



REPORT OF INDEPENDENT AUDITORS AND FINANCIAL  
STATEMENTS WITH REQUIRED SUPPLEMENTARY  
INFORMATION AND OTHER INFORMATION

**KING COUNTY WATER QUALITY ENTERPRISE FUND  
(AN ENTERPRISE FUND OF KING COUNTY, WASHINGTON)**

December 31, 2017 and 2016

## Table of Contents

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	PAGE
<b>Report of Independent Auditors</b>	1–2
<b>Management’s Discussion and Analysis</b>	3–13
<b>Financial Statements</b>	
Statements of net position	14–15
Statements of revenues, expenses, and changes in net position	16
Statements of cash flows	17–18
Notes to financial statements	19–48
<b>Required Supplementary Information</b>	
Pension plan information – schedule of the county’s proportionate share of the net pension liability	49–50
Pension plan information – schedule of the county’s contributions	51–52
Postemployment health care plan – schedule of funding progress for the plan	53
<b>Other Information (unaudited)</b>	
Supplemental schedule of debt service coverage ratios	54
Supplemental schedule of historical debt service coverage ratios	55

## **Report of Independent Auditors**

To the Metropolitan King County Council  
Seattle, Washington

### **Report on the Financial Statements**

We have audited the accompanying financial statements of the King County Water Quality Enterprise Fund (Water Quality), which comprise the statements of net position as of December 31, 2017 and 2016, and the related statements of revenues, expenses, and changes in net position, and cash flows for the years then ended, and the related notes to the financial statements.

### ***Management's Responsibility for the Financial Statements***

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### ***Auditor's Responsibility***

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

**Opinion**

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the King County Water Quality Enterprise Fund as of December 31, 2017 and 2016, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

**Other Matters**

*Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, the Schedule of the County's Proportionate Share of the Net Pension Liability, Schedule of the County's Contributions, and Schedule of Funding Progress for the Plan be presented to supplement the basic financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the financial statements, and other knowledge we obtained during our audit of the financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

*Other Information*

Our audits were conducted for the purpose of forming an opinion on Water Quality's financial statements. The Supplemental Schedule of Debt Service Coverage Ratios and Supplemental Schedule of Historical Debt Service Coverage Ratios are presented for purposes of additional analysis and is not a required part of the financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The other information has not been subjected to the auditing procedures applied in the audit of the financial statements and, accordingly, we express no opinion on it.

*Moss Adams LLP*

Seattle, Washington  
April 30, 2018

# King County Water Quality Enterprise Fund Management's Discussion and Analysis

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The management of King County Water Quality Enterprise Fund (Water Quality) presents to readers of its financial statements this narrative overview and analysis of its activities and financial performance for the fiscal years ended December 31, 2017 and 2016.

## The Sewer System

Water Quality provides regional wastewater treatment services to Western Washington in King County, part of Snohomish County, and part of Pierce County with a service area encompassing over 424 square miles. The major wastewater treatment facilities include three secondary treatment plants at West Point in Seattle, South Plant in Renton and the Brightwater Treatment Plant located near Woodinville and two smaller secondary treatment plants at Vashon Island and Carnation, 391 miles of interceptors, 47 pump stations, and 25 regulator stations. Other facilities include four combined sewer overflow (CSO) treatment plants and 39 CSO control locations. The sewer system collected and treated an average of 194 million gallons per day (MGD) in 2017 from approximately 1.7 million residents.

## Financial Highlights

During 2017, Water Quality provided sewage treatment services to 756,916 (based on sewer revenues that include sewer agency prior year adjustments) residential customer equivalents (RCE) compared to 756,430 in 2016 and 736,090 in 2015. An RCE is one single-family residence or an equivalent unit of 750 cubic feet of monthly water consumption for all other customers such as multifamily residential, commercial, and industrial properties. The capacity charge program added 12,484 new connections to its customer billing base in 2017. The program added 10,743 and 11,676 new connections in 2016 and 2015, respectively. In 2017, the average flow of the five treatment plants was 194 MGD with a peak daily flow of 605 MGD. Maximum system capacity was 862 MGD in 2017 and in 2016. The average daily flow fluctuated between a peak of 194 MGD in 2017 and 188 MGD in 2016. The annual fluctuation in flows largely depends on the amount of annual precipitation.

In 2017, resource recovery delivered 117,195 tons compared to 122,194 tons in 2016 of Loop® biosolids to customers for use in forest management, agriculture, and composting. Approximately 108 million gallons compared to 83 million gallons in 2016 of Class A reclaimed water was distributed for irrigation, urinals/toilets, municipal purposes, and wetland enhancement and about 621 million gallons of filtered, treated wastewater compared to 711 million gallons in 2016 were used for internal treatment plant processes. The permitted capacity for the South Plant reclaimed water facility is a filter feed loading of 1.3 MGD and the Brightwater permitted reclaimed water treatment capacity is 21 MGD.

Water Quality sold 2.4 million therms of natural gas to Puget Sound Energy from the South Treatment Plant in 2017 and 211 thousand therms in 2016. Recently, Congressional action under the Energy Independence Security Act and subsequent rule-making by the Environmental Protection Agency (EPA) created an opportunity for Water Quality to monetize the environmental benefit of its biofuel through the generation and sale of environmental attributes called RINS (Renewable Identification Numbers). In November 2016, King County entered an agreement with IGI Resources, Inc., for the sale of bio-methane from South Plant and the corresponding RINS. In 2017, this agreement resulted in \$5.6 million in revenue from which \$785 thousand was paid for operational costs to fulfill the administrative and operations requirements of the contract and to improve the operation of the biogas system. West Point Treatment Plant sold Seattle City Light 10.9 million kilowatt hours of electricity generated from digester gas in 2017 and 18 million kilowatt hours in 2016.

# King County Water Quality Enterprise Fund Management's Discussion and Analysis

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## Financial Highlights (continued)

The Industrial Pretreatment Program conducted 339 inspections and took 1,735 compliance samples in 2017 compared to 309 inspections and 1,500 compliance samples taken in 2016. The program currently tracks 585 facilities with discharge authorization permits and 111 significant industrial users compared to 552 facilities with discharge authorization permits and 114 significant industrial users in 2016.

In 1999, the Metropolitan King County Council adopted the Regional Wastewater Services Plan (RWSP) to construct additional capacity, protect public health and provide for future projected population growth in its service area through 2030. Major RWSP projects include improvements to the regional Conveyance system and CSO control projects. Total capital program expenditures were \$192 million in 2017 and \$167.5 million in 2016.

Water Quality currently has 39 CSO locations plus four CSO treatment facilities. Past investments conducted in concert with the City of Seattle have resulted in a significant reduction in combined sewer overflows from a baseline of 2.3 billion gallons per year in years 1980-1983 to an average of 1 billion gallons per year at present.

In 2012, the EPA entered into a consent decree with Water Quality to reduce CSO overflows to meet regulator's standards for discharges or treatment by 2030. The consent decree is based on Water Quality's 2012 Amended Long-term CSO Control Plan. The Plan amended the original total of 21 CSO projects to 13, of which four were completed in 2017. These 13 projects will control 18 CSO locations. Presently, nine CSO projects remain, four of which are currently underway. A joint project with the City of Seattle is being developed that will address two of the nine projects.

The EPA and Washington State Department of Ecology (DOE) will monitor Water Quality's progress with CSO control and work closely with the enterprise going forward to meet CSO control requirements. In accordance with the county's National Pollutant Discharge Elimination System permit for the West Point Treatment Plant and the consent decree, an update to the Plan is underway and will be completed by the end of 2018.

On February 9, 2017, during heavy rainfall in the Seattle area, the West Point treatment plant was operating at peak hydraulic capacity when a partial interruption of power supply occurred. The ensuing cascade of events caused several elements of the treatment plant to fail, culminating in flooding of the plant and leading to the emergency bypass of the treatment system and the discharge into Puget Sound of an estimated 180 million gallons of stormwater mixed with untreated sewage. Water Quality was able to restore primary treatment to the plant on February 28, 2017. On May 8, 2017, secondary treatment and full regulatory compliance was restored. Costs incurred in remediating the damage come under the terms of the County's property insurance coverage, with a \$250 thousand deductible and a maximum loss recovery of \$500 million per occurrence. The County Council commissioned the consulting engineering firm AECOM to provide an independent review of the West Point accident, which was received on July 18, 2017. Water Quality has worked closely with AECOM in its review of West Point and is committed to moving forward on its recommendations to improve redundancy, resiliency and implement a higher level of operational integration to manage its interdependencies. On September 12, 2017, the DOE issued a Notice of Penalty against Water Quality in the amount of \$361 thousand for permit violations stemming from the incident.

# King County Water Quality Enterprise Fund Management's Discussion and Analysis

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## Financial Highlights (continued)

The DOE also issued an Administrative Order requiring that six corrective actions be implemented amounting to \$1.4 million. Given the remedial actions already taken and already planned by Water Quality, including those set forth in the Administrative Order, the County has filed a Notice of Appeal with the Pollution Control Hearings Board regarding the Notice of Penalty. Water Quality did not appeal the Administrative Order.

The unprecedented electrical disturbance during the intense rainstorm precipitated electrical failures throughout the treatment plant resulting in catastrophic flood damage to equipment and building assets. In 2017, Water Quality received \$12.5 million in insurance proceeds offsetting the asset impairment loss of \$1.6 million and recovery costs of \$10.0 million resulting in a net gain of \$883 thousand. Water Quality incurred and capitalized an additional \$11.0 million in capital assets in 2017 and will capitalize related 2018 costs outstanding.

In April of 2016, the Magnolia CSO Control Facility entered service and functioned until a pipeline leak was detected on November 2, 2016. An extensive analysis was undertaken by Water Quality project management in conjunction with the project contractor to determine the root cause of the leak and a corrective course of action. The work continued until December, 2017 when the project team decided on a plan to destroy the existing pipe and replace it with a continuous pipeline. Water Quality determined the original pipeline a total loss and impairment in accordance with governmental accounting standards. The storage tank and other components of this project remain intact and depreciation for them continued since the expected life of the facility remains as originally capitalized. The carrying value of the fully retired pipeline was \$9.6 million. The costs associated with replacing the pipeline are still being determined and will be capitalized in 2018.

Water Quality operating revenues increased by 8.2 percent, or \$38.1 million, to \$502.6 million in 2017 from \$464.5 million in 2016 while operating expenses before depreciation and amortization increased by 2.6 percent, or \$3.6 million, to \$142.3 million in 2017 from \$138.7 million in 2016.

The monthly sewer rate increased to \$44.22 in 2017 from \$42.03 per RCE in 2016. In 2016, it stayed the same as 2015 at \$42.03 per RCE. The capacity charge rate increased to \$60.80 per RCE in 2017 from \$58.7 per RCE in 2016. Capacity charge revenues increased 16 percent, or \$11.4 million, to \$82.6 million in 2017 from \$71.2 million in 2016. The RCE's billed for sewer treatment services increased to 756,916 (based on sewer revenues that include sewer agency prior year adjustments) in 2017 from 756,430 in 2016. The County allows the capacity charge to be prepaid on a discounted basis at the customer's option. The discount rate reflects the 15-year mortgage and 10- and 20-year investment rates and was 2.9 percent in 2017 compared to 2.8 percent in 2016. In June, 2017, the County Council adopted a capacity charge of \$62.60, a 3 percent increase, and maintained the \$44.22 sewer rate for 2018.

The rate stabilization reserve, as mandated by the Metropolitan King County Council as part of its rate setting activities, permits Water Quality to set aside a portion of current revenue for future periods in order to moderate the impact of rate increases over time. The rate stabilization reserve was unchanged at \$46.3 million in 2017 and 2016. Future deposits to the rate stabilization reserve will decrease operating revenues and debt service coverage in the year of the deposit. Withdrawals will have the opposite effect of increasing operating revenues and debt service coverage in the year the rate stabilization reserve is reduced.

# King County Water Quality Enterprise Fund Management's Discussion and Analysis

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## Financial Highlights (continued)

Water Quality issued \$149.5 million in Sewer Refunding Revenue Bonds in 2017, which resulted in \$35.8 million in savings over the lives of the refunded issues or \$19.9 million in present value of debt service savings. In February 2017, Water Quality deposited cash in an irrevocable escrow to defease \$5.1 million of outstanding 2008 and 2009 sewer revenue bonds. With the defeasance of these bonds, revised covenants in the bond ordinance that establish the minimum ratings for surety bonds that the County may use as qualified investments in lieu of cash in the Bond Reserve have become effective. In December, 2017, Water Quality issued \$50 million in Junior Lien Sewer Revenue Bonds, Series 2017, used for new capital construction. Water Quality issued \$154.6 million in Limited Tax General Obligation Refunding Bonds which resulted in \$41.2 million in savings over the life of the refunded issue or \$33.5 in present value of debt service savings. On October 26, 2017, Water Quality issued \$100 million in Multi-Modal Limited Tax General Obligation Refunding Bonds to refund all outstanding 2010 Multi-Modal, Series A and B debt. Water Quality received \$26.5 million in low interest state loans in 2017 at rates of 2.41 and 2.72 percent.

In 2016, Water Quality issued \$781.2 million of Sewer Revenue and Refunding Bonds, which provided \$50.0 million for new construction. This resulted in \$168.9 million in savings over the lives of the refunded issues or \$113.5 million in present value of debt service savings. In November 2016, Water Quality remarketed \$100 million in 2015 Junior Lien Sewer Revenue Bonds, and changed the interest rate mode to a one-month variable rate from a one-year fixed rate. Water Quality received \$39.1 million in low interest state loans in 2016.

The results of operations for 2017 and 2016 produced a debt service coverage ratio on senior lien debt of 1.70 and 1.55, respectively, exceeding the coverage covenant requirement of 1.15 in both years. The total debt coverage ratio of 1.51 in 2017 and 1.41 in 2016 exceeded the 1.15 policy minimum in both years.

## Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to Water Quality's basic financial statements. The basic financial statements are comprised of the comparative statements of net position; statements of revenues, expenses and changes in net position; statements of cash flows; and the notes to the financial statements, which explain certain elements of the financial statements in greater detail.

Water Quality's financial statements provide information with respect to all of its activities using accounting methods similar to those used by private-sector companies. The statements provide both long-term and short-term information about Water Quality's financial status.

The comparative statement of net position presents information on all of Water Quality's assets, liabilities and deferred inflows/outflows of resources, with the difference presented as net position as of each year-end. Over time, the statements demonstrate Water Quality's financial health by providing a basis for the reader to evaluate capital structure, liquidity, and financial flexibility.

