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RISING RATES AND CUSTOMER CONCERNS

ASSESSING GOVERNANCE OF PORTLAND'S WATER AND SEWER UTILITIES



City Club of Portland Bulletin, Vol. 96, No. 13, March 7, 2014

City Club members will vote on this report between Friday, March 14, 2014 and Wednesday, March 19, 2014. Until the membership votes, City Club of Portland does not have an official position on this report. The outcome of the vote will be reported in the City Club of Portland Bulletin Vol. 96, No. 14, dated March 20, 2014, and online at pdxcityclub.org.

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A. EXECUTIVE SUMMARY

"Whiskey is for drinking; water is for fighting over."
(Attributed to Mark Twain)

Portland appears to be a water utopia. It draws ample stores of drinking water from the pristine Bull Run watershed, located in the Mt. Hood National Forest. The purity of Bull Run water is the envy of other cities; the water is so clean that it requires minimal treatment before delivery to Portlanders' faucets. For well over 100 years, Portland's water and sewer systems have supported and advanced the health and economic well-being of the City's residents.

But a closer look shows that Portland relies on an aging water, sewer and wastewater infrastructure, and that its residents are paying for extensive systems to prevent discharging sewage into the Willamette River and Columbia Slough. Portlanders today face huge costs associated with replacing crumbling underground pipes, building covered reservoirs for drinking water, and cleaning up historic pollution in Willamette River sediments.

Meanwhile, city residents are feeling the sting of rising water and sewer rates. In the past decade, average water bills have increased by 73 percent, and average sewer and wastewater bills have increased by 79 percent. The average combined quarterly residential bill for these utility services now exceeds \$300. Significant rate increases are expected to continue in the future. The higher costs come at a time when the City Auditor and the media have revealed the use of ratepayer funds for projects unrelated to the provision of water and sewer services. Those expenditures have eroded public confidence in how Portland's water and sewer utilities are governed, and how rates and budgets are set.

Discontent with rising rates and the apparent misuse of ratepayer dollars have spawned a measure on the May 2014 ballot that would require the transfer of both ownership and governance of the City's water, sewer and wastewater systems to a new Portland Public Water District.

The stakes are high as Portland voters contemplate the future of their water and sewer utilities. The City's water utility, the Portland Water Bureau, manages over \$7 billion in assets and has an annual budget for FY 2013-14 of \$256.5 million. Portland's sanitary sewer and wastewater utility, the Bureau of Environmental Services, manages over \$12 billion in assets and has an annual budget for FY 2013-14 of \$426 million. But even more important than the scope and complexity of their operations is the critical role the bureaus play in maintaining public health, advancing economic development, and preserving the quality of life that Portlanders value.

Your committee undertook a broad study of the bureaus' operations and governance, and analyzed the Portland Public Water District ballot measure. While your committee found that the use of ratepayer dollars for purposes other than delivery of services is not a primary driver of rate increases, any such use is unacceptable. The City's budget setting process bears much of the blame for the diversion of funds. Often, short-term political expediency substitutes for long-term planning, and the temptation to tap ratepayer dollars for projects unrelated to utility services can be too much to resist. Because the costs to modernize infrastructure and meet federal clean water

standards will continue to put a strain on rates, it's time to shore up ratepayers' confidence in the governance of the City's utilities.

Your committee recommends a "no" vote on the measure to create an independent Portland Public Water District. The measure is poorly structured and is likely to be subject to legal challenges. And while the proponents appear to believe that a new governing entity independent of the City will be able to lower rates, your committee sees nothing in the measure that will guarantee that. Rates will continue to be subject to upward pressure regardless of the utilities' governance structure.

To address concerns about how budgets are set and how ratepayer funds are spent, your committee recommends the creation of a semi-autonomous Portland Water and Sewer Authority to provide independent management and oversight of the water, sewer and wastewater bureaus. Under this proposal, the City Council will continue to set policy for the water, sewer and wastewater utilities and will approve the utilities' overall budgets, but will no longer have authority to direct any specific expenditure from those budgets. The Portland Water and Sewer Authority will propose budgets to the City Council and will set rates. The Authority will be composed of appointed members experienced in utility finance, engineering and other fields relevant to utility management.

Your committee further recommends that the City undertake efforts to inform city residents about the challenges faced by their water and sewer utilities, and engage them in issues of oversight and rate regulation. As to internal management, your committee recommends that the bureaus continue and perhaps expand benchmarking, and adopt least cost, least risk planning that includes ratepayer input to conform to industry standards for managing ratepayer dollars.

B. SCOPE OF THE STUDY

1. Study Charge

City Club tasked your committee to study Portland's governance of its water, sewer and wastewater systems, and its rate setting process and criteria. The committee's objective was to understand and describe the current system, and to assess the efficacy of the governing structure and the adequacy of the budgeting and rate setting process and criteria. Your committee was further directed to recommend a 'yes' or 'no' vote on a proposed ballot measure that would shift water and sewer management from the City of Portland ("the City") to a separate and independent Portland Public Water District.

2. Methodology

Your committee interviewed 31 individuals regarding the operations, management, budget and rate setting process, and governance of the Portland Water Bureau and Portland Bureau of Environmental Services.

Your committee interviewed supporters and critics of those agencies.

Your committee studied the governance of water, sewer, and wastewater utilities in other municipalities.

Your committee interviewed opponents of the ballot measure. Sponsors of the ballot measure declined to be interviewed, so your committee reviewed articles written by proponents of the measure and interviewed representatives of industrial users that have expressed dissatisfaction with Portland's water, sewer and wastewater services.

C. QUESTIONS TO BE ADDRESSED BY THE STUDY

- (1) Why have Portland water, sewer and wastewater customers been experiencing significant rate increases, and what are the prospects for future rate increases?
- (2) How and by what criteria are water, sewer and wastewater rates set?
- (3) How are Portland's water and wastewater bureaus governed, and does the governance structure have a bearing on recent rate increases and how ratepayer funds are used?
- (4) Should City Club recommend a 'yes' or 'no' vote on the ballot measure that would create a separate and independent Portland Public Water District?

D. PORTLAND'S WATER, SEWER AND WASTEWATER UTILITIES

While most customers of the Portland Water Bureau ("PWB") and the Bureau of Environmental Services ("BES") receive a quarterly, unified bill setting out the rate charges for both agencies, PWB and BES are in fact separate agencies, each with its own operating, rate setting and budgeting structures. About two-thirds of a typical Portland resident's unified bill pays for BES services, while the remaining one-third goes to PWB for drinking water service.

