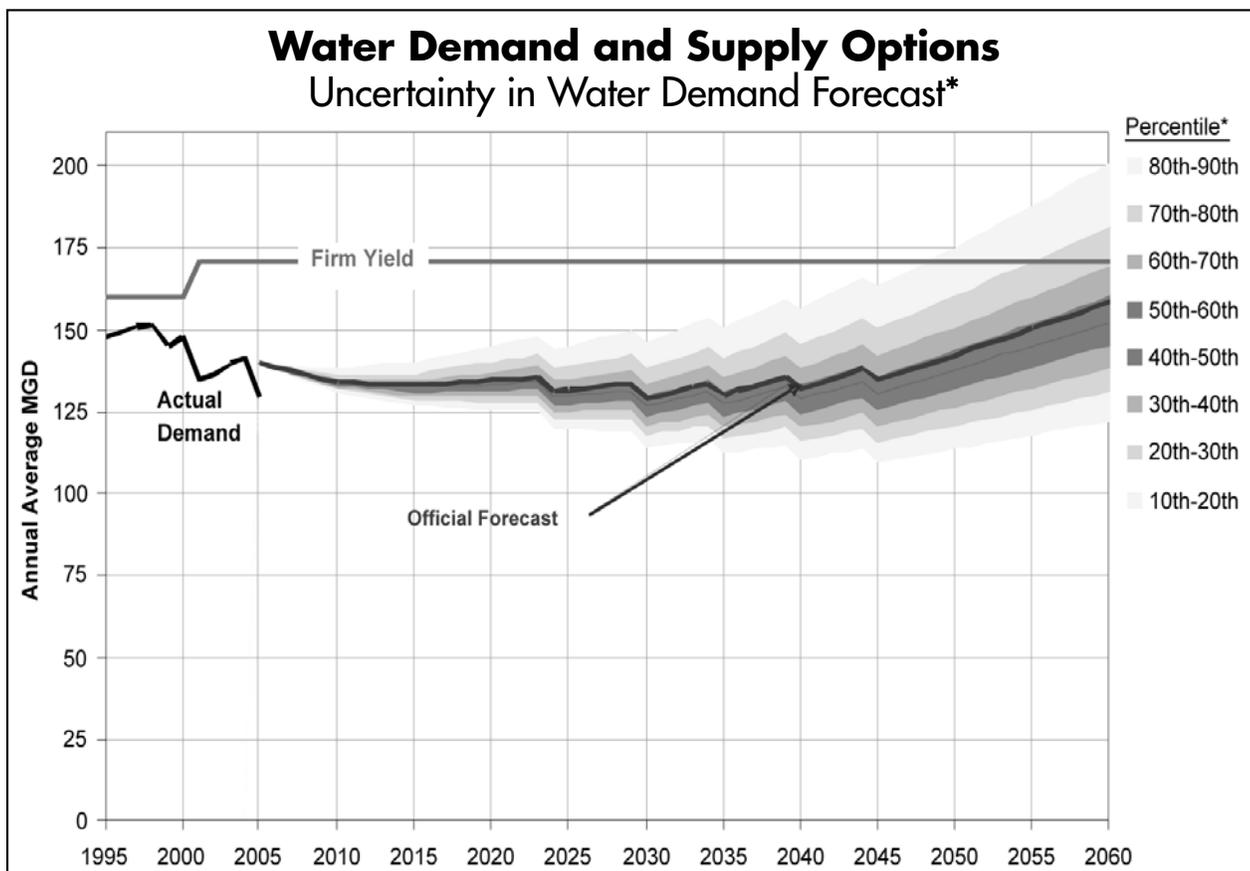
gray shading on the graph on page 3. Even under the highest, but unlikely demand forecasts, available supply is projected to remain higher than demand through 2048 as shown below.

We will update our forecast at least every six years and will have time to adapt to any subsequent changes that impact the supply-demand outlook. We are also pursuing ways to make our supply system more flexible and adaptive so as to better position ourselves for an uncertain future.

Seattle Public Utilities works with available information to come up with the best array of water supply options, should more water be needed in the future. Those options include everything from expansion of existing sources of supply in the

Cedar and Tolt Watersheds, increasing conservation, to reclaiming waste water. When the development of new supply is needed, preferred options will be those that provide high value at low cost.