# King County Water Quality Enterprise Fund Management's Discussion and Analysis

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## Overview of the Financial Statements (continued)

The two most recent years' operating and non-operating revenues and expenses of Water Quality are accounted for in the statements of revenues, expenses and changes in net position. The statements illustrate the current and prior period results of operations and recovery of costs by receipt of fees, and are instrumental in demonstrating Water Quality's continued creditworthiness. All changes in net position are reported as soon as the underlying event occurs, irrespective of the timing of related cash flows. The receipt of monthly sewage treatment charges provides the principal support for Water Quality's activities. Sewage treatment charges of \$401.7 million provided 79.9 percent of operating revenues in 2017 and \$381.5 million provided 82.1 percent of operating revenues in 2016. Water Quality is a wholesale provider of sewage treatment services to 34 municipal and 3 non-municipal participants in King, Pierce, and Snohomish counties. The receipt of the monthly payments is governed by service agreements, the majority of which expire in July 2036.

The statements of cash flows report cash receipts, cash payments, and net changes in cash derived from operations, financing, and investment activities. From the statements, the reader can discern Water Quality's sources and applications of cash during 2017 and 2016, reasons for differences between operating cash flows and operating income, and the effect on the statements of net position from investing, capital, and financing activities.

The notes to financial statements provide additional information essential to obtain a full understanding of the data provided in the basic statements.

In the following comparative analysis of the financial statements, percentages and ratios were calculated and rounded using the actual detail from the financial statements.

# King County Water Quality Enterprise Fund Management's Discussion and Analysis

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## Financial Analysis of the Statement of Net Position

Comparative data, stated in millions of dollars:

	Years Ended December 31,		
	2017	2016	2015
Current assets	\$ 438.7	\$ 458.1	\$ 431.8
Noncurrent assets	242.4	217.1	245.2
Capital assets	4,077.8	4,081.5	4,106.5
Other	120.2	113.3	110.4
<b>Total assets</b>	<b>4,879.1</b>	<b>4,870.0</b>	<b>4,893.9</b>
Deferred outflows of resources	233.6	247.5	184.9
<b>Total assets and deferred outflows of resources</b>	<b>5,112.7</b>	<b>5,117.5</b>	<b>5,078.8</b>
Current liabilities	217.2	214.5	456.5
Noncurrent liabilities	4,144.8	4,216.1	4,065.9
<b>Total liabilities</b>	<b>4,362.0</b>	<b>4,430.6</b>	<b>4,522.4</b>
Deferred inflows of resources	54.1	47.5	53.2
<b>Total liabilities and deferred inflows of resources</b>	<b>4,416.1</b>	<b>4,478.1</b>	<b>4,575.6</b>
Net position - net investment in capital assets	180.7	154.2	191.1
Net position - restricted	235.9	202.4	201.6
Net position - unrestricted	280.0	282.8	110.5
<b>Total net position</b>	<b>\$ 696.6</b>	<b>\$ 639.4</b>	<b>\$ 503.2</b>

Net position serves as a useful indicator of Water Quality's financial position. As of December 31, 2017 and 2016, assets and deferred outflows of resources exceeded liabilities and deferred inflows of resources by \$696.6 million and \$639.4 million, respectively.

Of the total Water Quality assets and deferred outflows of resources, 79.8 percent or \$4,077.8 million were invested in capital assets such as treatment plants, pumping and regulator stations, interceptors, and other equipment at year-end 2017. For the year-end 2016, 79.8 percent or \$4,081.5 million were invested in capital assets. Water Quality uses its capital assets to provide wholesale wastewater collection and treatment services in King, Pierce, and Snohomish counties. Current operating and debt service requirements are met by operating and non-operating revenues composed of monthly sewage treatment charges, a capacity charge for new customers, other special-handling charges, miscellaneous operating revenues, and investment earnings.

## King County Water Quality Enterprise Fund Management's Discussion and Analysis

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### Financial Analysis of the Statement of Net Position (continued)

The net position increased by 8.9 percent or \$57.2 million in 2017 to \$696.6 million from \$639.4 million in 2016. Changes in net position are largely due to increased sewage disposal, capacity charge and other operating revenues. Water Quality also prevailed in a July 6, 2017 judgement by the Supreme Court which released a total of \$15.4 million in attorney's fees related to the litigation settlement between Vinci, Parsons, Frontier-Kemper (VPFK) and King County. Restricted net position increased by 16.6 percent or \$33.5 million in 2017 to \$235.9 million from \$202.4 million in 2016. The unrestricted net position decreased by \$2.8 million in 2017 to \$280.0 million from \$282.8 million in 2016.

In 2016, the net position increased by 27.1 percent or \$136.2 million to \$639.4 million from \$503.2 million in 2015. This change was primarily due to the release of restricted funds held in reserve and the recognition of the settlement income from the 2013 litigation settlement between VPFK and King County. On September 7, 2016, the Supreme Court issued an order denying VPFK's Petition for Review and thus, released \$129.6 million of the disputed \$144.3 million. Restricted net position increased by 0.4 percent or \$799 thousand in 2016 to \$202.4 million from \$201.6 million in 2015. The unrestricted net position increased by \$172.3 million in 2016 to \$282.8 from \$110.5 million in 2015.

### Financial Analysis of the Statement of Revenues, Expenses, and Changes in Net Position

Comparative data, stated in millions of dollars:

	Years Ended December 31,		
	2017	2016	2015
Sewage treatment fees	\$ 401.7	\$ 381.5	\$ 371.3
Rate stabilization	-	-	(12.0)
Capacity charge revenue	82.6	71.2	62.5
Other revenue	18.3	11.8	11.6
	<u>502.6</u>	<u>464.5</u>	<u>433.4</u>
Operating revenues	502.6	464.5	433.4
Operating expenses	319.3	315.0	301.0
	<u>183.3</u>	<u>149.5</u>	<u>132.4</u>
Operating income	183.3	149.5	132.4
Nonoperating (expenses)	(126.1)	(13.4)	(142.6)
Grant revenues	-	0.1	0.8
	<u>57.2</u>	<u>136.2</u>	<u>(9.4)</u>
Change in net position	57.2	136.2	(9.4)
Net position beginning of year	<u>639.4</u>	<u>503.2</u>	<u>512.6</u>
Net position end of year	<u>\$ 696.6</u>	<u>\$ 639.4</u>	<u>\$ 503.2</u>

# King County Water Quality Enterprise Fund

## Management's Discussion and Analysis

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### Financial Analysis of the Statement of Revenues, Expenses, and Changes in Net Position (continued)

While the statements of net position show changes in assets, liabilities, deferred inflows/outflows of resources and net position, the statements of revenues, expenses and changes in net position provide insight into the source of these changes.

During 2017, operating revenues increased by 8.2 percent or \$38.1 million to \$502.6 million from \$464.5 million in 2016. Operating expenses increased by 1.4 percent or \$4.3 million to \$319.3 million in 2017 from \$315.0 million in 2016.

In 2016, operating revenues increased by 7.2 percent or \$31.1 million to \$464.5 million from \$433.4 million in 2015. Operating expenses increased by 4.7 percent or \$14.0 million to \$315.0 million from \$301.0 million in 2015.

### Operating Revenues

In 2017, the \$20.2 million, 5.3 percent increase in sewage disposal fee revenue of \$401.7 million from \$381.5 million in 2016 was due to a 5.2 percent rate increase and growth in number of RCE's. Water Quality charged a monthly sewage treatment rate of \$44.22 per RCE in 2017, \$42.03 per RCE in 2016, and \$42.03 in 2015. In 2016, sewage disposal revenues increased by 2.7 percent or \$10.2 million to \$381.5 million from \$371.3 million in 2015.

A 3.6 percent increase in the 2017 capacity charge rate for new customers and continued growth in new connections contributed to a 16.0 percent, or \$11.4 million, increase in overall capacity charge revenue of \$82.6 million. In 2016, capacity charge revenue increased by 13.9 percent to \$71.2 million from \$62.5 million in 2015. Capacity charge early payoffs accounted for 28.6 percent of the 2017 capacity charge revenue compared to 25.4 percent in 2016 and 28.6 percent in 2015.

Other operating revenues totaling \$18.3 million in 2017 increased \$6.5 million, or 55.1 percent, due primarily to the sale of bio-methane credits known as RINS. In 2016, other operating revenue increased 1.7 percent, or \$200 thousand to \$11.8 million from \$11.6 million in 2015.

### Operating Expenses

In 2017, operating expenses, excluding depreciation, rose 2.6 percent or \$3.6 million to \$142.3 million compared to a 9.0 percent increase, or \$138.7 million in 2016. Utility and Service costs rose 13.2 percent, or \$4.2 million from \$31.9 million in 2016 to \$36.1 million in 2017 primarily due to consultant and engineering fees. Utility and Service costs in 2016 increased 6.7 percent or \$2.0 million from \$29.9 million to \$31.9 million. Electricity costs in 2017 rose by 1.4 percent, or \$220 thousand, to \$14.2 million from \$14.0 million in 2016. In 2016, electricity costs increased by 1.0 percent or \$129 thousand to \$14.0 million. After using methane gas to produce electricity for its Cogen system at South Treatment Plant in 2016, Water Quality returned to selling its methane in 2017. Chemical costs stayed the same at \$8.1 million in 2017 and 2016. Chemical costs increased by 12.5 percent or about \$903 thousand in 2016 to \$8.1 million.

# King County Water Quality Enterprise Fund Management's Discussion and Analysis

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## Financial Analysis of the Statement of Revenues, Expenses, and Changes in Net Position (continued)

Intragovernmental expenses grew 9.4 percent, or \$3.4 million, to \$39.2 million from \$35.8 million in 2016. Contributors to increases were rent and property management fees, in addition to attorney and insurance payments. In 2016, intragovernmental expenses increased by 4.1 percent or \$1.4 million to \$35.8 million from \$34.4 million.

## Non-operating Revenues and Expenses

Non-operating expenses (net) increased by \$113.6 million to \$127.0 million in 2017 from \$13.4 million in 2016. The main contributor to the non-operating expense increase (net) in 2016 was the release of \$129.6 million in restricted funds related to the VPFK legal action on the Brightwater project. Subsequently in 2017, the drop in non-operating expense (net) corresponds to the 2016 decision. In 2017, an additional \$15.4 million of disputed VPFK legal fees were settled in a July 6, 2017 Supreme Court decision, and were added to non-operating expense (net). Impaired asset costs totaling \$9.6 million for Magnolia CSO project, and net 2017 West Point flood event costs are included in non-operating expense (see Financial Highlights for additional information). In 2016, non-operating expenses (net) decreased by 90.6 percent or \$129.2 million to \$13.4 million from \$142.6 million in 2015.

## Capital Assets

At December 31, 2017, Water Quality's investment in capital assets, net of accumulated depreciation, was \$4,077.8 million, reflecting a decrease of \$3.7 million or 0.1 percent less than the balance of \$4,081.5 million at December 31, 2016. Capital assets net decrease from December 31, 2015 to December 31, 2016 was \$25.0 million or 0.6 percent.

Large 2017 construction project expenditures include:

- \$37.7 million for North Creek Interceptor
- \$13.6 million for Kent-Auburn Pacific Pump Station and Interceptors
- \$11.9 million for Georgetown Wet Weather Treatment Station
- \$11.0 million for West Point Treatment Plant
- \$10.4 million for Hanford Conveyance and Storage Tank

Large 2016 construction project expenditures include:

- \$16.7 million for Georgetown Wet Weather Treatment Station
- \$16.3 million for North Creek Interceptor
- \$13.7 million for Fremont Siphon Replacement
- \$10.9 million for Joint Ship Canal CSO
- \$ 8.9 million for Hanford Conveyance & Storage Tank

For more detailed information on capital assets, refer to Note 6 in the financial statements.

# King County Water Quality Enterprise Fund Management's Discussion and Analysis

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## Debt Administration

On February 22, 2017, Water Quality deposited cash in an irrevocable escrow to defease \$5.1 million in Sewer Revenue Bonds, Series 2008 and 2009. With the defeasance of this debt, revised covenants in the bond ordinance that establish the minimum ratings for surety bonds that the County may use as qualified investments in lieu of cash in the Bond Reserve have become effective.

Water Quality issued \$154.6 million of limited tax general obligation refunding bonds in October, 2017 with an average life of 9.6 years at an average rate of 4.3 percent and an effective rate of 2.6 percent and \$149.5 million of sewer refunding revenue bonds in December, 2017 with an average life of 15.9 years at an average rate of 5.0 percent and an effective rate of 3.6 percent. On October 26, 2017, Water Quality issued \$100 million in multi-modal limited tax general obligation refunding bonds to refund all outstanding 2010 Multi-Modal, Series A and B. On December 19, 2017 Water Quality issued \$50 million in Junior Lien Sewer Revenue Bonds, Series 2017 which was used for new capital construction.

Water Quality issued \$281.5 million of sewer revenue refunding bonds in February 2016 with an average life of 18.4 years at an average rate of 4.1 percent and an effective rate of 3.3 percent, and \$499.7 million of sewer improvement and refunding revenue bonds in October 2016 with an average life of 17.6 years at an average rate of 4.7 percent and effective rate of 3.2 percent. In November 2016, Water Quality remarketed \$100.0 million in Junior Lien Sewer Revenue Bonds changing their interest rate mode to a monthly variable rate from a one-year fixed rate.

Water Quality received \$26.5 million in low-interest loans from the State of Washington in 2017 and \$39.1 million in 2016. The new loans carry below-market rates of 2.41 percent and 2.72 percent with repayment terms of 20 years.

Water Quality has \$2.9 billion of sewer revenue bonds and variable rate revenue bonds outstanding at the end of 2017 and had \$2.9 billion of sewer revenue bonds and variable rate revenue bonds outstanding at the end of 2016. Revenue bonds are repaid from and secured by a pledge of earnings, revenues and money received by Water Quality from or on account of operation of the sewer system, including receipts from sewage treatment fees, and other income of Water Quality. Revenue bonds are not guaranteed by the full faith and credit of King County.

At the end of 2017, Water Quality has \$706.0 million of general obligation bonds and variable rate general obligation bonds outstanding and had \$755.9 million of general obligation bonds and variable rate general obligation bonds outstanding at the end of 2016. While the full faith and credit of King County guarantees repayment of principal and interest on general obligation bonds, they are paid from sewage treatment fees and other income.