1. Portland Water Bureau

a. History and Mission

PWB directly serves a population of over 566,000 people in 161,000 residential households (including single- and multi-family residences) and over 19,000 commercial and industrial customers.¹ The Bureau additionally sells to 20 metropolitan area water utilities. Those water utility customers of PWB – known as wholesale customers -- in turn serve an estimated population of more than 368,000 individuals. Not every resident of Portland is a direct customer of PWB. Including both its direct and wholesale customers, PWB delivers drinking water to about 935,000 residents of Portland and surrounding areas.²

PWB serves an average of 100 million gallons of water daily to its customers.² It manages \$7 billion in assets, including more than 2,000 miles of pipe, reservoirs, pumps and pump stations, and 14,200 fire hydrants.^{3, 4}

PWB draws drinking water from the Bull Run River located in the Mt. Hood National Forest, supplemented by the Columbia South Shore Well field, a series of wells tapping aquifers near the Columbia River. The U.S. Forest Service owns 95% of the Bull Run Watershed Management Unit, while the City owns 4% and the federal Bureau of Land Management owns 1%. Pursuant to a federal statute, PWB and the Forest Service have an agreement to jointly manage the watershed.^{2, 5, 6}

PWB's FY 2013-14 budget is \$256.5 million. PWB performs billing and collection activities for itself and BES, and currently bills most of its residential customers quarterly.²

PWB's 575 positions are assigned to seven divisions: Administrator's Office, Finance and Support Services, Customer Services, Maintenance and Construction, Engineering, Resource Protection and Planning, and Operations.^{3, 7}

PWB's history can be traced back to 1885, when a water committee recommended the construction of a new water system. Engineer Col. Isaac Smith identified the Bull Run watershed as an adequate source of drinking water. He oversaw the construction of 24 miles of pipe from Bull Run to Portland, and the Mt. Tabor and Washington Park reservoirs. On January 2, 1895, water began flowing from Bull Run, and much of the infrastructure built at that time remains in use today. A privately held water company turned over operation of the water system to the City in 1903, and the Bureau of Water Works was created by charter amendment in 1913.⁸

b. LT2: Treatment and Reservoirs

A recent challenge for PWB has been compliance with federal mandates to avoid contamination by *Cryptosporidium*, a microscopic parasite. In 1993, a deadly Cryptosporidiosis outbreak from drinking water in Milwaukee, Wisconsin, led Congress to amend the Safe Drinking Water Act. The amendment required the U.S. Environmental Protection Agency ("EPA") to develop new regulations to protect drinking water. The EPA in 2006 issued the Long Term 2 Enhanced Surface Water Treatment Rule ("LT2"), which addressed two concerns: storage of finished drinking water – meaning water that's ready for consumption – in open reservoirs, and treatment for contaminants, including specifically *Cryptosporidium*.

Since 2002 Portland has tested thousands of liters of raw water at the Bull Run source and has detected *Cryptosporidium* only once at the raw water intake in a sample collected in December 2011. During that same period, *Cryptosporidium* was also detected in very low levels in two stream samples collected upstream of the intake.^{9, 10}

The City accordingly has pursued parallel responses to the LT2 mandate regarding treatment: it designed an ultraviolet treatment system while at the same time it sought a variance that would relieve its obligation to treat raw water from the Bull Run for *Cryptosporidium*. Additionally, the City sought several compliance alternatives and compliance schedule delays for the uncovered reservoirs requirement. The city received a variance from the Oregon Health Authority to the UV treatment obligation in 2012, sparing it the cost of building the treatment plant. Portland is currently the only water system in the nation to hold a variance to the LT2 treatment requirements. In early 2013, the City announced that it had exhausted the available avenues for appealing the requirement to discontinue storage of finished drinking water in uncovered reservoirs, and would proceed to shift to the use of covered reservoirs.^{2, 11}

Four projects are planned or currently under construction to replace Portland's open reservoirs. The Powell Butte Reservoir 2 project will involve constructing a 50 million gallon underground reservoir and other improvements. The \$128 million project is scheduled to be completed in late 2014. The Kelly Butte project will increase storage capacity, and replace an existing tank with a

buried reservoir. That project is expected to cost \$80 million and will be completed in 2016. The Mt. Tabor project involves adjustments to piping, structures and other features required to discontinue use of the uncovered reservoirs there. The compliance schedule requires that Mt. Tabor's uncovered reservoirs be disconnected from the public water system by late 2015. The Mt. Tabor project is projected to cost \$3.9 million. The Washington Park project will build a buried reservoir to replace the existing uncovered reservoirs there. The anticipated cost of the Washington Park project is \$76 million, and it is set to be completed by late 2021.²

c. PWB's wholesale customers

Portland currently has contracts for delivery of water to 20 water districts, water companies, and cities in the metropolitan area. Some of those wholesale customers are in the process of developing alternative water sources – including facilities to treat Willamette River water – and plan to discontinue their contracts with PWB. These utilities' stated reasons for ending their contracts with PWB include a desire to predict and control water supply and future costs, and dissatisfaction with the level of coordination and communication with Portland. As an example of the latter concern, witnesses told your committee that suburban wholesale customers were unhappy that they were not informed in advance of Portland's 2012 plan (later rejected by Portland voters) to begin fluoridating PWB's water.¹²

2. Bureau of Environmental Services

a. History and Mission

The City of Portland owns, operates, and maintains a sewer system that collects, transports, and treats sanitary sewage and stormwater generated within the City's boundaries. BES is responsible for building, operating, and maintaining the collection and treatment systems.¹³

BES comprises sanitary sewer and stormwater utilities currently managing over \$12 billion in assets that include 2,330 miles of sewer pipe, 97 sewage pump stations, 450 miles of stormwater conveyance pipes, and two treatment plants. Its FY 2013-14 annual budget is \$426 million.¹³

The 520 employees of BES are assigned to six work groups: Office of the Director, Business Services Group, Wastewater Operations Group, Watershed Services Group, Engineering Group, and Pollution Prevention Services Group.¹⁴

In addition to designing, building, and managing the City's wastewater facilities, the bureau's responsibilities include ensuring that all bodies of water within the City limits meet water quality standards; ensuring the City's compliance with federal Endangered Species Act mandates; managing and remediating floodplains; handling the City's involvement with the Portland Harbor Superfund listing; and cleaning up brownfields, which are former industrial and commercial properties actually affected or believed to be affected by environmental contamination.¹⁴