SPU has carefully considered the potential impact of climate change in our water supply plans. A recent study by the University of Washington that used one scenario for carbon dioxide emissions showed that future climate change could lead to a 50% loss of snow pack in Seattle's watersheds, resulting in a 10% loss in supply by 2040 – or a loss of about 20 million gallons per day. If this scenario were to occur, Seattle would need a new supply source of water by 2055. As such, there is no need to invest in a new source at this time.



Note: Percentiles represent the probability that actual demand will be less than the value shown. Ranges reflect uncertainty in projected household, employment, price and income growth, price elasticity, income elasticity and conservation. Note that the Official Forecast is at about the 57th percentile.

A Look at SPU's Policies

One of the goals of the *2007 Draft Water System Plan* is to let our customers know what to expect of us, particularly with respect to the thinking behind our decisions.

We developed new and updated policies that will guide us in the future as issues arise. For example:

- We will use Asset Management principles to guide all capital as well as operating and maintenance financial decisions to deliver services effectively and efficiently.
- We will protect and enhance the environment affected by the utility while meeting SPU's responsibilities to provide drinking water.



- We will institute and maintain appropriate safeguards to protect against security risks and sustain emergency response readiness to ensure the continuity of drinking water services, including fire protection service.
- We will provide retail and wholesale drinking water service that responds to changing customer expectations centered on providing reli-



able, high-quality water, and guided by asset management principles.

- We will be a leader in seeking regional cooperation and efficiencies that benefit the customers of SPU, other water utilities, and the environment.
- We will select new sources of supply from all viable options, including conservation programs, improvements to system efficiencies, use of reclaimed water and conventional supply sources, based on triple-bottom-line analysis.
- We will base supply investment strategies on future outlooks for supply and demand that incorporate an evaluation of uncertainties using the best available analytical tools.
- We will plan to meet full water demands of "people and fish" under all but the most extreme or unusual conditions, when demands can only be partially met.
- We will manage drinking water quality from the water source to the customers tap in coordination with wholesale customers to protect public health, comply with drinking water quality regulations, and maintain and improve public confidence in the drinking water quality.



Financial Implications of Our Draft Plan

One component of the draft plan is an outlook of expenditures through 2030.

draft plan anticipates an increase in these expenditures to repair aging watermains.

Highlights include:

- The level of capital expenditures will taper off after 2015 when a number of major capital improvements are completed, including the reservoir burying program, improvements to the Morse Lake Dead Storage Facilities, and flood passage improvements at Landsburg.



- Capital expenditures identified in the outer years include ongoing programs to replace aging infrastructure.

- The issue of aging infrastructure is also expected to impact operations and maintenance expenses. The

- Average rates have been rising in recent years above the rate of inflation. This is in large part due to the financing of the major capital projects we've completed, including the two drinking water treatment plants, new Tolt pipelines and covering of in-town reservoirs. Rates through 2015 will pay for financing of infrastructure im-

provements and ongoing operations, and be somewhat higher than the rate of inflation.

- After 2015 rates are currently projected to stabilize and are expected to decrease in real terms.

Asset Management – SPU's Approach to Ensuring Wise Use of Resources

SPU strives to further integrate Asset Management in its business decisions to ensure available resources are used wisely for the greatest benefit for our customers. Asset Management means:

- Making decisions on capital projects and operations and maintenance work based on a long-term view of financial, social, and environmental costs and benefits – otherwise known as the “triple bottom line.”
- Establishing “service level” objectives – statements of desired per-

formance outcome that are high priority to SPU customers or required by regulations.

- Developing “strategic asset management plans,” which are three- to five-year documents that guide the management of assets to meet our objectives.
- Using “benchmarks” – a process in which the utility measures its performance or work processes against other utilities.

We Want to Hear from You

Seattle Public Utilities values its customers and community partners, and knows how critical you are to this process.

There will be four public meetings held in August 2006 on the *2007 Water System Plan* to inform customers about the details of the plan and provide a public forum for input. Check out our web-site at www.seattle.gov/util/About_SPU to view a copy of the draft plan, all the technical appendices as well as the SEPA document or call 206-684-3000.

Come and join us.