King County received ratings of AAA from Standard and Poor's and Aaa from Moody's Investors Service for the limited tax general obligation bond issued in October, 2017. On September 19, 2017, Moody's Investors Service raised its rating of King County Sewer Enterprise parity revenue bonds to Aa1 from Aa2 and raised its rating of King County Sewer Enterprise junior sewer revenue bonds to Aa2 from Aa3. In 2016, Water Quality's bond ratings were Aa2 and AA+ by Moody's Investors Service and S&P Global Ratings, respectively.

# King County Water Quality Enterprise Fund Management's Discussion and Analysis

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## Debt Administration (continued)

At the time of the issuance of the sewer revenue bonds in December, 2017, Water Quality's bond ratings were:

<u>Moody's Investors Service</u> Aa1	<u>Standard &amp; Poor's</u> AA+
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As required by bond covenant, Water Quality maintains a bond reserve account, which is funded by cash and surety bond policies. At December 31, 2017, the cash balance in the reserve account was \$150.5 million and with a surety bond balance of \$29.6 million, totaled \$180.1 million. This balance exceeded the reserve account requirement of maximum annual debt service on the parity bonds by \$7.9 million. In June 2017, excess funds in the reserve account of \$10 million were transferred to the construction fund to pay for capital improvements. At the end of 2016, the bond reserve account balance was \$160.5 million. In addition to bond covenant reserves, Water Quality also maintains financial policy reserves. At December 31, 2017 and 2016, respectively, the rate stabilization, liquidity, and asset management financial policy reserves totaled \$81.1 million and \$79.9 million.

For more detailed information on debt, reference the notes to the financial statements.

## Debt Service Coverage Ratios

	<u>Year Ended December 31,</u>	
	<u>2017</u>	<u>2016</u>
Parity Debt	1.70	1.55
Total Debt	1.51	1.41

Two debt service coverage ratios closely monitored by bond rating agencies are coverage on parity debt and coverage on total debt. By bond ordinance, Water Quality sets sewer rates at a level adequate to provide net revenue equal to at least 1.15 times the annual debt service requirement on parity debt. Water Quality has an adopted policy to equal or exceed a ratio of at least 1.25 on parity debt or 0.10 above the ratio required by bond ordinance. Since 2001, Water Quality established a minimum coverage policy of 1.15 on total debt to further strengthen coverage performance.

## Requests for Information

This financial report is designed to provide an overview of Water Quality's financial condition as of the years ended December 31, 2017 and 2016. Questions concerning this report or requests for additional information should be addressed to Cheryl Lee, Chief Accountant for King County, 500 Fourth Avenue, Room 653, Seattle, WA 98104.

**King County Water Quality Enterprise Fund**  
**Statements of Net Position (in thousands)**

	December 31,	
	2017	2016
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$ 366,227	\$ 383,232
Restricted cash and cash equivalents	2,481	19,748
Accounts receivable, net	57,767	44,755
Due from other funds	2,087	1,292
Inventory of supplies	9,531	8,760
Prepayments	579	315
	<u>438,672</u>	<u>458,102</u>
<b>NONCURRENT ASSETS</b>		
Restricted cash and cash equivalents	<u>242,406</u>	<u>217,093</u>
Capital assets		
Building and land improvements	2,114,776	2,082,829
Artwork	6,045	5,700
Infrastructure and right of way	2,297,081	2,268,422
Plant in service and other equipment	1,145,510	1,146,609
Less accumulated depreciation	<u>(2,134,638)</u>	<u>(2,010,012)</u>
	<u>3,428,774</u>	<u>3,493,548</u>
Land and easements	259,657	256,048
Construction work in progress	<u>389,354</u>	<u>331,948</u>
	<u>4,077,785</u>	<u>4,081,544</u>
Other noncurrent		
Prepayments	-	2
Regulatory and other utility assets, net of amortization	116,750	109,550
Other assets	<u>3,488</u>	<u>3,725</u>
	<u>120,238</u>	<u>113,277</u>
Total assets	<u>4,879,101</u>	<u>4,870,016</u>
<b>DEFERRED OUTFLOWS OF RESOURCES</b>		
Deferred outflows on refunding	227,851	237,604
Deferred outflows on pension	<u>5,767</u>	<u>9,849</u>
Total deferred outflows of resources	<u>233,618</u>	<u>247,453</u>
<b>TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES</b>	<u><u>\$ 5,112,719</u></u>	<u><u>\$ 5,117,469</u></u>

**King County Water Quality Enterprise Fund**  
**Statements of Net Position (continued) (in thousands)**

	December 31,	
	2017	2016
<b>CURRENT LIABILITIES</b>		
Accounts payable	\$ 34,827	\$ 26,767
Retainage payable	2,481	2,049
Due to other funds	25	16
Interest payable	66,590	68,116
Wages and benefits payable	3,080	2,983
Compensated absences	669	608
Taxes payable	16	14
Unearned revenue	2,325	2,594
State loans payable	15,690	13,565
General obligation bonds payable	29,340	21,105
Revenue bonds payable	55,535	52,015
Environmental remediation costs	6,627	6,928
Deposits and other liabilities	-	17,698
	<u>217,205</u>	<u>214,458</u>
<b>NONCURRENT LIABILITIES</b>		
Compensated absences	10,596	10,865
Other post-employment benefits	1,631	1,583
Net pension liability	35,112	51,568
State loans payable, net	202,354	192,424
General obligation bonds payable, net	755,018	801,363
Revenue bonds payable, net	3,100,316	3,118,433
Environmental remediation costs	39,833	39,949
	<u>4,144,860</u>	<u>4,216,185</u>
Total liabilities	<u>4,362,065</u>	<u>4,430,643</u>
<b>DEFERRED INFLOWS OF RESOURCES</b>		
Regulatory credits - rate stabilization	46,250	46,250
Deferred inflows on pension	7,825	1,217
	<u>54,075</u>	<u>47,467</u>
Total deferred inflows of resources	<u>54,075</u>	<u>47,467</u>
<b>TOTAL LIABILITIES AND DEFERRED INFLOWS OF RESOURCES</b>	<u>4,416,140</u>	<u>4,478,110</u>
<b>NET POSITION</b>		
Net investments in capital assets	180,727	154,183
Restricted for		
Debt service	162,103	170,843
Regulatory assets and environmental liabilities	73,777	31,568
Unrestricted	279,972	282,765
	<u>279,972</u>	<u>282,765</u>
Total net position	<u>\$ 696,579</u>	<u>\$ 639,359</u>

**King County Water Quality Enterprise Fund**  
**Statements of Revenues, Expenses, and Changes in Net Position (in thousands)**

	Years Ended December 31,	
	2017	2016
OPERATING REVENUES		
Sewage disposal fees	\$ 401,650	\$ 381,513
Other operating revenues	100,923	83,028
Total operating revenues	<u>502,573</u>	<u>464,541</u>
OPERATING EXPENSES		
Sewage treatment, disposal, and transmission	102,680	95,429
General and administrative	39,583	43,269
Environmental related amortization	4,242	3,707
Depreciation and amortization	172,779	172,598
Total operating expenses	<u>319,284</u>	<u>315,003</u>
OPERATING INCOME	<u>183,289</u>	<u>149,538</u>
NONOPERATING REVENUES (EXPENSES)		
Investment earnings	4,386	4,019
Interest expense	(128,137)	(131,042)
Loss on disposal and impairment of capital assets	(4,250)	(19,100)
Other	1,932	132,697
Total nonoperating expenses	<u>(126,069)</u>	<u>(13,426)</u>
INCOME BEFORE GRANTS	57,220	136,112
Capital grants	<u>-</u>	<u>50</u>
CHANGE IN NET POSITION	57,220	136,162
NET POSITION		
Beginning of year	<u>639,359</u>	<u>503,197</u>
End of year	<u>\$ 696,579</u>	<u>\$ 639,359</u>

## King County Water Quality Enterprise Fund Statements of Cash Flows (in thousands)

	Years Ended December 31,	
	2017	2016
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Cash received from customers	\$ 492,400	\$ 462,654
Cash payments to suppliers for goods and services	(90,653)	(78,905)
Cash payments for employee services	(54,953)	(51,658)
Other receipts	12,500	-
Other payments	(22,661)	(8,995)
Net cash provided by operating activities	336,633	323,096
<b>CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES</b>		
Transfers out	(741)	(150)
Assistance to other agencies	(425)	(948)
Net cash used in noncapital financing activities	(1,166)	(1,098)
<b>CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES</b>		
Acquisition of capital and other utility assets	(175,138)	(171,138)
Proceeds from disposal of capital assets	62	72
Principal paid on capital debt	(86,944)	(78,980)
Interest paid on capital debt	(157,869)	(170,028)
Proceeds of new bond issuance	50,000	50,000
Proceeds of state loans	26,471	39,151
Cash payments for bond defeasance	(5,394)	-
Capital grants received	-	50
Net cash used in capital and related financing activities	(348,812)	(330,873)
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Interest on investments	4,386	4,019
Net DECREASE IN CASH AND CASH EQUIVALENTS	(8,959)	(4,856)
<b>CASH AND CASH EQUIVALENTS</b>		
Beginning of year	620,073	624,929
End of year	\$ 611,114	\$ 620,073

## King County Water Quality Enterprise Fund

### Statements of Cash Flows (in thousands)

	Years Ended December 31,	
	2017	2016
RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES		
Operating income	\$ 183,289	\$ 149,538
Adjustments to reconcile operating income to net cash provided by operating activities		
Depreciation and amortization	172,779	172,598
Other nonoperating revenue and expense	22,358	134,379
Changes in assets		
Accounts receivable	(13,011)	(7,738)
Due from other funds	(92)	(118)
Inventory of supplies	(771)	(335)
Prepayments	(265)	59
Other assets	(6,963)	135
Changes in deferred outflows of resources		
Deferred outflows on pension	4,082	(4,862)
Changes in liabilities		
Accounts payable	3,393	5,744
Retainage payable	82	18
Due to other funds	9	(95)
Taxes payable	2	2
Unearned revenue	(269)	527
Wages and benefits payable	134	364
Compensated absences	(208)	208
Other post-employment benefits	48	116
Net pension liability	(16,457)	12,683
Other liabilities	(18,115)	(134,360)
Changes in deferred inflows of resources		
Deferred inflows on pension	6,608	(5,767)
Total adjustments	153,344	173,558
NET CASH PROVIDED BY OPERATING ACTIVITIES	\$ 336,633	\$ 323,096

#### NONCASH INVESTING, CAPITAL, AND FINANCING ACTIVITIES

Water Quality issued bonds in 2017 to refund debt issued from 2008 to 2011. The \$356.4 million of bond proceeds and \$6.5 million of cash payments by Water Quality were placed in escrow for the defeasance of \$335.3 million of outstanding bond principal and \$30.5 million of interest.

Water Quality issued bonds in 2016 to refund debt issued from 2006 to 2011. The \$870.9 million of bond proceeds were placed in escrow for the defeasance of \$769.5 million of outstanding revenue bond principal and \$130.6 million of interest. The \$100.0 million of fixed rate junior lien bonds issued in 2015 were remarketed in 2016 to junior lien variable rate demand sewer revenue bonds.

# King County Water Quality Enterprise Fund

## Notes to Financial Statements

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### Note 1 – Operations and Accounting Policies

**Summary of operations** – The King County Water Quality Enterprise Fund (Water Quality) is an enterprise fund operated by the King County Department of Natural Resources and Parks in accordance with Chapter 35.58 of the Revised Code of Washington (RCW) to provide sewage treatment and water pollution abatement services to the urbanized areas of King County, Washington (the County).

Water Quality is an integral part of the County reporting entity and is included, as an enterprise fund, in the County's comprehensive annual financial report. As an enterprise fund, Water Quality is funded and operated separately from other operations of the County. Revenues, bond proceeds, and grants are restricted by purpose. Accordingly, Water Quality maintains separate accounting records and issues stand-alone financial statements.

Water Quality has long-term sewage disposal agreements with the cities and sewer districts that operate sewage collection systems within its service area. The monthly sewage disposal charge to the contracting cities and districts is based on Water Quality's estimated annual monetary requirements, including operating costs and debt service. Revenues from Water Quality's largest customer, the City of Seattle (Seattle Public Utilities), represent approximately 40 percent of total sewage disposal fees in 2017 and in 2016.

Water Quality purchases goods and services from other County agencies, including reimbursement of the County's general fund for a share of general government. Expenses incurred in doing business with other County agencies amounted to \$39.2 million and \$35.8 million in 2017 and 2016, respectively.

**Significant accounting policies** – Water Quality is accounted for using the flow of economic resources measurement focus similar to that of a private enterprise organized for profit. Water Quality's financial statements are prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) as applied to governmental units using the accrual basis of accounting. Under this method, revenues are recorded when earned, and expenses are recorded at the time liabilities are incurred. Water Quality, regardless of the timing of cash flows, applies all applicable Governmental Accounting Standards Board (GASB) pronouncements.

- a. **Cash and cash equivalents** – Water Quality considers as cash and cash equivalents all balances held with the King County Treasurer in the King County Investment Pool (the Pool), cash with escrow agents or held in trust, and petty cash. Unrealized gain or loss on Water Quality's proportionate share of the Pool is reported as a component of investment earnings.
- b. **Receivables and allowance for doubtful accounts** – Receivables include charges for services rendered by Water Quality or intergovernmental grants. All unbilled service receivables are recorded at year-end. The provisions for estimated uncollectible receivables are reviewed and updated at year-end. These provisions are estimated based on actual historical write-off trends and knowledge of specific circumstances that indicate collection of an account may be unlikely. As of December 31, 2017 and 2016, Water Quality's allowance for doubtful accounts was \$890 thousand and \$815 thousand, respectively.

# King County Water Quality Enterprise Fund

## Notes to Financial Statements

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### Note 1 – Operations and Accounting Policies (continued)

- c. **Due from and to other funds, interfund loans, and advances** – Due from and to other funds consists of current receivables and payables from or to other funds within the County. They typically arise from interfund goods and service transactions and reimbursements.

Interfund loans receivable and payable or advances from and to other funds represent authorized short-term and long-term, respectively, lending and borrowing arrangements within the County.