Starting as early as 1860, Portland's sewer system collected storm water and untreated sewage in the same pipes and discharged the combined wastewater directly into the Willamette River and Columbia Slough. In 1947, construction began on Portland's first sewage treatment plant, located

on Columbia Boulevard, and in 1952 new interceptor pipes began collecting wastewater from the combined sewers for treatment. Sewage treatment capacity was expanded in 1964 with the construction of the Tryon Creek sewage treatment plant in the City of Lake Oswego. The Tryon Creek plant serves southwest Portland and, on a wholesale contract basis, the City of Lake Oswego. Today BES serves a population of approximately 588,000 customers, including approximately 16,000 in the City of Lake Oswego.¹³

b. Big Pipe

Even after the City began treating its wastewater in the 1950s, stormwater runoff during wet weather filled the combined sewers to capacity, causing stormwater and untreated sewage to overflow into the Willamette River and Columbia Slough on a regular basis. Following a Clean Water Act lawsuit by Northwest Environmental Advocates, and in response to a mandate from the State Department of Environmental Quality, BES completed in 2011 a 20 year, \$1.4 billion program to control combined sewer overflows (“CSOs”). The CSO compliance project, part of which is known as the Big Pipe, was the largest public works project in Portland history. It included the construction of massive underground tunnels on both sides of the river and a pipeline along the slough, and reduced CSO events from an average of 50 per year to no more than four times per winter and once every third summer.^{15, 16} It was funded almost entirely by ratepayer-supported revenue bonds.¹⁴

c. Gray to Green Infrastructure

When BES developed the Big Pipe project to reduce the frequency of CSOs, it included the use of “green infrastructure” as a critical component to reduce or capture stormwater before it flows into the “gray” sewer system. The visibility of green infrastructure projects such as bioswales – resembling ditches filled with vegetation along the edges of city streets – has caused some to question their connection to what is seen as the “real” work of BES: protecting waterways by building and maintaining stormwater and sewer pipes.

“Gray infrastructure” is a term for the standard materials and approaches used to collect, convey and treat stormwater from impervious surfaces such as streets and roofs. Catch basins, pipes, pump stations, and outfalls are examples of gray infrastructure.

“Green infrastructure” systems, in contrast, are designed to capture, partially treat, and/or infiltrate (or in some cases reuse) stormwater before it reaches the gray infrastructure system. Green infrastructure includes permeable-pavement streets and parking lots, and curb cutouts that incorporate infiltration swales. These systems reduce the amount of stormwater that must be conveyed, treated, and discharged in the combined sewer system. “Low impact development,” is a closely-related approach that focuses on capturing stormwater in the built environment, by means such as rain gardens and green roofs.

It is often less expensive to manage stormwater before it enters the sewer system than it is to treat stormwater once it combines with sewage. According to the EPA, “Green infrastructure can often provide more benefits at lesser cost than single-purpose gray infrastructure.”¹⁷ Your committee learned that green infrastructure is commonly understood to offer benefits including reduced water

treatment costs, reduced flooding, and improved water quality, air quality, and natural habitat.¹⁸ BES considers only cost savings, and not ancillary benefits to the environment, when determining whether to implement green infrastructure. The bureau identifies green infrastructure opportunities on a case-by-case basis, implementing green elements only when they are found to be cost effective.¹⁹

Your committee heard from several witnesses that the City's recent Tabor to the River program demonstrates the cost effectiveness of using green infrastructure to limit the size and cost of gray infrastructure projects. The Tabor to the River program area covers about 2.3 square miles of Southeast Portland and includes the Richmond, Hosford-Abernethy, Brooklyn and Mt. Tabor neighborhoods. BES states that, before Tabor to the River, increases in pavement and other impervious surfaces and decreases in tree canopy in that area caused the volume of water flowing into the 100-year-old stormwater system to be much greater than the system was designed to manage. Very heavy rains caused sewers to back up into basements, flood streets, and overflow to the Willamette River. Tabor to the River implemented various green infrastructure elements to limit the size of necessary gray infrastructure improvements.

According to BES, resolving the problem of inadequate stormwater capacity in the Tabor to the River Program area with only gray infrastructure would have cost an estimated \$144 million, while incorporating green infrastructure elements reduced the estimated cost to \$81 million, saving more than \$60 million.

Your committee finds that the feasibility, efficacy, and cost effectiveness of combined green and gray solutions are area and project specific. Your committee finds that prudent application of green systems can reduce peak flows and water quality demands on the existing gray components, and that green infrastructure can reduce costs to ratepayers.

d. Replacing aging infrastructure

Portland's aging sewer and wastewater infrastructure presents an ongoing challenge to BES. Following completion of the Big Pipe, the agency's Capital Improvement Program now focuses on replacing old and failing sewer lines throughout the City. A 2005 asset management review created a ranking which prioritized the need for replacement of each segment of the City sewer system. That ranking considered both the probability and the consequences of pipe failure. Phase 1 of the Pipe Rehabilitation program replaced approximately \$26 million in pipes, and assessed pipes that had not been inspected in the previous 10 years. The current Phase 2, which was developed based on a review of the remainder of the system, is an eight-year program to replace pipes that will reach the end of their expected life during that period. Phase 2 will replace approximately 240,000 linear feet of pipe.²⁰ Because of funding constraints, it will take 400 years to replace all of the system's pipes at the current replacement rate for both BES and PWB. It is well understood that most existing pipe has roughly a 100-year life span, and, therefore, the current replacement rate is likely unsustainable. BES asset management review rankings will be used to plan future projects to replace aging segments of the system.

e. Superfund

BES is responsible for managing Portland's participation in the Portland Harbor Superfund remediation. Superfund is the name given to the environmental program created by Congress in 1980 to address the U.S. sites with the most serious hazardous-waste contamination. The Portland Harbor – the stretch of the Willamette River extending from a point midway between where the Columbia Slough enters the river and the Multnomah Channel creates Sauvie Island, and the Broadway Bridge – was added to EPA's National Priorities List in December 2000.^{21, 22}

Under Superfund rules, the cost of cleanup is charged to the Potentially Responsible Parties ("PRP") that caused the pollution, which is often the current site owner.²¹

Proposed remedial actions for the Portland Harbor, including removing and capping contaminated sediments, were included in the March 2012 draft Feasibility Study prepared for the Lower Willamette Group, consisting of some of the PRPs in the harbor.²² The EPA is expected to issue a proposed remedy in late 2015. A final plan, negotiations, and design must be completed before cleanup begins.^{23, 24}