Meetings take place from 6:30 to 8:00pm August 15th

Delridge Community Center
August 16th

University Heights
Community Center

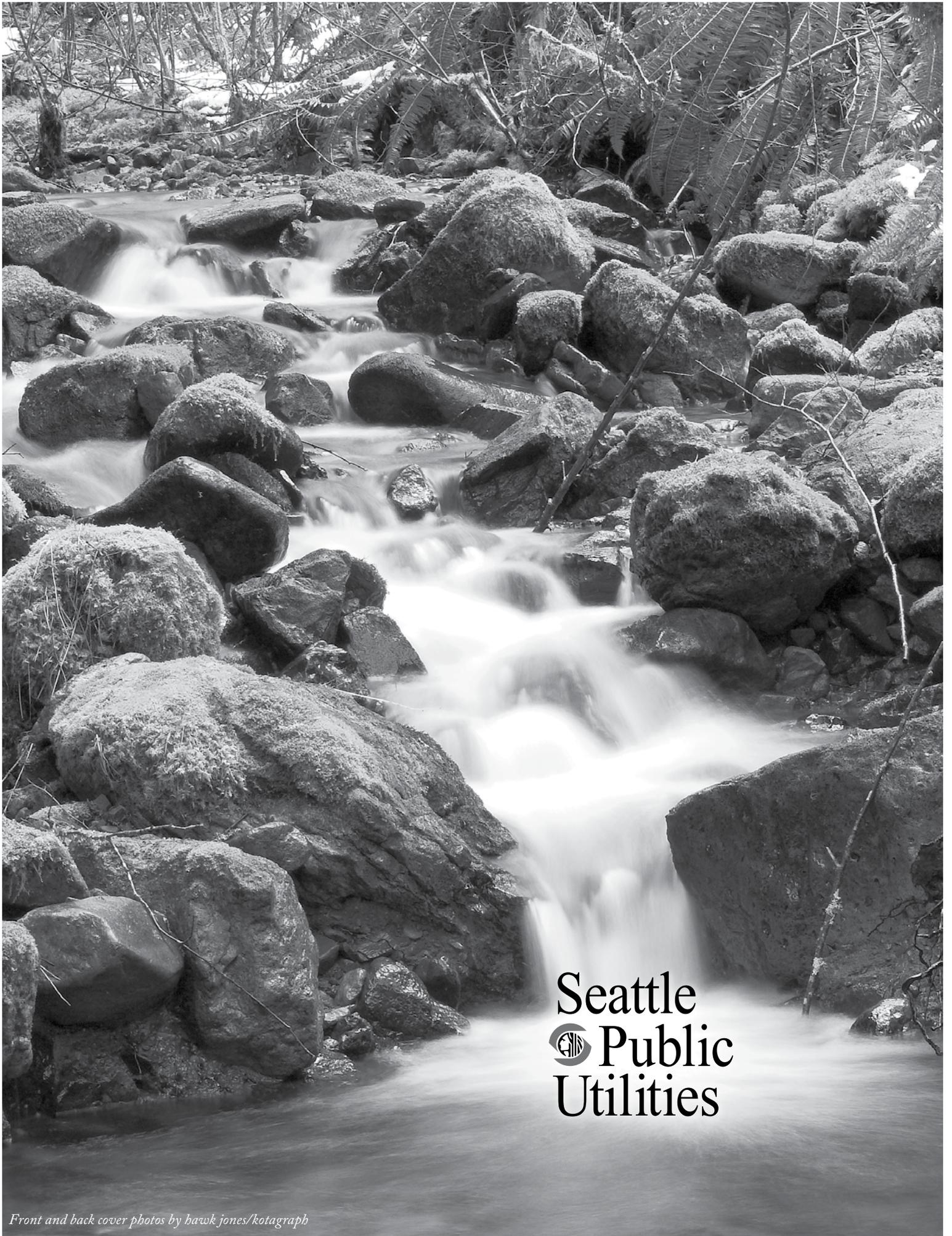
August 22nd

Woodinville Water District
August 23rd

Mercer Island
Community Center

Please send written comments on the *2007 Draft Water System Plan* during the public comment period which ends on August 31, 2006, to: Seattle Public Utilities
Attn: Joan Kersnar, Project Manager
PO Box 34018
Seattle, WA 98124-4018
Fax: (206) 386-9147
Or send email to:
joan.kersnar@seattle.gov

The analysis leading to the Draft 2007 Water System Plan was reviewed in 2005-2006 by SPU's Water System Advisory Committee. We thank them for their review, along with that provided by the Seattle Water Supply System Operating Board and Wholesale Customer Technical Forums.



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