- d. **Inventory of supplies** – Inventory is recorded at the lower of cost or market using the weighted-average cost method. Materials and supplies are expensed as consumed. Inventory is written off in the year that it is determined obsolete.
- e. **Restricted assets** – In accordance with Water Quality’s bond resolutions, state law, King County codes, or other agreements, separate restricted assets have been established. These assets are restricted for specific purposes, including bond and state loan reserves.
- f. **Capital assets** – Capital assets are stated at cost, less accumulated depreciation and amortization. Water Quality’s capitalization threshold is: equipment at \$5 thousand; software and intangible assets at \$500 thousand, and buildings and improvements at \$100 thousand. Provision for depreciation and amortization are made on a straight-line basis over the estimated useful lives of Water Quality’s capital assets as follows:

Description	Estimated Useful Life
Buildings and improvements other than building	10–75 years
Cars, vans, and trucks	5–10 years
Data processing equipment	3–10 years
Heavy equipment	5–25 years
Sewer lines	20–50 years
Shop equipment	5–20 years
Software	3–10 years
Intangibles	35 years

Water Quality capitalizes certain interest income and expense related to borrowings until the assets are ready for their intended use. The amount capitalized is the difference between the interest revenue and interest expense associated with the applicable tax free borrowings. Total interest expense incurred was \$149.0 million and \$150.2 million during the years ended December 31, 2017 and 2016, of which \$13.2 million and \$12.1 million, respectively, was capitalized.

Repairs and maintenance are expensed as incurred; major renewals, replacements, and betterments are capitalized.

## King County Water Quality Enterprise Fund Notes to Financial Statements

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### Note 1 – Operations and Accounting Policies (continued)

Water Quality annually reviews long-lived assets for impairment to determine whether any events or circumstances indicate the carrying value of the assets may not be recoverable. During 2017, Water Quality recognized the asset impairment of \$11.2 million due to damage caused by West Point Treatment Plant flooding in February 2017 and Magnolia CSO control facility pipeline failure in November 2016. The Magnolia facility has been out of service since November 2016. The construction to fully replace the pipeline will occur in 2018, and the other assets at the facility, with a total 2017 year-end carrying amount of \$32.1 million, remain idle until the new pipeline enters service.

- g. **Compensated absences** – Employees earn vacation based upon their date of hire and years of service. They may accumulate a maximum of 480 hours or as bargained for by represented employees. Unused vacation at retirement or normal termination is considered vested and payable to the employee. Employees also earn up to 12 days of sick leave per year and may accumulate sick leave balances without limit. Employees or their beneficiaries are paid 35 percent of the accrued unused sick leave upon retirement or death. No amounts are paid for unused sick leave upon termination. Vacation pay and a portion of sick leave liabilities, including payroll taxes, are accrued.

Water Quality accrues estimated excess compensation liabilities to the Washington State Department of Retirement Systems based on an employee's accrued vacation and sick leave. An excess compensation liability is incurred when an employee whose retirement benefits are based in part on excess compensation receives a termination or severance payment defined by the State as excess compensation. This includes, but is not limited to, a cash-out of unused annual leave in excess of 240 hours and a cash-out of any other form of leave.

- h. **Rebatable arbitrage** – Water Quality's tax-exempt debt is subject to arbitrage restrictions as defined by the Internal Revenue Code. Arbitrage occurs when the funds borrowed at tax-exempt rates of interest are invested in higher yielding taxable securities. These interest earnings in excess of interest expense must be remitted to the federal government except when spending exceptions rules are met. The liability is recognized during the period the excess interest is earned. Water Quality has no liability as of December 31, 2017 and 2016.
- i. **Deferred outflows and inflows of resources** – Deferred outflows of resources represent consumption of resources that is applicable to future reporting periods and deferred inflows of resources represent acquisition of resources that is applicable to future reporting periods. Deferred outflows of resources include deferred losses on the refunding of bonds and certain amounts related to pension accounting. Deferred inflows of resources include certain amounts related to pension accounting and rate stabilization.
- j. **Operating and nonoperating revenues and expenses** – Operating revenues result from exchange transactions of Water Quality's activities. Expenses associated with providing wastewater treatment services and operating Water Quality's treatment facilities are considered operating. Nonoperating revenues result from nonexchange transactions such as operating subsidies and investment earnings.

# King County Water Quality Enterprise Fund

## Notes to Financial Statements

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### Note 1 – Operations and Accounting Policies (continued)

Water Quality provides water treatment services to cities and sewer districts and recognizes revenue when such service is provided. Additionally, the capacity charge revenue is generated from new connections to the sewer system. Both water treatment service and capacity charge rates are authorized by ordinances passed by the King County Council. Water treatment service and capacity charge revenues are recorded through cycle billings rendered to customers monthly. Water Quality accrues and records unbilled water service and capacity charge revenues in the financial statements for services provided from the date of the last billing to year end.

- k. **Debt-related amortization** – Bond premiums, discounts and refunding losses and gains are amortized over the life of the bonds using the outstanding principal balance method.
- l. **Capital grant revenues** – Pursuant to GASB Statement No. 33, *Accounting and Financial Reporting for Nonexchange Transactions*, grant revenues are reported separately from operating and nonoperating revenues as capital grant revenues. Water Quality received capital grant revenues of \$50 thousand for the year ended December 31, 2016.
- m. **Net position** – Resources set aside for debt service and other obligations, net of related liabilities, are classified as restricted net position on the statements of net position as their use is limited by externally-imposed restrictions. Net investments in capital assets are reported as a separate component of net position and consists of capital assets, net of accumulated depreciation, reduced by the outstanding balances of any bonds, notes, or other borrowings attributable to the acquisition, construction, or improvement of those assets. Any net position not subject to classification as restricted or invested in capital assets are reported as unrestricted.
- n. **Use of estimates** – The preparation of the financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the financial statements. Specific estimates have been made in the areas of allowance for uncollectible accounts, environmental remediation costs, useful lives of capital assets, pension liability and related deferred outflow and inflow of resources, and future interest rates. Actual results could differ from these estimates.

**New accounting standards** – The following GASB pronouncement was implemented during the current year.

GASB Statement No. 82, *Pension Issues—an amendment of GASB Statements No. 67, No. 68, and No. 73*, was issued in March 2016. This Statement addresses issues regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. The statement was implemented in 2017 by Water Quality.

## King County Water Quality Enterprise Fund Notes to Financial Statements

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### Note 2 – Deposits in King County Investment Pool

The King County Treasurer is the custodian of Water Quality's cash. Water Quality's cash on deposit with the King County Treasurer is pooled with cash from other County funds and other jurisdictions and are either deposited in the County's bank account or invested by the County. The King County Investment Pool (the Pool) functions essentially as a demand deposit account where Water Quality receives an allocation of its proportionate share of pooled earnings as interest.

The Pool is administered by the King County Treasury Operations Section and is not registered with the Securities and Exchange Commission (SEC) as an investment company. Oversight is provided by the King County Executive Finance Committee (EFC), which serves the role of the County Finance Committee as defined in RCW 36.48.070.

The County has deposit and investment policies addressing risks that have the potential to result in losses of deposits and investments. All deposits not insured by the Federal Depository Insurance Corporation (FDIC) are covered by the Public Deposit Protection Commission of the State of Washington (PDPC), a statutory authority established under chapter 39.58 RCW that governs public depositories and provides that "All public funds deposited in public depositories, including investment deposits and accrued interest thereon, shall be protected against loss, as provided in the chapter." The PDPC constitutes a multiple financial institution collateral pool that can make pro rata assessments to all public depositories within the state for their public deposits. PDPC protection is of the nature of collateral, not of insurance. Effective July 1, 2016, resolution 2016-1 adopted by the PDPC on May 31, 2016 allowed for well capitalized public depositories to collateralize uninsured public deposits at no less than fifty percent.

The custodial credit risk for deposits is the risk that Water Quality's deposits may not be returned to it in the event of a bank failure.

Assessing Water Quality's risk exposure, Water Quality's cash and cash equivalents balance of \$611.1 million and \$620.1 million were fully invested in the Pool as of December 31, 2017 and 2016, respectively. The County had demand deposits of \$38.1 million as of December 31, 2017, of which \$18.0 million was exposed to custodial credit risk as uninsured and uncollateralized. As of December 31, 2016, the County had demand deposits of \$149.0 million in insured and collateralized depository accounts at U.S. Bank and other banks under FDIC and PDPC as set out above.

**Credit risk – investments** – Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligation. As of December 31, 2017, the Pool was not rated by a Nationally Recognized Statistical Rating Organization (NRSRO). In compliance with state statutes, Pool policies authorize investments in U.S. Treasury securities, U.S. Federal agency securities and mortgage-backed securities, municipal securities and corporate notes (rated at least "A" by two NRSROs), commercial paper (rated at least the equivalent of "A-1" by two NRSROs), certificates of deposit issued by qualified public depositories, repurchase agreements, and the Local Government Investment Pool managed by the Washington State Treasurer's office.

# King County Water Quality Enterprise Fund

## Notes to Financial Statements

### Note 2 – Deposits in King County Investment Pool (continued)

The Pool's policies limit the maximum amount that can be invested in various securities. At 2017 and 2016 year-end the Pool was in compliance. The Pool's actual composition, as of December 31, 2017 and 2016, is as follows (in thousands):

Investment type	2017		2016	
	Total	Allocation Percentage	Total	Allocation Percentage
Repurchase agreements	\$ 296,000	4.30%	\$ 100,000	1.65%
Commercial paper	386,989	5.62%	249,505	4.12%
U.S. Agency discount notes	478,950	6.96%	440,879	7.29%
Corporate notes	1,019,747	14.81%	959,115	15.85%
U.S. Treasury notes	2,486,956	36.12%	2,456,511	40.60%
U.S. Agency notes	1,418,257	20.60%	1,203,362	19.89%
U.S. Agency collateralized mortgage obligations	4,922	0.07%	6,070	0.10%
Supranational coupon notes	377,600	5.48%	-	-
State treasurer's investment pool	415,634	6.04%	634,558	10.50%
	<u>\$ 6,885,055</u>	<u>100.00%</u>	<u>\$ 6,050,000</u>	<u>100.00%</u>

**Custodial credit risk – investments** – Custodial credit risk is the risk that in the event of the failure of the counterparty, the County will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. County policy mandates that all security transactions, including repurchase agreements, are settled “delivery versus payment (DVP).” This means that payment is made simultaneously with the receipt of the security. These securities are delivered to the County's safekeeping bank or its tri-party custodian banks. Exempt from the DVP policy are Certificates of Deposits (CDs) and funds placed with the State of Washington Local Government Investment Pool.

**Concentration of credit risk – investments** – Concentration of credit risk is the risk of loss attributed to the magnitude of a government's investment in a single issue. At 2017 year-end the Pool had concentrations greater than 5 percent of the total investment pool portfolio in the following issuers: Federal Farm Credit Bank, 9.7 percent, Federal Home Loan Mortgage Corporation, 8.6 percent, Wells Fargo Bank, 5.7 percent, and Federal National Mortgage Association, 5.6 percent.

The issues with concentrations greater than 5 percent of the pool portfolio at 2016 year-end were as follows: Federal Home Loan Mortgage Corporation, 5.7 percent, Federal National Mortgage Association, 7.5 percent, Federal Home Loan Bank, 5.2 percent, and Federal Farm Credit Bank, 8.9 percent.

**Interest rate risk – investments** – Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Through its investment policy, the County manages its exposure to fair value losses arising from increasing interest rates by setting maturity and effective duration limits for the Pool. The policy limit for the Pool's maximum effective duration is 1.5 years, and 40 percent of the Pool's total value in securities must have a maturity of 12 months or fewer. Securities in the portfolio cannot have an average life greater than five years at purchase. The combined effective duration of the liquidity and core portfolios was 1.022 years and 1.122 years at December 31, 2017 and 2016, respectively.

## King County Water Quality Enterprise Fund Notes to Financial Statements

### Note 2 – Deposits in King County Investment Pool (continued)

All securities are reported at fair value. Fair value reports are prepared monthly and distributed to all Pool participants. The Pool values participants' shares using an amortized cost basis. Monthly income is distributed to participants based on their relative participation during the period.

#### Fair Value Hierarchy

The County categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure fair value of the assets. Level 1 inputs are quoted prices in an active market for identical assets; Level 2 inputs are significant other observable inputs; and Level 3 inputs are significant unobservable inputs.

The following is a summary of inputs in valuing the County's investments as of December 31, 2017 and 2016.

#### KING COUNTY INVESTMENT POOL

Investments by Fair Value Level	Fair Value 12/31/2017	Fair Value Measurement Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Unobservable Inputs (Level 3)
Commercial paper	\$ 386,989	\$ -	\$ 386,989	\$ -
U.S. agency discount notes	478,950	-	478,950	-
Corporate notes	1,019,747	-	1,019,747	-
U.S. treasury notes	2,486,956	2,486,956	-	-
U.S. agency notes	1,418,257	-	1,418,257	-
U.S. agency collateralized mortgage obligations	4,922	-	4,922	-
Supranational coupon notes	377,600	-	377,600	-
<b>Subtotal</b>	<b>\$ 6,173,421</b>	<b>\$ 2,486,956</b>	<b>\$ 3,686,465</b>	<b>\$ -</b>
Investments Measured at Amortized Cost (Not Subject to Fair Value Hierarchy)				
Repurchase agreements	296,000			
State treasurer's investment pool	415,634			
<b>Subtotal</b>	<b>711,634</b>			
<b>Total investment in Investment Pool</b>	<b>\$ 6,885,055</b>			

# King County Water Quality Enterprise Fund

## Notes to Financial Statements

### Note 2 – Deposits in King County Investment Pool (continued)

#### KING COUNTY INVESTMENT POOL

Investments by Fair Value Level	Fair Value 12/31/2016	Fair Value Measurement Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Unobservable Inputs (Level 3)
Commercial paper	\$ 249,505	\$ -	\$ 249,505	\$ -
U.S. agency discount notes	440,879	-	440,879	-
Corporate notes	959,115	-	959,115	-
U.S. treasury notes	2,456,511	2,456,511	-	-
U.S. agency notes	1,203,362	-	1,203,362	-
U.S. agency collateralized mortgage obligations	6,070	-	6,070	-
<b>Subtotal</b>	<b>\$ 5,315,442</b>	<b>\$ 2,456,511</b>	<b>\$ 2,858,931</b>	<b>\$ -</b>
Investments Measured at Amortized Cost (Not Subject to Fair Value Hierarchy)				
Repurchase agreements	100,000			
State treasurer's investment pool	634,558			
<b>Subtotal</b>	<b>734,558</b>			
<b>Total investment in Investment Pool</b>	<b>\$ 6,050,000</b>			

U.S. Treasury Notes are valued using quoted prices in active markets and classified in Level 1 of the fair value hierarchy.