The City of Portland is among the PRPs for the Portland Harbor because it owns land within the designated area, and has directed stormwater runoff and raw sewage into the river. Portlanders pay a Superfund fee as part of each utility bill based on water consumption and their property's square feet of impervious surface. Site studies and associated activities have cost \$100 million over 10 years. Ratepayers have contributed approximately \$41 million over that period for the City's share of these activities, and for additional source investigation work in support of the City's position, as well as funding for Natural Resource Damage Assessment Trustees. Total future cleanup costs are expected to range between \$169 million and \$1.8 billion. Ratepayers can expect to fund a portion of Portland's yet-to-be-determined share of those costs.^{22, 25}

E. BUDGETING AND RATEMAKING

1. Introduction

Utilities such as water and sewer systems are monopolies that have no competition in the market for utility services. They are known as 'natural monopolies' because the high cost of the required infrastructure, and the inefficiency of running duplicate pipes to each residence and business, mean that just one provider will necessarily enjoy the exclusive right to serve customers within a set geographic area. Unlike a seller in a competitive market, a utility has the burden of serving every customer in its territory, and cannot choose to serve just the customers who are in the best position to pay.

Because they are monopolies that do not face pressure from competitors to keep prices low and customers happy, utilities are subject to regulatory control of rates and terms and conditions of service.

PWB and BES are city-owned utilities which function as city bureaus. The Portland City Council is the economic regulator of PWB and BES, setting budgets and rates. The Commissioner-in-Charge

for each bureau is additionally responsible for managerial and administrative oversight of the bureaus. PWB and BES are self-sustaining enterprise funds, which means the cost of services must be paid by ratepayers. The full costs of running the bureaus are determined in the City's budgeting process. Those costs include operating expenses, capital expense, and debt service. The full costs of services – or revenue requirements – ultimately determine the rates that customers pay.

2. The Budgeting and Ratemaking Process

Oregon law establishes standard procedures for preparing, presenting, and administering a municipal agency's budget. It further requires community involvement in the preparation of a budget, and public disclosure before a budget's adoption.

PWB and BES address these mandates by employing a set budget process, and by utilizing citizen review committees: the Portland Utility Review Board (PURB) and two Budget Advisory Committees (BAC), one for each bureau.^{26, 27} Your committee heard testimony that the PURB and BAC members are interested citizens and water activists appointed by the City Council who may not have a background or expertise in utility finance, engineering, or accounting. While the PURB and the BACs function slightly differently, they share the stated goal of ensuring that PWB and BES customers pay a reasonable price for the services they receive.

The City of Portland budgets on an annual basis, but conducts financial planning over a five-year timeframe. This is done to ensure that decisions are made within a larger financial perspective. Annual budget decisions are made such that resources and requirements balance over the five-year financial plan.²⁸

Each city bureau is responsible for development of its Requested Budget, following state and city guidelines. The budget process for PWB and BES begins with a review of the bureaus' five-year Capital Improvement Plans (CIP) with the City Council and the City Budget Office.²⁸

Both BACs receive updates and engage in dialogue with bureau directors and managers as they develop the annual budget per city guidelines. The bureaus bring together representatives of key stakeholders, including members of the community, PURB, and bureau employees, as part of the budgeting process.^{26, 27, 29}

Upon receipt of a bureau's Requested Budget, the City Budget Office ("CBO") staff confirms that submitted materials are complete and accurate, and that they comply with budget guidance. The CBO staff analyze the Requested Budgets and prepare budget analysis reports for the Mayor and Commissioners.²⁸

Acting as the Chair of the Budget Committee, the Mayor is responsible for overseeing the preparation of the Proposed Budget based on each bureau's Requested Budget, for presentation to the City Council when it sits as the Budget Committee. The Proposed Budget is the culmination of an extensive process of budget development, analysis, and revision. The City Council, when convened as the Budget Committee, provides members of the public the opportunity to ask questions about, or comment on the proposed budget. Changes to the proposed budget are made

during this process, and the City Council/Budget Committee reviews the changes and votes on whether to approve the proposed budget.

After the proposed budget is formally approved, rate hearings are held to approve water, sewer, and stormwater rates. The rates are approved by city ordinance.²⁸ During the budget process, the PURB reviews PWB and BES budgets for rate setting impacts. The PURB reports proposed rate changes to the City Council during the annual budget hearings.

The timing of City Council review and approval is such that the size of the budget, as well as the rates for water and sewer services, can be changed at the last minute without citizen review and input, and without input from the bureaus. Under the current budget process, PURB and the BACs have only three weeks to review and comment on the Mayor's Proposed Budget. The budget can then be changed by the Commissioner-in-Charge and the Mayor shortly before final approval without further review or comment from the public or the bureaus. Last minute additions or changes in the proposed budget are not subject to the same level of public review and transparency that is required earlier in the process.³⁰

Although the bureaus utilize annual budgeting and the five-year CIP process, they do not have in place a public least cost, least risk planning process. A least cost, least risk process – which is standard in the utility industry – focuses on long-term planning and evaluation of expected future investment, potential changes within the marketplace, and alternatives for meeting both existing and anticipated demand. The process develops a roadmap to providing reliable, least cost service to customers while addressing risks and uncertainties.

This is fundamentally a two-step process. First, after extensive discussions with stakeholders, an action plan is drafted. Second, the utility selects and embarks on a project set out in the action plan. Even after the plan is in place, each project is examined for prudence before being added to the agency's budget.

3. Ratemaking Methodology

Utility rates must be set at a level that allows a utility to recover its prudent and reasonable cost of service, and to service its debt. There are two widely recognized steps in establishing utility rates. First, the regulator must determine the annual revenue requirement, i.e. the amount of revenue that the utility must receive in order to operate and maintain its system, to expand as needed, and to preserve its financial integrity. Second, the regulator must determine the rate spread and rate design, which designate and set criteria for determining the amount of required revenue that should be collected from each class of customer, including residential, commercial and industrial customers.

For both PWB and BES, the first step in the process – the revenue requirement – is set when the City Council approves the budget. The second step, setting the rate spread and rate design based on the budget, differs for each bureau, as described below.

a. PWB ratemaking

PWB's revenue requirement – the amount it must take in to pay for each item in its budget – is collected from retail sales (including sales to wholesale customers), bond proceeds, and other sources including system development charges.

The rate structure for PWB's retail sales is simple. It consists of two components: a base charge and a commodity charge. PWB collects from each customer a base charge of \$10.40 per month, or \$31.21 every three-month billing cycle. Base charges are designed to recover the fixed costs incurred by the utility regardless of the volume of water the customer uses. PWB in addition collects a commodity charge for the volume of water used. The commodity charge is a set price per centum cubic foot ("ccf") – or 100 cubic feet – of water used. There are 748 gallons in one ccf. PWB's current rate \$3.441 per ccf.

PWB's average residential customer uses 5 ccf per month, and thus pays a commodity charge of \$17.21 per month in addition to the base charge of \$10.40 per month.

PWB does not differentiate among classes of customer in setting either its base charge or its commodity charge. In other words, a Portland homeowner pays the same base charge and per-ccf commodity charge as a large industrial or commercial customer. PWB's single base charge and single commodity charge likely result in cross-subsidization, which means that some classes of customers may pay less than the full cost of the service they receive, while other classes of customers may pay more than the full cost of service. While some cross-subsidization is common for any utility, the effect can be minimized by assigning different base charges to different classes of customers.

The American Water Works Association ("AWWA"), a nonprofit scientific and educational association dedicated to managing and treating water,³¹ recommends that water utilities set differing base for small, single-family residential customers and large industrial water users. This recommendation is designed to avoid cross-subsidization by accounting for the fact that industrial customers may place greater demand on the water system than do residential customers. Your committee concludes that further study of lower base charges for PWB's residential customers is advisable to address the cross-subsidization inherent in the current system.

PWB sells water to other water districts, water companies, and cities in the metropolitan area. Rates paid by those wholesale customers are established following the terms and provisions of a master water sales agreement which specifies how rates are calculated each year and takes into account specific parameters, cost allocations, factors and variables specific to each wholesale customer. PWB's contracts with its wholesale customers require the customers to pay for a pre-determined volume of water, even if they don't actually use that fixed amount.² Since fiscal year 2011-2012, the aggregate amount of water purchased by wholesale customers was less than the minimum guaranteed amount, meaning that wholesale customers paid for water they didn't use.³²

A large proportion of PWB's operating costs are fixed, meaning that PWB incurs those costs regardless of how many gallons of water the bureau sells. Water districts that purchase from PWB help to pay a share of those fixed costs, and as a consequence hold down prices paid by PWB's retail

customers. It is in the interest of PWB and its retail customers to sell as much water as possible to as many wholesale customers as possible. In fact, in FY 2013-14, PWB will receive 12% of its total revenue – \$15.8 million – from its wholesale customers.³³ However, as noted above, several of PWB’s wholesale customers are preparing to discontinue purchases from PWB and develop their own water sources. The loss of those wholesale customers will shift more of the bureau’s fixed costs to its retail customers.

b. BES ratemaking

While PWB sells a product, BES sells a service: disposal and treatment of sewage and wastewater. BES’s revenue requirement – the amount it must take in to pay for each item in its budget – is collected from customer charges, bond proceeds, system development charges, wholesale contracts, and miscellaneous other charges.

The varied ways in which customers contribute to the sewer and stormwater system adds complexity to the way BES’s rates are structured. Customers pay for the following components of BES services:³³ Sanitary Sewage Flow, which is the volume of sanitary sewage discharged by customers, measured in ccf per year; Biochemical Oxygen Demand, the oxygen required by microorganisms to break down the organic content of sanitary sewage, measured in pounds per ccf of sanitary sewage flow; total suspended solids, the weight of suspended particulate matter per unit of sanitary sewage flow, also measured in pounds per ccf of sanitary sewage flow; and impervious area, the responsible customer’s contribution of stormwater runoff to the City’s stormwater drainage system, measured in thousands of square feet.

In addition to charging for different types of services, BES divides its customers into residential and nonresidential classes when setting rates. Each class is subject to a different charge for sewer services and stormwater management. There are separate rates for users discharging clean water into the storm or combined sewer, users operating special meters, and users who make industrial strength discharges into these systems. Industrial strength discharges are further classified as “suspended solids” and “biochemical oxygen demand” – measures of the strength of the discharges and necessary treatments.

The rate structure for BES is more complex than that of PWB and is better suited to reduction of cross-subsidization. But despite its substantial fixed costs, and unlike PWB, BES does not have a base charge. Use of base charges to recover fixed costs and commodity charges to recover variable costs is a common practice among utilities.

Like PWB, BES has contracts with other utility districts. Gravity is the reason for those contracts. As a practical matter, the most efficient and cost-effective way to move sewage and wastewater is downhill. BES has agreements with sewer providers in the area surrounding Portland to receive and treat flows from each other’s territory, depending on which jurisdiction is on the downhill side. Providers include Lake Oswego, Clean Water Services (Washington County), Clackamas County Service District #1, Gresham, Milwaukie, and Dunthorpe-Riverdale Service District. Each agreement stipulates the payments required when one jurisdiction sends flows to another, or the

net amount for those where one jurisdiction both receives and sends flow to others. BES expects to receive approximately \$3.5 million in revenue from wholesale contracts in FY2013-14.

F. AGING INFRASTRUCTURE, REGULATIONS AND DECREASED USAGE PUT UPWARD PRESSURE ON WATER AND SEWER RATES

1. Recent Rate Increases

PWB's rates have increased steadily over the past 10 years. PWB's typical residential monthly bill was \$15.91 in 2003-2004, compared to \$27.61 in 2013-2014. This represents an increase of approximately 73 percent in 10 years. As a comparison, the consumer price increase for that period was approximately 24.7 percent.

BES's residential rates have increased approximately 79 percent since 2003-2004. BES's average monthly bill in 2003-2004 was \$35.05 compared to \$62.74 in 2013-2014. Projected future rates show similar increases.

For the current year, the City is considering adopting a 7 percent increase in water rates, and a 4 percent increase in sewer and stormwater rates, beginning in July 2014. Looking forward, PWB's 2017-2018 typical residential monthly bill is projected to be \$42.32, representing a 20.74 percent increase over current rates. BES's 2017-2018 typical residential monthly bill is projected to be \$73.75, representing an approximate 17 percent increase over current rates.

Are Portland's water and sewer rates out of line with rates paid by residents of other municipalities? Your committee was unable to reach any firm conclusions on this issue. Comparison of water and sewer rates is notoriously difficult. Every utility sets its budget and rates differently. Every utility has its own cost drivers, including water source, treatment requirements, seasonal use variation, access to capital, bond ratings, complexity of infrastructure, density, economies of scale, age of infrastructure, and regulatory compliance.