Commercial Paper, U.S. Agency Discount Notes, Corporate Notes, U.S. Agency Notes, U.S. Agency Collateralized Mortgage Obligations and Supranational Coupon Notes are valued using standard inputs including benchmark yields, reported trades, broker/dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers, and reference data including market research publications. Interactive Data also monitors market indicators, industry and economic events and corroborating market data and are classified in Level 2 of the fair value hierarchy.

State Treasurer's Investment Pool and Repurchase Agreement are overnight securities and are recorded at amortized cost.

## King County Water Quality Enterprise Fund Notes to Financial Statements

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### Note 3 – Restricted Assets

A significant portion of Water Quality’s assets are restricted as to use by legal and contractual provisions and by fiscal management policy. Restricted assets comprise \$244.9 million at December 31, 2017 and \$236.8 million at December 31, 2016, to comply with bond covenants and other requirements.

Liability amounts payable from restricted assets primarily consist of escrow and in-house retainage payables. These amounted to \$2.5 million and \$2.0 million at December 31, 2017 and 2016, respectively. The details of restricted and unrestricted cash and cash equivalents as of December 31, 2017 and 2016 are as follows (in thousands):

	2017	2016
Unrestricted cash and cash equivalents		
Operating funds	\$ 36,738	\$ 23,702
Construction funds	169,291	197,355
Bond funds	125,393	128,543
Policy reserves	34,805	33,632
	<u>366,227</u>	<u>383,232</u>
Restricted cash and cash equivalents		
Bond reserves	150,491	160,491
SRF loan reserves	11,612	10,352
Bond proceeds committed to construction	34,053	-
Retainage	2,481	2,049
Rate stabilization reserve	46,250	46,250
Legally restricted funds	-	17,699
	<u>244,887</u>	<u>236,841</u>
Total unrestricted cash and cash equivalents	<u>\$ 611,114</u>	<u>\$ 620,073</u>
Total restricted cash and cash equivalents	<u>\$ 611,114</u>	<u>\$ 620,073</u>

### Note 4 – Risk Management

Water Quality is exposed to a wide range of risks of loss, including those related to tort; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters.

Water Quality participates in three County internal service funds to account for and finance its (1) property/casualty, (2) workers’ compensation, and (3) employee medical and dental benefits, through self-insurance programs. The County contracts with a plan administrator to process medical and dental claims. County fund/claims managers, together with the Civil Division of the King County Prosecuting Attorney’s Office, are responsible for processing all tort and workers’ compensation claims.

During 2017 and 2016, Water Quality claims paid by the Insurance Fund of King County were \$248 thousand and \$154 thousand, respectively. In the past three years there was no occurrence that resulted in payment in excess of the self-insured retention of \$7.5 million.

# King County Water Quality Enterprise Fund

## Notes to Financial Statements

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### Note 4 – Risk Management (continued)

Claims settlements and loss expenses are accrued in the three internal service funds for the estimated settlement value of both reported and unreported claims. These funds are responsible for collecting interfund premiums from insured funds and departments, for paying claim settlements, and for purchasing certain policies. The County's internal service funds assess premiums attributable to Water Quality on the basis of claims experience, actuarial evaluation of future claims risk, and adequacy of available reserves. Premiums are recorded as an expense in the year paid or accrued.

Water Quality retains all risk associated with environmental claims.

### Note 5 – Long-Term Liabilities and Notes Payable

**Sewer revenue bonds** – As of December 31, 2017, bonds outstanding include \$2,875.3 million of serial and term bonds maturing from January 1, 2018 through January 1, 2052, bearing interest at stated rates of 1.00 percent to 5.50 percent per annum.

On February 22, 2017, the County defeased \$5.1 million of outstanding sewer revenue bonds 2008 and 2009.

On December 19, 2017, the County issued \$149.5 million in sewer revenue bonds, Series 2017, with an effective interest cost of 3.6 percent to advance refund \$159.7 million of outstanding 2010, 2011-A, 2011-B, and 2011-C sewer revenue bonds and 2009 general obligation bonds with an average coupon interest rate of 5.0 percent. The reacquisition price exceeded the net carrying amount of the refunded debt by \$11.2 million. This advance refunding was undertaken to reduce total debt service payments by \$35.8 million over the life of the bonds, resulting in an economic gain (difference between the present values of the old and new debt service payments) of \$19.9 million.

On December 19, 2017, the County issued \$50.0 million in junior lien sewer revenue bonds, Series 2017, with a one-month variable interest rate. On April 2, 2018 the King County council approved a January 1, 2048 maturity date for the bonds, correcting a January 1, 2040 date from the December 2017 sale motion.

On February 17, 2016, the County issued \$281.5 million in sewer revenue bonds, Series A, with an effective interest cost of 3.3 percent to advance refund \$278.8 million of outstanding 2007, 2008, 2009, and 2010 sewer revenue bonds with an average coupon interest rate of 4.4 percent. The reacquisition price exceeded the net carrying amount of the refunded debt by \$35.4 million. This advance refunding was undertaken to reduce total debt service payments by \$65.0 million over the life of the bonds, resulting in an economic gain (difference between the present values of the old and new debt service payments) of \$39.6 million.

On October 12, 2016, the County issued \$499.7 million in sewer revenue bonds, Series B, with an effective interest cost of 3.2 percent, to currently refund \$120.9 million of outstanding 2006 sewer revenue bonds and advance refund \$369.8 million of outstanding 2010, 2011-A, 2011-B, 2011-C sewer revenue bonds with a coupon interest rate of 5.0 percent. The reacquisition price exceeded the net carrying amount of the refunded debt by \$50.3 million. This refunding was undertaken to reduce total debt service payments by \$103.9 million over the life of the bonds, resulting in an economic gain (difference between the present values of the old and new debt service payments) of \$73.9 million.

## King County Water Quality Enterprise Fund Notes to Financial Statements

### Note 5 – Long-Term Liabilities and Notes Payable (continued)

On November 16, 2016, the County remarketed \$100.0 million in junior lien sewer revenue bonds, 2015 Series A and B, changing their interest rate mode to a one-month variable rate from a one-year fixed rate. These bonds have a final maturity date of January 1, 2046.

Bond issues provide funding for Water Quality's construction plan. Certain serial bonds may not be redeemed prior to maturity; other bonds may be redeemed after the lapse of specific periods of time. Amounts from the sewer revenue bond fund may be used to purchase term bonds prior to maturity.

The bonds are secured by a pledge of the revenue of the sewer system subject to payment of all operating and maintenance expenses of the sewer system. Payments from revenues of Water Quality are required to be made to the sewer revenue bond fund to pay interest and retire serial or term bonds on or before maturity. The amount required in the cash reserves and surety policies are based on the highest year of debt service over the life of all outstanding revenue bonds.

The following table summarizes Water Quality's revenue bonds (in thousands):

	Final Maturity	Interest Rates	Original Issue Amount	Outstanding at December 31, 2017
2001A-B Junior Lien Variable	1/1/32	(variable)	\$ 100,000	\$ 100,000
2010	1/1/50	2.00-5.00%	334,365	55,755
2011	1/1/41	5.00-5.125%	175,000	15,765
2011 Series B	1/1/41	1.00-5.00%	494,270	191,785
2011 Series C	1/1/35	3.00-5.00%	32,445	7,885
2011 Sewer Junior Lien Variable	1/1/42	(variable)	100,000	100,000
2012A Refunding	1/1/52	5.00%	104,445	104,445
2012B Refunding	1/1/35	4.00-5.00%	64,260	64,260
2012C Refunding	1/4/33	2.50-5.00%	65,415	65,415
2012 Sewer Junior Lien Variable	1/1/43	(variable)	100,000	100,000
2013A Refunding	1/1/35	2.00-5.00%	122,895	111,020
2013B Revenue and Refunding	1/1/44	2.00-5.00%	74,930	61,020
2014A Refunding	1/1/47	5.00%	75,000	75,000
2014B Refunding	7/1/35	1.00-5.00%	192,460	190,790
2015 Sewer Junior Lien Variable	1/1/46	(variable)	100,000	100,000
2015A Refunding	7/1/47	3.00-5.00%	474,025	472,325
2015B Refunding	1/1/46	4.00-5.00%	93,345	85,220
2016A Refunding	7/1/41	4.00-5.00%	281,535	278,975
2016B Refunding	7/1/49	4.00-5.00%	499,655	496,165
2017A Refunding	7/1/49	5.00%	149,485	149,485
2017B Sewer Junior Lien Variable	1/1/48	(variable)	50,000	50,000
			<u>\$ 3,683,530</u>	<u>\$ 2,875,310</u>

**General obligation bonds** – As of December 31, 2017, bonds outstanding include \$706.0 million of serial and term bonds maturing January 1, 2018 through 2040, bearing interest at stated rates of 2.00 percent to 5.25 percent per annum.

# King County Water Quality Enterprise Fund

## Notes to Financial Statements

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### Note 5 – Long-Term Liabilities and Notes Payable (continued)

Certain serial bonds cannot be redeemed prior to maturity; other bonds may be redeemed after the lapse of specific periods of time.

On October 25, 2017, the County issued \$154.6 million in general obligation refunding bonds, Series 2017, with an effective interest cost of 2.6 percent to advance refund \$175.6 million of 2008 general obligation bonds, with an average coupon interest rate of 4.3 percent. The reacquisition price exceeded the net carrying amount of the refunded debt by \$6.6 million. This advance refunding was undertaken to reduce total debt service payments by \$41.2 million over the life of the bonds, resulting in an economic gain (difference between the present values of the old and new debt service payments) of \$33.5 million.

On October 26, 2017, the County issued \$100.0 million in multi-modal general obligation refunding bonds, Series 2017A and Series 2017B, with a one-month variable rate, maturing on January 1, 2040. The bonds refunded all outstanding 2010 Series A and B debt.

The following table summarizes Water Quality's general obligation bonds (in thousands):

	Final Maturity	Interest Rates	Original Issue Amount	Outstanding at December 31, 2017
2008 LTGO	1/1/34	3.25-5.25%	\$ 236,950	\$ 29,615
2009B LTGO	7/1/39	5.00-5.25%	300,000	14,380
2017A-B Multi-Modal LTGO	1/1/40	(variable)	100,000	100,000
2012A LTGO	1/1/25	2.00-5.00%	68,395	61,640
2012B LTGO	1/1/29	5.00%	41,725	41,725
2012C LTGO	1/1/34	5.00%	53,405	53,405
2012F LTGO	12/1/22	2.20%	3,010	3,010
2015A LTGO	7/1/38	2.00-5.00%	247,825	247,620
2017A LTGO	1/1/34	4.00-5.00%	154,560	154,560
			<u>\$ 1,051,310</u>	<u>\$ 705,955</u>

**State loans** – Water Quality has received loans from the Washington State Department of Ecology under the Water Pollution Control State Revolving Fund Loan Program and the Washington Public Works Trust Fund. The loans require annual payments of principal and interest from 2018 through 2037 and bear interest at stated rates from 0.0 percent to 3.1 percent. As of December 31, 2017, the balance due on all state loans is \$218 million. Water Quality maintains separate cash reserves of \$11.6 million as of December 31, 2017. These reserves are treated as restricted, being required under the Revolving Fund Loan Program.

## King County Water Quality Enterprise Fund Notes to Financial Statements

### Note 5 – Long-Term Liabilities and Notes Payable (continued)

At December 31, 2017, the required principal and interest payments for all classes of long-term debt are as follows (in thousands):

Year(s) Beginning	Revenue Bonds		General Obligation Bonds		State Loans		Total
	Principal	Interest	Principal	Interest	Principal	Interest	
January 1, 2018	\$ 55,535	\$ 123,038	\$ 29,340	\$ 31,696	\$ 15,690	\$ 4,741	\$ 260,040
January 1, 2019	63,170	123,931	21,760	32,617	16,126	4,439	262,043
January 1, 2020	62,675	120,867	22,900	31,706	15,936	4,131	258,215
January 1, 2021	59,100	117,949	15,800	30,556	15,830	3,825	243,060
January 1, 2022	61,855	115,145	29,885	29,497	15,085	3,517	254,984
January 1, 2023-2026	268,490	429,262	125,955	103,006	53,364	11,042	991,119
January 1, 2027-2031	411,335	456,345	179,420	93,145	49,200	7,751	1,197,196
January 1, 2032-2036	602,690	330,789	142,480	51,499	36,132	2,063	1,165,653
January 1, 2037-2041	471,350	217,741	138,415	18,522	680	3	846,711
January 1, 2042-2046	625,950	105,893	-	-	-	-	731,843
January 1, 2047-2051	183,295	19,897	-	-	-	-	203,192
January 1, 2052	9,865	247	-	-	-	-	10,112
	<u>\$ 2,875,310</u>	<u>\$ 2,161,104</u>	<u>\$ 705,955</u>	<u>\$ 422,244</u>	<u>\$ 218,043</u>	<u>\$ 41,512</u>	<u>\$ 6,424,168</u>

The future annualized interest payments for the variable rate revenue bonds are based on an interest rate of 5.4 percent, which represents 90 percent of the long-term interest rate assumed by the County for financial planning purposes.

**Variable rate general obligation and revenue bonds** – The variable rate bonds, 2001 Series A and Series B revenue bonds are supported by a periodically renewable letter of credit that expires September 30, 2020. On October 26, 2017, the County issued \$100.0 million in multi-modal general obligation bonds, Series 2017 A and B to refund Series 2010 A and B. On December 19, 2017, the County issued \$50.0 million in junior lien sewer revenue bonds, Series 2017 to fund capital programs. The variable rate bonds, 2011, 2012, 2015 Series A and Series B, Series 2017 and Series 2017 A and B do not have liquidity facilities.

**Financial policy reserves** – In addition to bond reserves related to Sewer Revenue Bonds, Water Quality maintains liquidity and asset management reserves totaling \$34.8 million at December 31, 2017.

**Compliance with bond resolutions** – With respect to the year ended December 31, 2017, Water Quality complied with all financial covenants stipulated by its bond resolutions.