Based on an average residential water use of 5 ccf and factoring in the monthly base charge, regional average monthly water bills compare as follows:

City of Vancouver:	\$13.86
Rockwood Water District:	\$16.82
Tualatin Valley Water District:	\$20.89
City of Beaverton:	\$23.35
City of Portland:	\$27.61
City of Lake Oswego:	\$30.58
City of Gresham:	\$31.86
City of Tigard:	\$33.76

These figures tend to put PWB's rates squarely within the range of rates charged regionally.

As for sewer rates, BES's own survey shows that its sewer rates, at \$62.74 per month, fall toward the mid-range compared with other large cities. Atlanta, Georgia is at the high end at \$108.08 per month, and Baltimore, Maryland is at the low end at \$34.61 per month.³⁴

A recent independent survey of combined water and wastewater rates for both residential and commercial customers shows that Portland's rates are generally comparable to those in Seattle, San Francisco and Los Angeles.³⁵

Given this data, your committee cannot conclude that PWB and BES water, sewer and wastewater rates are notably higher than rates charged by utilities in other cities.

2. Drivers of rising rates

Your committee heard from witnesses that utilities around the country are experiencing substantial increases in water and sewer rates driven by the costs of compliance with clean-water and other laws, the costs of replacing aging infrastructure, and declining water consumption. Water, sewer and wastewater rates throughout the U.S. have increased since 1996 at about twice the rate of inflation.³¹

a. Statutes and Regulations

Federal laws with which PWB and BES must comply include the Clean Water Act (CWA), which regulates discharges from wastewater treatment plants and sewage overflows into rivers and streams.³⁶ The Comprehensive Environmental Response, Compensation and Liability Act, known as CERCLA, created Superfund in 1980 to respond to releases of hazardous substances that may endanger public health or the environment.³⁷

The Safe Drinking Water Act (SDWA) is the primary federal law ensuring the quality of Americans' drinking water. Under the SDWA, EPA sets standards for drinking water quality and oversees the states, localities, and water suppliers that implement those standards. The law requires state and local governments to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and ground water wells. The SDWA authorizes the EPA to set national health-based standards for drinking water to protect against both naturally occurring and man-made contaminants that may be found in drinking water.³⁸

As a rule, much of the cost of compliance with federal laws is borne by ratepayers because the federal government provides little or no funding support. For example, Combined Sewer Overflows present a major obstacle to implementing CWA mandates. More than 700 cities' sewer and wastewater systems are subject to CSOs; since 2007, the federal government has required cities to invest more than \$15 billion in new pipes and equipment to prevent CSOs.³⁹

Each of these laws has an impact on customers of PWB and BES. Federal drinking water standards, and in particular LT2 requirements, were the impetus for PWB's ongoing and costly effort to replace open reservoirs with covered reservoirs, and for its extensive testing to maintain the exemption from treatment for *Cryptosporidium*. Clean water laws and regulations motivated the

Big Pipe project and the ongoing efforts to manage stormwater and avoid CSOs. CERCLA will require Portlanders to pay part of the costs to clean up contaminated sediments in the Portland Harbor.

b. Aging Infrastructure

Much of the U.S. water infrastructure – the systems that treat, distribute, collect and clean water – was built a century ago. With quiet consistency, this infrastructure has provided the foundation for an economic prosperity and quality of life unparalleled anywhere in the world.^{40, 41, 42} But the U.S. General Accounting Office reports that 50% of the nation's large systems' pipe is near replacement age.^{43, 44} In some cases, the infrastructure is literally falling apart.

Restoring existing water systems as they reach the end of their useful lives and expanding them to serve a growing population will cost U.S. ratepayers at least \$1 trillion between 2012 and 2037, according to the AWWA. To meet that need, household water bills could triple during that time period.³⁹

The nation's wastewater and stormwater systems, which have kept surface waters safe and clean for generations, have similar capital investment needs. A report by the American Society of Civil Engineers shows that an investment of \$298 billion will be required nationally to maintain and upgrade those systems over the next 20 years.³⁹

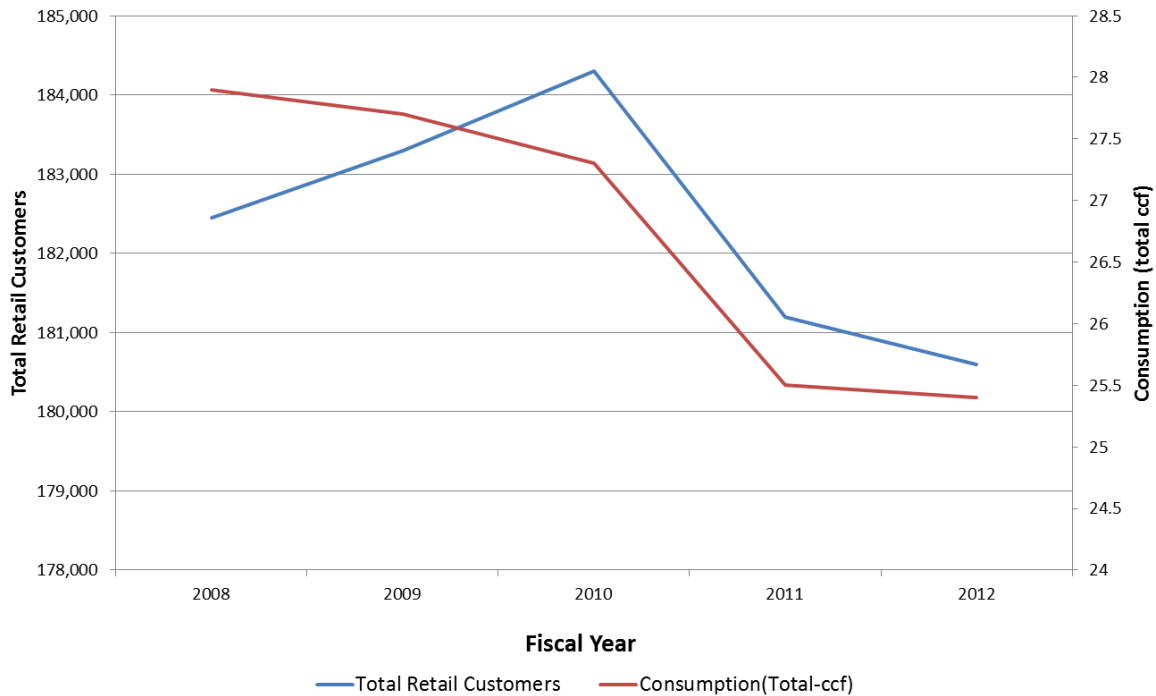
Portland is one of many cities confronting the challenges of a decades-old water and sewer system.⁴⁵ Your committee heard from witnesses that Portland is ahead of most cities in upgrading its combined sewer system and replacing pipes that are at risk of failure. As other cities take on their own infrastructure challenges, their ratepayers may see the kind of rate increases that Portlanders have experienced for the past several years. But the work in Portland is not done, and decades of infrastructure projects lie ahead for PWB and BES.^{46, 47} A 2012 Portland city auditor report noted that PWB is a leader in asset management, which is the practice of managing infrastructure capital assets to minimize the cost of ownership and operation while delivering desired service levels.⁴⁸ This expertise should help to facilitate the efficient and cost-effective replacement of infrastructure.^{49, 50}