# King County Water Quality Enterprise Fund

## Notes to Financial Statements

### Note 5 – Long-Term Liabilities and Notes Payable (continued)

**Changes in long-term liabilities** – Long-term liability activity for the years ended December 31, 2017 and 2016 was as follows (in thousands):

	Balance January 1, 2017	Additions	Reductions	Balance December 31, 2017	Due Within One Year
Bonds payable	\$ 3,640,765	\$ 454,045	\$ (513,545)	\$ 3,581,265	\$ 84,875
Bond premiums and discounts	352,151	33,776	(26,983)	358,944	-
Total bonds payable	3,992,916	487,821	(540,528)	3,940,209	84,875
State loans	205,989	26,472	(14,417)	218,044	15,690
Compensated absences	11,473	10,332	(10,540)	11,265	669
Other post-employment benefits	1,583	48	-	1,631	-
Net pension liability	51,568	26,846	(43,302)	35,112	-
Environmental remediation	46,877	8,665	(9,082)	46,460	6,627
Total long-term liabilities	<u>\$ 4,310,406</u>	<u>\$ 560,184</u>	<u>\$ (617,869)</u>	<u>\$ 4,252,721</u>	<u>\$ 107,861</u>
	Balance January 1, 2016	Additions	Reductions	Balance December 31, 2016	Due Within One Year
Bonds payable	\$ 3,695,560	\$ 781,190	\$ (835,985)	\$ 3,640,765	\$ 73,120
Bond premiums and discounts	274,709	102,618	(25,176)	352,151	-
Total bonds payable	3,970,269	883,808	(861,161)	3,992,916	73,120
State loans	179,388	39,151	(12,550)	205,989	13,565
Compensated absences	11,265	11,133	(10,925)	11,473	608
Other post-employment benefits	1,467	190	(74)	1,583	-
Net pension liability	38,885	25,693	(13,010)	51,568	-
Environmental remediation	52,298	2,838	(8,259)	46,877	6,928
Total long-term liabilities	<u>\$ 4,253,572</u>	<u>\$ 962,813</u>	<u>\$ (905,979)</u>	<u>\$ 4,310,406</u>	<u>\$ 94,221</u>

## King County Water Quality Enterprise Fund Notes to Financial Statements

### Note 6 – Changes in Capital Assets

Changes in capital assets for the years ended December 31, 2017 and 2016, are shown in the following table (in thousands):

	Balance January 1, 2017	Increases	Decreases	Balance December 31, 2017
Land	\$ 240,759	\$ 3,557	\$ (41)	\$ 244,275
Easements	15,289	93	-	15,382
Construction work in progress	331,948	167,697	(110,291)	389,354
<b>Total nondepreciable assets</b>	<b>587,996</b>	<b>171,347</b>	<b>(110,332)</b>	<b>649,011</b>
Buildings	1,980,048	25,396	(2,873)	2,002,571
Improvements other than building	102,781	9,626	(202)	112,205
Artwork	5,700	405	(60)	6,045
Right of way	7,635	-	-	7,635
Infrastructure	2,260,787	43,144	(14,485)	2,289,446
Equipment	1,110,978	37,617	(38,716)	1,109,879
Software development	35,631	-	-	35,631
<b>Total depreciable assets</b>	<b>5,503,560</b>	<b>116,188</b>	<b>(56,336)</b>	<b>5,563,412</b>
Accumulated depreciation and amortization				
Building	(706,833)	(53,136)	1,570	(758,399)
Improvements other than building	(28,577)	(3,698)	88	(32,187)
Artwork	(1,079)	(205)	-	(1,284)
Right of way	(1,145)	(218)	-	(1,363)
Infrastructure	(578,134)	(47,881)	3,243	(622,772)
Equipment	(661,414)	(58,314)	35,826	(683,902)
Software development	(32,830)	(1,901)	-	(34,731)
<b>Total depreciation and amortization</b>	<b>(2,010,012)</b>	<b>(165,353)</b>	<b>40,727</b>	<b>(2,134,638)</b>
<b>Depreciable assets - net</b>	<b>3,493,548</b>	<b>(49,165)</b>	<b>(15,609)</b>	<b>3,428,774</b>
<b>Total capital assets - net</b>	<b>\$ 4,081,544</b>	<b>\$ 122,182</b>	<b>\$ (125,941)</b>	<b>\$ 4,077,785</b>

# King County Water Quality Enterprise Fund

## Notes to Financial Statements

### Note 6 – Changes in Capital Assets (continued)

	Balance January 1, 2016	Increases	Decreases	Balance December 31, 2016
Land	\$ 253,535	\$ 2,175	\$ (14,951)	\$ 240,759
Easements	14,863	426	-	15,289
Construction work in progress	319,960	144,565	(132,577)	331,948
<b>Total nondepreciable assets</b>	<b>588,358</b>	<b>147,166</b>	<b>(147,528)</b>	<b>587,996</b>
Buildings	1,915,240	65,005	(197)	1,980,048
Improvements other than building	94,246	11,104	(2,569)	102,781
Artwork	5,645	60	(5)	5,700
Right of way	7,635	-	-	7,635
Infrastructure	2,238,131	22,656	-	2,260,787
Equipment	1,071,642	43,873	(4,537)	1,110,978
Software development	35,614	52	(35)	35,631
<b>Total depreciable assets</b>	<b>5,368,153</b>	<b>142,750</b>	<b>(7,343)</b>	<b>5,503,560</b>
Accumulated depreciation and amortization				
Building	(655,574)	(51,441)	182	(706,833)
Improvements other than building	(25,993)	(3,256)	672	(28,577)
Artwork	(874)	(205)	-	(1,079)
Right of way	(927)	(218)	-	(1,145)
Infrastructure	(530,650)	(47,484)	-	(578,134)
Equipment	(606,100)	(59,834)	4,520	(661,414)
Software development	(29,874)	(2,991)	35	(32,830)
<b>Total depreciation and amortization</b>	<b>(1,849,992)</b>	<b>(165,429)</b>	<b>5,409</b>	<b>(2,010,012)</b>
<b>Depreciable assets - net</b>	<b>3,518,161</b>	<b>(22,679)</b>	<b>(1,934)</b>	<b>3,493,548</b>
<b>Total capital assets - net</b>	<b>\$ 4,106,519</b>	<b>\$ 124,487</b>	<b>\$ (149,462)</b>	<b>\$ 4,081,544</b>

### Note 7 – Environmental Remediation

Water Quality operations are subject to rules and regulations enacted by the Washington State Department of Ecology (DOE) and the U.S. Environmental Protection Agency (EPA).

Water Quality follows GASB Statement No. 49, *Accounting and Financial Reporting for Pollution Remediation Obligations* (GASB 49), which mandates the disclosure of “obligations to address current or potential detrimental effects of existing pollution by participating in pollution remediation activities.” GASB 49 establishes five events, any one of which obligates Water Quality to record a liability for pollution remediation expenditures. Liabilities are related to ongoing projects, which include the sediment management of aquatic habitats along Elliot Bay and the clean-up of certain sites along the Lower Duwamish Waterway (LDW). Environmental remediation costs are capitalized and amortized over 30 years.

## King County Water Quality Enterprise Fund Notes to Financial Statements

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### Note 7 – Environmental Remediation (continued)

The Sediment Management Project was obligated when the Metropolitan King County Council approved the pollution remediation program. The LDW project became a Water Quality obligation when King County entered into an Administrative Order on Consent (AOC) with the DOE and EPA. This AOC also includes The Boeing Company, the City of Seattle and the Port of Seattle as parties conduct the studies on which to base the cleanup decision. Each party has agreed to pay one fourth of the costs under the AOC.

Both projects may result in additional cleanup efforts as a result of future regulatory orders. These potential cleanup liabilities cannot be currently estimated. Ongoing, regulatory action has identified and may identify other Potentially Responsible Parties (PRP) for the LDW cleanup.

There are no estimated recoveries at this time that will reduce the amount of Water Quality's pollution remediation obligations. The total environmental remediation liability at December 31, 2017, stands at \$46.5 million and \$46.9 million in 2016.

The pollution remediation obligation is an estimate and subject to changes resulting from price increases or reductions, technology, or changes in applicable laws or regulations.

The methodology for estimating liabilities continues to be based on Water Quality engineering analysis, program experience and cost estimates for the remediation activities scheduled to be undertaken in future years as programmed under Water Quality's Regional Wastewater Services Plan. Certain costs were developed by consulting engineers. Costs were estimated using the expected cash flow method set out by GASB 49. For the LDW project, a weighted average method is used to calculate the liability. The Sediment Management Plan does not employ weighted average cost estimation because the remaining work is well-defined and negates the utility of multiple estimates. The cost estimates continue to be re-measured as succeeding benchmarks are reached or when cost assumptions are modified. All pollution remediation obligations are being deferred and amortized over 30 years as permitted by regulatory accounting standards (see Note 8 – Regulatory Assets and Credits).

### Note 8 – Regulatory Assets and Credits

The King County Council has taken various regulatory actions resulting in differences between the recognition of revenues for rate-making purposes and their treatment under generally accepted accounting principles for nonregulated entities. Changes to these balances and their inclusion in rates may occur only at the direction of the Council.

**Rate stabilization** – In 2005, the Council established a Rate Stabilization Reserve. This action created a deferred inflow of resource which deferred operating revenue to be set aside in a reserve and recognized in subsequent years to maintain stable sewer rates. The reserve was \$46.3 million in 2016 and remains unchanged in 2017.

# King County Water Quality Enterprise Fund

## Notes to Financial Statements

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### Note 8 – Regulatory Assets and Credits (continued)

**Pollution remediation** – In 2006, the Council approved the application of regulatory accounting to treat pollution remediation obligations as regulatory assets to allow for cost recovery through future rate increases. The portion of regulatory asset costs that have been accrued is being amortized over a recovery period of 30 years.

**Rainwise program** – In 2013, the Council approved the application of regulatory accounting to treat program payments to Rainwise participants as regulatory assets to allow for cost recovery through future rate increases. The portion of regulatory asset costs that have been accrued is being amortized over a recovery period of 7 years.

**Strategic planning costs** – In 2016, the Council approved the application of regulatory accounting to treat strategic planning costs as regulatory assets to allow for cost recovery through future rate increases. The portion of regulatory asset costs that have been accrued is amortized over a 7- to 10-year recovery period.

### Note 9 – Employee Benefit Plans

In accordance with GASB Statement No. 68, *Accounting and Financial Reporting for Pension*, the County elected to use June 30, 2017 and 2016, respectively, as the measurement date for reporting net pension liability at 2017 and 2016 year-end, respectively.

The following table represents the aggregate pension amounts allocated to Water Quality for all pension plans subject to the requirements of GASB Statement No. 68 for the years 2017 and 2016 (in thousands):

	Aggregate Pension Amounts—All Plans	
	2017	2016
Pension liabilities	\$ 35,112	\$ 51,568
Deferred outflows of resources	5,767	9,849
Deferred inflows of resources	7,825	1,217
Pension expense	1,837	8,848

**Pension plans** –Substantially all full-time and qualifying part-time employees of Water Quality participate in one of the following retirement plans: Public Employees' Retirement System (PERS) Plan 1, 2 and 3.

PERS is administered by the Washington State Department of Retirement Systems (DRS) under cost-sharing, multiple-employer public employee defined benefit and defined contribution retirement plans. The state Legislature establishes, and amends, laws pertaining to the creation and administration of all statewide public retirement systems.

The DRS, a department within the primary government of the State of Washington, issues a publicly available comprehensive annual financial report (CAFR) that includes financial statements and required supplementary information for each plan.

## King County Water Quality Enterprise Fund Notes to Financial Statements

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### Note 9 – Employee Benefit Plans (continued)

The DRS CAFR may be obtained by writing to:

Department of Retirement Systems  
Communications Unit  
P.O. Box 48380  
Olympia, WA 98540-8380

Or the DRS CAFR may be downloaded from the DRS website at [www.drs.wa.gov](http://www.drs.wa.gov).

**Public Employees Retirement System** – PERS members include elected officials; state employees; employees of the Supreme, Appeals and Superior Courts; employees of the legislature; employees of district and municipal courts; employees of local governments; and higher education employees not participating in higher education retirement programs. PERS is comprised of three separate pension plans for membership purposes. PERS plans 1 and 2 are defined benefit plans, and PERS plan 3 is a defined benefit plan with a defined contribution component.

PERS Plan 1 provides retirement, disability and death benefits. Retirement benefits are determined as two percent of the member's average final compensation (AFC) times the member's years of service. The AFC is the average of the member's 24 highest consecutive service months. Members are eligible for retirement from active status at any age with at least 30 years of service, at age 55 with at least 25 years of service, or at age 60 with at least five years of service. Members retiring from active status prior to the age of 65 may receive actuarially reduced benefits. Retirement benefits are actuarially reduced to reflect the choice of a survivor benefit. Other benefits include duty and non-duty disability payments, an optional cost-of-living adjustment (COLA), and a one-time duty-related death benefit, if found eligible by the Department of Labor and Industries. PERS 1 members were vested after the completion of five years of eligible service. The plan was closed to new entrants on September 30, 1977.

The PERS Plan 1-member contribution rate is established by State statute at 6 percent. The employer contribution rate is developed by the Office of the State Actuary and includes an administrative expense component that is currently set at 0.18 percent. Each biennium, the state Pension Funding Council adopts Plan 1 employer contribution rates. The PERS Plan 1 required contribution rates (expressed as a percentage of covered payroll) for 2017 and 2016 were as follows:

PERS Plan 1		
	Employer	Employee
Actual contribution rates		
January through June 2017	11.18%	6.00%
July through December 2017	12.70%	6.00%
January through December 2016	11.18%	6.00%

# King County Water Quality Enterprise Fund

## Notes to Financial Statements

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### Note 9 – Employee Benefit Plans (continued)

Water Quality's actual contributions to the plan were as follows for the years ended December 31 (in thousands):

	<u>PERS Plan 1</u>
2017	\$ 58
2016	77
2015	78

PERS Plan 2/3 provides retirement, disability and death benefits. Retirement benefits are determined as two percent of the member's average final compensation (AFC) times the member's years of service for Plan 2 and 1 percent of AFC for Plan 3. The AFC is the average of the member's 60 highest-paid consecutive service months. There is no cap on years of service credit. Members are eligible for retirement with a full benefit at 65 with at least five years of service credit. Retirement before age 65 is considered an early retirement. PERS Plan 2/3 members who have at least 20 years of service credit and are 55 years of age or older, are eligible for early retirement with a benefit that is reduced by a factor that varies according to age for each year before age 65. PERS Plan 2/3 members who have 30 or more years of service credit and are at least 55 years old can retire under one of two provisions:

- With a benefit that is reduced by three percent for each year before age 65; or
- With a benefit that has a smaller (or no) reduction (depending on age) that imposes stricter return-to-work rules.