c. Declining usage

Since 1985, water utilities throughout the country have experienced declining water consumption. The decline is attributable to factors including conservation and the adoption of water-saving technology.^{51, 52} Because of the substantial fixed costs associated with delivering water services, a decline in usage means that more of the fixed costs must be recovered with each gallon sold. This translates to higher per-unit costs. The following table shows the decrease in consumption by PWB retail customers over the past five years.

PWB Consumption⁵³

<u>Fiscal Year</u>	<u>Total Retail Customers</u>	<u>Consumption (Total-ccf)</u>
2008	182,450	27.9 million
2009	183,300	27.7 million
2010	184,300	27.3 million
2011	181,200	25.5 million
2012	180,600	25.4 million



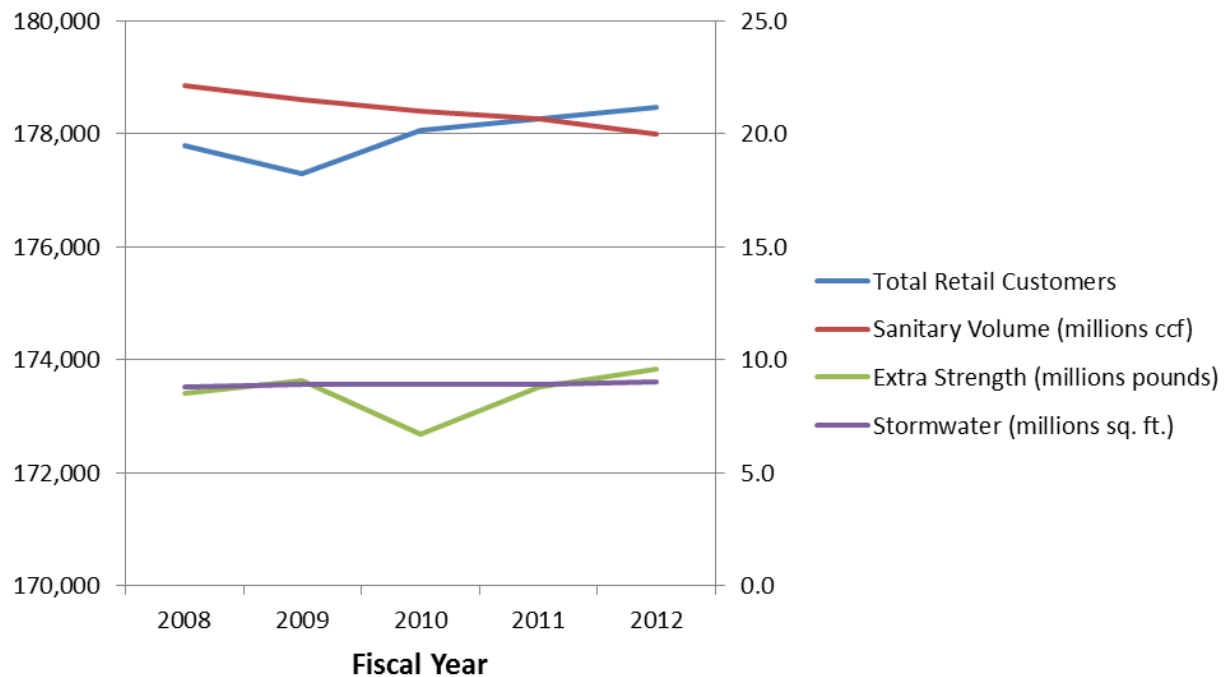
As the table indicates, both PWB customer count and total water consumption have decreased since 2008.

BES has experienced stagnant use in the past several years. As shown in the table below, the number of BES customers has increased slightly since 2008, while basic sanitary service demand has declined. At the same time, other components of BES's services – extra strength and stormwater demand – have increased slightly during that period.

BES Demand

<u>Fiscal Year</u>	<u>Total Retail Customers</u>	<u>Sanitary Volume (millions ccf)</u>	<u>Extra Strength (millions pounds)</u>	<u>Stormwater (millions sq. ft.)</u>
2008	177,784	22.1	8.5	8.8

2009	177,294	21.5	9.1	8.9
2010	178,058	21.0	6.7	8.9
2011	178,257	20.65	8.8	8.9
2012	178,461	20.0	9.6	9.0



These trends are expected to continue in the future. As customers decrease their usage of water and sewer services, costs per customer will trend upwards.

G. QUESTIONS REGARDING PERFORMANCE EFFICIENCY

Some witnesses offered anecdotal evidence that PWB and BES have become “bloated” in their staffing and inefficient in their operations. It is beyond the scope of this study for your committee to determine whether the bureaus operate in the most efficient manner possible. However, as part of its general inquiry regarding performance efficiency, your committee asked representatives of both bureaus about their benchmarking practices and results.

Benchmarking is a systematic process of searching for best practices, innovative ideas, and effective operating procedures that lead to improved performance. Benchmarking generally entails assessing performance through comparison with peer utilities. Benchmarking can address a wide variety of internal metrics (e.g., worker safety) as well as customer service and efficiency (e.g., complaints, service interruptions, gallons of water provided per employee, gallons of wastewater treated per employee). Both bureaus report that they have participated in benchmarking analyses. Your committee believes that continued and perhaps expanded benchmarking is warranted as a means to address and improve the bureaus’ efficiency. The results of benchmarking should be made available for public review.