PERS Plan 2/3 members hired on or after May 1, 2013, have the option to retire early by accepting a reduction of five percent for each year of retirement before age 65. This option is available only to those who are age 55 or older and have at least 30 years of service credit. PERS Plan 2/3 retirement benefits are also actuarially reduced to reflect the choice of a survivor benefit. Other PERS Plan 2/3 benefits include duty and non-duty disability payments, a cost-of-living allowance (based on the CPI), capped at three percent annually and a one-time duty related death benefit, if found eligible by the Department of Labor and Industries. PERS 2 members are vested after completing five years of eligible service. Plan 3 members are vested in the defined benefit portion of their plan after ten years of service; or after five years of service if 12 months of that service are earned after age 44.

PERS Plan 3 defined contribution benefits are totally dependent on employee contributions and investment earnings on those contributions. PERS Plan 3 members choose their contribution rate upon joining membership and have a chance to change rates upon changing employers. As established by statute, Plan 3 required defined contribution rates are set at a minimum of 5 percent and escalate to 15 percent with a choice of six options. Employers do not contribute to the defined contribution benefits. PERS Plan 3 members are immediately vested in the defined contribution portion of their plan.

## King County Water Quality Enterprise Fund Notes to Financial Statements

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### Note 9 – Employee Benefit Plans (continued)

The PERS Plan 2/3 employer and employee contribution rates are developed by the Office of the State Actuary to fully fund Plan 2 and the defined benefit portion of Plan 3. The Plan 2/3 employer rates include a component to address the PERS Plan 1 UAAL and an administrative expense that is currently set at 0.18 percent. Each biennium, the state Pension Funding Council adopts Plan 2 employer and employee contribution rates and Plan 3 contribution rates. The PERS Plan 2/3 required contribution rates (expressed as a percentage of covered payroll) for 2017 and 2016 were as follows:

PERS Plan 2/3		
	Employer 2/3	Employee 2
Actual contribution rates		
January through June 2017	11.18%	6.12%
July through December 2017	12.70%	7.38%
2017 Employee PERS Plan 3		Varies
January through December 2016	11.18%	6.12%
2016 Employee PERS Plan 3		Varies

Water Quality's actual contributions to the plan were as follows for the years ended December 31 (in thousands):

	PERS Plans 2/3
2017	\$ 7,546
2016	6,717
2015	5,705

**Actuarial assumptions** – The total pension liability (TPL) for each of the DRS plans was determined using the most recent actuarial valuation completed in 2017 with a valuation date of June 30, 2016. The actuarial assumptions used in the valuation were based on the results of the Office of the State Actuary's (OSA) 2007-2012 Experience Study and the 2015 Economic Experience Study.

Additional assumptions for subsequent events and law changes are current as of the 2016 actuarial valuation report. The TPL was calculated as of the valuation date and rolled forward to the measurement date of June 30, 2017. Plan liabilities were rolled forward from June 30, 2016, to June 30, 2017, reflecting each plan's normal cost (using the entry-age cost method), assumed interest and actual benefit payments.

- Inflation: 3% total economic inflation; 3.75% salary inflation
- Salary increases: In addition to the base 3.75% salary inflation assumption, salaries are also expected to grow by promotions and longevity.
- Investment rate of return: 7.5%

# King County Water Quality Enterprise Fund

## Notes to Financial Statements

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### Note 9 – Employee Benefit Plans (continued)

Mortality rates were based on the RP-2000 report's Combined Healthy Table and Combined Disabled Table, published by the Society of Actuaries. The OSA applied offsets to the base table and recognized future improvements in mortality by projecting the mortality rates using 100 percent Scale BB. Mortality rates are applied on a generational basis; meaning, each member is assumed to receive additional mortality improvements in each future year throughout his or her lifetime.

There were minor changes in methods and assumptions since the last valuation.

- For all plans except Law Enforcement Officers' and Fire Fighters' Retirement System (LEOFF) Plan 1, how terminated and vested member benefits are valued was corrected.
- How the basis minimum COLA in PERS Plan 1 is valued for legal order payees was improved.
- For all plans, the average expected remaining service lives calculation was revised.

**Discount rate** – The discount rate used to measure the total pension liability for all DRS plans was 7.5 percent.

To determine that rate, an asset sufficiency test included an assumed 7.7 percent long-term discount rate to determine funding liabilities for calculating future contribution rate requirements. (All plans use 7.7 percent except LEOFF 2, which has assumed 7.5 percent). Consistent with the long-term expected rate of return, a 7.5 percent future investment rate of return on invested assets was assumed for the test. Contributions from plan members and employers are assumed to continue being made at contractually required rates (including PERS 2/3 employers, whose rates include a component for the PERS 1 plan liabilities). Based on these assumptions, the pension plans' fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return of 7.5 percent was used to determine the total liability.

**Long-term expected rate of return** – The long-term expected rate of return on the DRS pension plan investments of 7.5 percent was determined using a building-block-method. In selecting this assumption, the Office of the State Actuary (OSA) reviewed the historical experience data, considered the historical conditions that produced past annual investment returns, and considered capital market assumptions and simulated expected investment returns provided by the Washington State Investment Board (WSIB). The WSIB uses the capital market assumptions and their target asset allocation to simulate future investment returns over various time horizons.

## King County Water Quality Enterprise Fund Notes to Financial Statements

### Note 9 – Employee Benefit Plans (continued)

**Estimated rates of return by asset class** – Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of June 30, 2017, are summarized in the table below. The inflation component used to create the table is 2.2 percent and represents the WSIB's most recent long-term estimate of broad economic inflation.

Asset Class	Target Allocation	% Long-Term Expected Real Rate of Return Arithmetic
Fixed income	20.00%	1.70%
Tangible assets	5.00%	4.90%
Real estate	15.00%	5.80%
Global equity	37.00%	6.30%
Private equity	23.00%	9.30%
	100.00%	

**Sensitivity of NPL** – The table below presents Water Quality's proportionate share of the net pension liability calculated using the discount rate of 7.5 percent, as well as what Water Quality's proportionate share of the net pension liability/(asset) would be if it were calculated using a discount rate that is 1-percentage point lower (6.5 percent) or 1-percentage point higher (8.5 percent) than the current rate (in thousands).

Year	Pension Plan	1% Decrease (6.5%)	Current Discount Rate (7.5%)	1% Increase (8.5%)
2017	PERS 1	\$ 16,503	\$ 13,547	\$ 10,987
2017	PERS 2/3	58,097	21,565	(8,368)
2016	PERS 1	\$ 23,099	\$ 19,155	\$ 15,761
2016	PERS 2/3	59,679	32,413	(16,873)

**Pension plan fiduciary net position** – Detailed information about the State's pension plans' fiduciary net position is available in the separately issued DRS financial report.

**Pension liabilities, pension expense, and deferred outflows of resources and deferred inflows of resources related to pensions** – At June 30, 2017 and 2016, Water Quality reported a total pension liability of \$35.1 million and \$51.6 million, respectively, for its proportionate share of the net pension liabilities as follows (in thousands):

	Liability	
	2017	2016
PERS 1	\$ 13,547	\$ 19,155
PERS 2/3	21,565	32,413

# King County Water Quality Enterprise Fund

## Notes to Financial Statements

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### Note 9 – Employee Benefit Plans (continued)

At June 30, Water Quality's proportionate share of the collective net pension liabilities was as follows:

	<u>Proportionate Share 6/30/16</u>	<u>Proportionate Share 6/30/17</u>	<u>Change in Proportion</u>
PERS 1	0.36%	0.29%	(0.07%)
PERS 2/3	0.64%	0.62%	(0.02%)
	<u>Proportionate Share 6/30/15</u>	<u>Proportionate Share 6/30/16</u>	<u>Change in Proportion</u>
PERS 1	0.32%	0.36%	0.04%
PERS 2/3	0.61%	0.64%	0.03%

Employer contribution transmittals received and processed by the DRS for the fiscal year ended June 30 are used as the basis for determining each employer's proportionate share of the collective pension amounts reported by the DRS in the Schedules of Employer and Nonemployer Allocations for all plans except Law Enforcement Officers' and Fire Fighters' Retirement System (LEOFF) Plan 1.

The collective net pension liability was measured as of June 30, 2017 and 2016, respectively, and the actuarial valuation date on which the total pension liability is based was as of June 30, 2016 and 2015, respectively, with update procedures used to roll forward the total pension liability to the measurement date.

**Pension expense** – For the year ended December 31, 2017 and 2016, Water Quality recognized pension expense as follows (in thousands):

	<u>Pension Expense</u>	
	<u>2017</u>	<u>2016</u>
PERS 1	\$ (4,509)	\$ 760
PERS 2/3	<u>6,346</u>	<u>8,088</u>
Total	<u>\$ 1,837</u>	<u>\$ 8,848</u>

## King County Water Quality Enterprise Fund Notes to Financial Statements

### Note 9 – Employee Benefit Plans (continued)

**Deferred outflows of resources and deferred inflows of resources** – At December 31, 2017 and 2016, Water Quality reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources (in thousands):

PERS 1	2017		2016	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Net difference between projected and actual investment earnings on pension plan investments.	\$ -	\$ 505	\$ 482	\$ -
Contributions subsequent to the measurement date.	953	-	1,007	-
Total	\$ 953	\$ 505	\$ 1,489	\$ -

PERS 2/3	2017		2016	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience.	\$ 2,186	\$ 710	\$ 1,726	\$ 1,070
Net difference between projected and actual investment earnings on pension plan investments.	-	5,749	3,967	-
Changes of assumptions	229	-	335	-
Changes in proportion and differences between contributions and proportionate share of contributions.	23	861	462	147
Contributions subsequent to the measurement date.	2,376	-	1,870	-
Total	\$ 4,814	\$ 7,320	\$ 8,360	\$ 1,217

# King County Water Quality Enterprise Fund

## Notes to Financial Statements

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### Note 9 – Employee Benefit Plans (continued)

Deferred outflows of resources related to pensions resulting from Water Quality’s contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ended December 31, 2018 and 2017, respectively. Other amounts reported as deferred outflows and deferred inflows of resources related to pensions will be recognized in pension expense as follows (in thousands):

Year Ending December 31,	2017	
	PERS 1	PERS 2/3
2018	\$ (342)	\$ (2,416)
2019	108	485
2020	(25)	(635)
2021	(246)	(2,449)
2022		58
Thereafter		75

  

Year Ending December 31,	2016	
	PERS 1	PERS 2/3
2017	\$ (119)	\$ 106
2018	(119)	106
2019	443	3,153
2020	277	1,908

### Note 10 – Other Post-Employment Benefits

GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pension*, requires the County to accrue other post-employment benefits (OPEB) expenses related to its post-retirement healthcare plan based on a computed annual required contribution (ARC) that includes the current period’s service cost and an amount to amortize unfunded accrued liabilities. The liability is included in noncurrent liabilities on the statements of net position for Water Quality.

**Plan description** – The King County Health Plan (the Health Plan) is a single-employer defined benefit healthcare plan administered by the County. The Health Plan provides medical, prescription drug, vision, and other unreimbursed medical benefits to eligible employees. The Health Plan’s actuary is Healthcare Actuaries and it does not issue a separate stand-alone financial report.

**Funding policy** – Law Enforcement Officers’ and Fire Fighters’ Retirement System Plan (LEOFF) 1 retirees are not required to contribute to the Health Plan. All other retirees are required to pay the COBRA rate associated with the elected plan. For the years ended December 31, 2017 and 2016, Water Quality contributed to the Health Plan an estimated \$55 thousand and \$74 thousand, respectively. The contribution was entirely to fund “pay-as-you-go” costs under the Health Plan and not to advance fund the cost of benefits.

## King County Water Quality Enterprise Fund Notes to Financial Statements

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### Note 10 – Other Post-Employment Benefits (continued)

**Annual OPEB and net OPEB obligation** – The basis of the County’s annual OPEB cost (expense) is the ARC. The ARC represents a level of funding that, if paid on an ongoing basis, the actuary projects will cover normal costs each year and amortize any unfunded actuarial liabilities (or funding excess) over a period not to exceed thirty years.

Water Quality’s allocated annual OPEB costs, the percentage of annual OPEB cost contributed to the Health Plan, and the net OPEB obligation for the years ended December 31, 2017 and 2016 were as follows (in thousands):

	2017	2016
Normal cost - Unit Credit Method	\$ 84	\$ 164
Amortization of unfunded actuarial accrued liability (UAAL)	27	32
Annual Required Contribution (ARC)	111	196
Interest on net OPEB obligation	8	5
Adjustment to annual required contribution	(16)	(11)
Annual OPEB cost (expense)	103	190
Contributions made	(55)	(74)
Increase in net OPEB obligation	48	116
Net OPEB obligation - beginning of year	1,583	1,467
Net OPEB obligation - end of year	\$ 1,631	\$ 1,583

Water Quality’s allocated annual OPEB costs, the percentage of annual OPEB costs contributed to the Health Plan, and the net OPEB obligation were as follows (in thousands):

Year Ended	Annual OPEB Cost	Percentage of Annual OPEB Cost Contributed	Net OPEB Obligation
12/31/2017	\$ 103	53.4%	\$ 1,631
12/31/2016	190	38.9%	1,583
12/31/2015	190	38.9%	1,467

# King County Water Quality Enterprise Fund

## Notes to Financial Statements

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### Note 10 – Other Post-Employment Benefits (continued)

**Actuarial methods and assumptions** – The basis of projections of benefits for financial reporting purposes is the substantive plan (the Health Plan as understood by the County and members of the Health Plan) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the County and Members of the Health Plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

The December 31, 2017 valuation used the unit credit actuarial cost method. The actuarial assumptions included a 3.50 percent investment rate of return (net of administrative expenses) and an initial annual health care cost trend rate of 7.5 percent for KingCare medical and miscellaneous LEOFF 1 expenses, 9.0 percent for KingCare pharmacy, and 7.5 percent for HMO medical/pharmacy, each reduced by decrements to an ultimate rate of 3.8 percent after 57 years and 7 years for medical and pharmacy, respectively. The Medicare Premium trend rate is 6.0 percent, for all years. All trend rates include a 3.0 percent inflation assumption. The UAAL is recalculated each year and amortized as a level dollar amount on an open basis over 20 years.

### Note 11 – Interfund Balances and Transfers

Water Quality is an enterprise fund of the County and reports in its financial statements interfund balances and transfers as a result of intra-county activity with other County agencies.

**Interfund balances** – The balances result from the time lag between the dates when interfund goods and services were provided or reimbursable expenditures incurred and when interfund payments were made, Water Quality reported total due from other funds of \$2.1 million and due to other funds of \$25 thousand at December 31, 2017. Water Quality had total due from other funds of \$1.3 million and due to other funds of \$16 thousand at December 31, 2016.

**Interfund transfers** – The King County Council approves ordinances and/or motions authorizing Water Quality to contribute and receive amounts to and from various County funds. During 2017 and 2016, the transfers from Water Quality to other funds were \$741 thousand and \$150 thousand, respectively.

### Note 12 – Commitments and Contingencies

**Construction and maintenance programs** – To ensure the continued operation, reliability, and compliance with regulatory standards of existing wastewater treatment facilities, Water Quality is committed to expending approximately \$197.7 million on active construction contracts as of December 31, 2017.

# King County Water Quality Enterprise Fund

## Notes to Financial Statements

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### Note 12 – Commitments and Contingencies (continued)

**Contingencies and claims** – The following litigation, or potential litigation, may involve claims for material damages against the King County Water Quality Enterprise Fund for which Water Quality is unable to provide an opinion as to the ultimate outcome or the amount of damages that may be found:

- An administrative order issued by the Environmental Protection Agency (EPA) that required King County, the City of Seattle, Boeing, and the Port of Seattle to conduct studies to determine the nature and extent of contamination in the Lower Duwamish Waterway. The County and the other three parties recently agreed with EPA to amend the administrative order and to conduct additional studies pursuant to the amendment. The Feasibility Study, which discusses the remediation alternatives, has been issued in final form by EPA. EPA issued a Record of Decision (ROD) in the latter part of 2014. The ROD contains EPA's final plan for cleanup of the Lower Duwamish Waterway. King County and a number of other parties are participating in an alternative dispute resolution process, called an allocation, to determine shares of liability for the costs of the cleanup. If parties that participate in the allocation accept their allotted shares, they then expect to enter into a settlement agreement and to negotiate a consent decree with EPA to implement the cleanup. Due to the fact that the parties do not yet know their respective shares of cleanup costs and no consent decree has been negotiated with EPA, the County is unable to determine the schedule or cost of any required remediation. In addition, the County is unable to determine the extent to which King County and the Wastewater Treatment Division (WTD) or Water Quality will be responsible for the cost of such remediation.
- A potential requirement for more cleanup in the area contaminated when the Denny Way combined sewer outflow was replaced in 2005. Water Quality has already performed interim cleanup costing \$3.6 million to comply with a formal agreement with the Washington State Department of Ecology (DOE). Water Quality had discussions in March 2018 with DOE and stakeholders regarding site conditions and next steps toward final cleanup. The County is unable to determine an amount, if any, for which Water Quality may be responsible.
- Potential claims for past and future cleanup costs at the Harbor Island Superfund Site. Certain removal costs already incurred by the Port of Seattle are expected to be defrayed by the County and the City of Seattle. The City of Seattle, Port of Seattle and King County intend to negotiate the amount, if any, that the City and the County will contribute. This is an extremely complex negotiation for which the County is unable to determine an amount that Water Quality may be responsible for, if any. The parties have also agreed to share the cost of a supplemental investigation and feasibility study required by the EPA. The agreement states that Water Quality has only a one-third pro rata share of the study costs although that portion may still be reallocated among the parties or with other Potentially Responsible Parties (PRP) who may agree to participate in the study. The parties may also seek contribution from other PRP's for the cost of the study. The EPA will not determine if, or the nature of, any additional remediation until the study is completed. Further remediation costs cannot be reasonably estimated until the study has been completed. The County and three other PRPs have negotiated a memorandum of agreements to implement a search for other responsible parties.

# King County Water Quality Enterprise Fund

## Notes to Financial Statements

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### **Note 12 – Commitments and Contingencies (continued)**

- A claim submitted by a contractor against Water Quality over the project to repair and replace two miles of pipeline serving the rapidly developing area in the vicinity of Canyon Park. The project is subject to an agreement with DOE that mandates a bypass system be constructed if this capital project was not completed by the onset of the 2016 wet season. The contractor has submitted a request for change order based on its assertion that the contract dewatering and open-faced shield tunneling specifications are defective. The amount claimed for costs for additional work at this time is approximately \$1.5 million. Water Quality found the contractor in default, terminated the contract, made demand upon the performance bond surety, and procured a \$20 million completion contract. Water Quality's additional costs to complete the project and consequential damages, and the contractor's counterclaims will be addressed in the lawsuit. The contractor filed a second lawsuit in Snohomish County Superior Court to enjoin the default termination. This lawsuit was dismissed and the contractor appealed that decision to Division One of the Court of Appeals. The motion to change venue in the King County action was denied and the contractor appealed that decision. Discretionary review was granted and both appeals are now consolidated. Oral argument was heard on October 31, 2017 and the County is awaiting a decision.

### **Note 13 – West Point Treatment Plant Flood Event**

On February 9, 2017, the West Point Treatment Plant suffered an unprecedented electrical disturbance during an intense rainstorm. The electrical disturbance precipitated electrical failures throughout the treatment plant resulting in catastrophic flooding damage to equipment and building assets. Water Quality received \$12.5 million in insurance proceeds to offset the asset impairment loss of \$1.6 million and cleanup, equipment repairs and maintenance recovery expenditures of \$10.0 million resulting in a net gain of \$883 thousand. Capital expenditures for equipment and building assets in 2017 amounted to \$11.0 million.

### **Note 14 – Subsequent Event**

Water Quality closed on a \$134.5 million loan commitment with the Environmental Protection Agency in April 2018 for the Georgetown Wet Weather Treatment Station. Draws on the loan commitment, authorized to begin in 2018, was evidenced by the sewer revenue bond, 2018 (WIFIA – N17107WA) authorized by King County Council on April 2, 2018.

## **Required Supplementary Information**

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**King County Water Quality Enterprise Fund  
Required Supplementary Information  
Pension Plan Information**

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Schedule of the County's Proportionate Share of the Net Pension Liability  
Public Employees' Retirement System (PERS) Plan 1  
Measurement Date of June 30\*  
(dollars in thousands)

	<u>2017</u>	<u>2016</u>	<u>2015</u>
County's proportion of the net pension liability	8.45%	8.90%	8.76%
County's proportionate share of the net pension liability	\$ 400,803	\$ 477,872	\$ 458,477
Covered payroll	\$ 15,426	\$ 18,793	\$ 22,880
County's proportionate share of the net pension liability as a percentage of covered payroll	2598.23%	2542.82%	2243.04%
Plan fiduciary net position as a percentage of the total pension liability	61.24%	57.03%	59.10%

\* This schedule is to be built until it contains ten years of data.

**King County Water Quality Enterprise Fund**  
**Required Supplementary Information**  
**Pension Plan Information (continued)**

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Schedule of the County's Proportionate Share of the Net Pension Liability  
Public Employees' Retirement System (PERS) Plan 2/3  
Measurement Date of June 30\*  
(dollars in thousands)

	<u>2017</u>	<u>2016</u>	<u>2015</u>
County's proportion of the net pension liability	10.14%	10.52%	10.36%
County's proportionate share of the net pension liability	\$ 352,361	\$ 529,855	\$ 370,294
Covered payroll	\$ 995,800	\$ 953,254	\$ 949,860
County's proportionate share of the net pension liability as a percentage of covered payroll	35.38%	55.58%	39.68%
Plan fiduciary net position as a percentage of the total pension liability	90.97%	85.82%	89.20%

\* This schedule is to be built until it contains ten years of data.

**King County Water Quality Enterprise Fund  
Required Supplementary Information  
Pension Plan Information (continued)**

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Schedule of the County's Contributions  
Public Employees' Retirement System (PERS) Plan 1  
For the Year Ended December 31\*  
(dollars in thousands)

	2017	2016	2015
Contractually required contributions	\$ 1,738	\$ 1,901	\$ 2,076
Contributions in relation to the contractually required contributions	1,738	1,901	2,076
Contribution deficiency (excess)	\$ -	\$ -	\$ -
Covered payroll	\$ 14,569	\$ 17,003	\$ 20,440
Contributions as a percentage of covered payroll	11.93%	11.18%	10.16%

\* This schedule is to be built until it contains ten years of data.

**King County Water Quality Enterprise Fund**  
**Required Supplementary Information**  
**Pension Plan Information (continued)**

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Schedule of the County's Contributions  
Public Employees' Retirement System (PERS) Plan 2/3  
For the Year Ended December 31\*  
(dollars in thousands)

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Contractually required contributions	\$ 123,333	\$ 109,269	\$ 95,176
Contributions in relation to the contractually required contributions	<u>123,333</u>	<u>109,269</u>	<u>95,176</u>
Contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered payroll	\$ 1,031,418	\$ 977,342	\$ 933,304
Contributions as a percentage of covered payroll	11.96%	11.18%	10.20%

\* This schedule is to be built until it contains ten years of data.

**King County Water Quality Enterprise Fund  
Required Supplementary Information  
Postemployment Health Care Plan**

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Schedule of Funding Progress for the Plan  
(dollars in thousands)

Year	Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) - Unit Credit (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) ÷ c)
2015	12/31/2015	\$ -	\$ 167,417	\$ 167,417	-	\$ 1,076,068	15.6%
2016	12/31/2016	\$ -	\$ 167,417	\$ 167,417	-	\$ 1,121,962	14.9%
2017	12/31/2017	\$ -	\$ 121,079	\$ 121,079	-	\$ 1,178,142	10.3%

## **Other Information**

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**King County Water Quality Enterprise Fund  
Supplemental Information  
Supplemental Schedule of Debt Service  
Coverage Ratios (Unaudited)  
Year Ended December 31, 2017**

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Water Quality is obligated by applicable bond ordinances to set sewage disposal rates at a level adequate to provide net revenue equal to at least 1.15 times the annual debt service requirements for sewer revenue and general obligation bonds payable from revenues of Water Quality. It is an adopted policy of Water Quality to achieve a debt service coverage ratio of 1.25. Excluded from the calculation of the coverage ratios for 2017 below is the optional redemption of \$920 thousand of 2015 Junior Lien Variable Rate Bonds, Series A and Series B.

Coverage (1.15 required by covenant, adopted policy 1.25) 1.70

In 2001, Water Quality adopted a new debt service target of 1.15 times the annual debt service for bonds, obligations, notes, and loans of Water Quality.

Coverage (1.15 adopted target) 1.51

Water Quality is required to generate revenues sufficient to pay all costs of operation of the sewage treatment system and debt service on obligations of Water Quality.

Coverage (1.00 required by covenant) 1.38

In 2001, Water Quality issued an additional tier of revenue bonds. The bond covenants of the Junior Lien Variable Rate Demand Sewer Revenue Bonds, Series 2001A and Series 2001B, require that sewage disposal rates provide net revenue equal to at least 1.10 times the annual debt service requirements for all junior lien obligations after payment of senior lien requirements. All of Water Quality Junior Lien Variable Rate Sewer Revenue Bonds and Multi-Modal Limited Tax General Obligation Revenue Bonds incorporate the identical requirement stated in the 2001 bond covenant requirements.

Coverage (1.10 required by covenant) 25.29

**King County Water Quality Enterprise Fund  
Supplemental Information  
Supplemental Schedule of Historical Debt Service  
Coverage Ratios (Unaudited)**

**DEBT SERVICE COVERAGE FOR THE WATER QUALITY ENTERPRISE  
LAST TEN FISCAL YEARS**  
(dollars in thousands)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Residential Customer and Residential Customer Equivalents (RCEs) (annual average, rounded)	706,846	703,795	704,400	707,300	708,900	718,160	725,844	736,090	756,430	756,916
Percentage Annual Change	0.56%	-0.43%	0.09%	0.41%	0.23%	1.31%	1.07%	1.41%	2.76%	0.06%
Operating Revenues										
Sewage disposal fees	\$ 237,001	\$ 271,558	\$ 269,498	\$ 306,430	\$ 307,143	\$ 342,850	\$ 346,591	\$ 371,253	\$ 381,513	\$ 401,650
Rate stabilization	3,000	(15,398)	(15,814)	(25,523)	13,923	10,350	18,000	(12,000)	-	-
Capacity charge revenues	35,002	40,827	41,363	48,693	51,411	58,660	59,522	62,479	71,200	82,615
Other operating revenues	9,170	9,869	9,778	7,830	9,398	10,126	11,675	11,674	11,828	18,308
Total Operating Revenues	284,173	306,856	304,825	337,430	381,875	421,986	435,788	433,406	464,541	502,573
Operating and Maintenance Expenses <sup>1)</sup>	98,370	103,118	103,682	103,995	114,939	117,183	122,014	127,211	138,698	142,263
Add: GAAP adjustment <sup>2)</sup>	-	-	-	-	-	-	2,187	1,715	(2,377)	5,936
Net Operating and Maintenance Expenses	98,370	103,118	103,682	103,995	114,939	117,183	124,201	128,926	136,321	148,199
Net Operating Revenue	185,803	203,738	201,143	233,435	266,936	304,803	311,587	304,480	328,220	354,374
Interest Income <sup>3)</sup>	4,087	5,613	3,426	2,725	1,697	2,682	2,822	2,863	4,549	6,055
Net Revenue Available for Debt Service	189,890	209,351	204,569	236,160	268,633	307,485	314,409	307,343	332,769	360,429
Debt Service										
Parity Bonds	110,237	118,925	118,817	132,664	157,117	172,959	175,463	167,694	160,957	159,761
Parity Lien Obligations	24,178	26,042	26,838	32,910	38,626	43,064	42,876	40,348	53,164	52,650
Subordinate Debt Service	18,581	12,150	12,182	12,769	14,087	15,039	17,477	18,318	21,316	26,277
Total Debt Service	\$ 152,996	\$ 157,117	\$ 157,837	\$ 178,343	\$ 209,830	\$ 231,062	\$ 235,816	\$ 226,360	\$ 235,437	\$ 238,688
Debt Service Coverage										
On Parity Bonds	1.72	1.76	1.72	1.78	1.71	1.78	1.79	1.83	2.07	2.26
On Parity Bonds and Parity Lien Obligations	1.41	1.44	1.40	1.42	1.36	1.42	1.44	1.48	1.55	1.70
On All Sewer System Obligations	1.24	1.33	1.30	1.32	1.28	1.33	1.33	1.36	1.41	1.51

1) 2014 operating expenses were restated as part of GASB Statements 68 and 71 implementation.

2) Non-cash GAAP adjustments consist of pension, other post-employment benefits and compensated absence accruals.

3) Interest Income excludes unrealized gains in the GASB Statement 31 market valuation adjustment.