H. PORTLAND HAS USED RATEPAYER FUNDS FOR PURPOSES UNRELATED TO DELIVERY OF UTILITY SERVICE

In recent years ratepayer funds have been used for purposes other than delivery of water, sewer and wastewater services. There are few, if any, explicit limits on the rates set by the City Council. In contrast, growth of the City's general fund is constrained by the Oregon Constitution's restrictions on increases in property taxes. It is not surprising, then, that the City Council has been tempted to use utility revenues to fund projects outside the purview of PWB and BES that would otherwise be supported by general fund dollars or not undertaken at all.

1. The Water House and other projects have harmed public perception of the bureaus

A steady flow of media stories has exposed the expenditure of ratepayer funds for projects unrelated to the delivery of water and sewer services. Nick Fish, currently Commissioner-in-Charge of both PWB and BES, described these projects to your committee as "self-inflicted wounds" that have damaged the public's perception of the agencies and caused voters to question how commissioners make budget and rate setting decisions.

Many witnesses mentioned the Water House to your committee as the prime example of misuse of ratepayer dollars. In 2011, PWB Commissioner-in-Charge Randy Leonard set out to build a house to demonstrate the benefits of water-efficient living. The City Council, outside of PWB's customary budget development process, approved the use of ratepayer funds for the project. PWB projected building costs of \$200,000, and projected selling the Water House for \$400,000. Several contractors donated time and materials, and others worked at discounted rates. The house was built on vacant surplus land in Northeast Portland. In the end, PWB expended \$950,000 in hard and soft costs on the Water House, according to Commissioner Fish.

In August 2013, the City put the Water House on the market, and it sold in January 2014 for \$394,950, less than half of what it cost to build. Commissioner Fish called the house "a mistake."⁵⁴

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Critics also targeted the use of ratepayer funds to renovate a building to house the Rose Festival Foundation headquarters. In 2009, the City Council approved transfer of the Yeon Building and adjacent land in Waterfront Park from the Park Bureau to PWB. Some \$1.5 million in ratepayer funds were used to renovate the building, and in 2010 the building was leased to the Rose Festival Foundation for use as its headquarters. The Rose Festival Foundation paid a base rent of \$1 per month, plus \$200,000 for renovation costs to be paid over the term of the lease. Ratepayer money was to be used to maintain the building. The project was approved outside of PWB's customary budget process. Following an uproar over this perceived misuse of ratepayer funds, the City in 2012 reimbursed the water fund \$1.6 million.⁵⁶

Other projects funded in whole or in part with ratepayer dollars that have received criticism in recent years include the Portland Loos, which are public flush toilet kiosks that the City designed and installed and has attempted to market to other cities;^{57, 58} the funding of a park ranger for Forest Park; and the purchase of the Kelly Building in East Portland for police department office space.⁵⁹

2. The Water House and similar projects are not the major driver of rate increases for PWB and BES

Despite the public outrage regarding the Water House and other projects funded with ratepayer dollars, your committee heard no evidence that these projects are the primary driving force behind recent and projected rate increases.

Certainly the cost of projects such as the Water House has had an effect on customers' bills.⁶⁰ And your committee questions whether the full scope of the misuse of funds has come to light. But the non-mission-critical expenses identified in the past few years are small in comparison to the price tag of massive projects such as the Big Pipe and LT2 compliance. The Big Pipe project by itself cost more than \$1 billion, and the cost of building covered reservoirs will run into the hundreds of millions of dollars. These are among the major drivers of rate increases.

Even so, it must be emphasized that utility rates should pay solely for the delivery of utility services; the lapses noted in this report highlight structural problems inherent in setting the bureaus' budgets and priorities.⁶¹

3. What projects are related to delivery of water, sewer and wastewater services?

While projects such as the Water House and Rose Festival Foundation headquarters are evidently unrelated to utility services, your committee found that it can at times be difficult to distinguish between what is and is not a proper use of ratepayer dollars. For example, BES ratepayer funds have been used to plant trees on private property, as part of its green infrastructure initiative to capture stormwater before it reaches the sewer system. Some have questioned whether that expenditure is properly categorized as the delivery of sewer and wastewater services. In fact, Mayor Hales proposes utilizing general fund dollars, and not ratepayer funds, to pay for tree planting in the City's next budget.

Other examples of expenditures that some have questioned include purchases of real property by BES ostensibly to avoid development in areas prone to landslide and resulting impacts on water quality;⁶² and utility fees – amounting to five percent of each utility's gross revenue – which are payable to the general fund and which may help fund services including police, fire, and parks.^{63, 64}

Portland has no criteria in place for identifying expenditures that are necessary for delivery of utility services. The lack of criteria may contribute to the public's distrust of the budget and rate setting processes.

4. Responses to perceived abuses and rising rates

Concern about rising water, sewer and wastewater bills, and media coverage of the Water House and other expenditures, have prompted a number of responses both inside and outside of city government.

a. Audit and Red Oak Consulting Reports

- (1) 2011 Audit Report

In 2011 the Portland City Auditor issued an audit report titled “Spending Utility Ratepayer Money: Not Always Linked to Services, Decision Process Inconsistent.”⁶¹ The report found that the vast majority of spending by PWB and BES was directly related to the delivery of water and sewer services and was properly approved during the City budget process. But the auditor highlighted several projects with a questionable relationship to the delivery of water and sewer utility services, and concluded that some of that spending was not authorized in a manner consistent with the City’s planning, budget and rate-setting process. The projects identified included the Water House, the Rose Festival Foundation headquarters, and several others.⁶¹

The Audit found that, overall, use of ratepayer funds for non-utility related programs had increased over the five years preceding the audit from less than \$200,000 in FY 2005-06 to \$2.5 million in FY 2010-11. The auditor made several recommendations to address these practices, including that all projects requiring significant expenditures of ratepayer funds should be submitted through the customary budget approval process and be accompanied by a statement setting out the relationship to water and sewer services and the effect on utility rates.⁶¹

(2) Red Oak Consulting Report

In 2011, PWB and BES retained a management consultant, Red Oak Consulting, to study and report on best practices regarding the process for setting water, sewer, and stormwater budgets and rates.³⁰ The Red Oak study was motivated by concerns expressed by members of PURB about the lack of transparency in the current rate approval process, and a perception that the PWB and BES budgets included “non-core utility service delivery items.”³⁰

The resulting report, dated June 7, 2011, concluded that the ability of a single City Commissioner to amend the final budget after the completion of BAC and PURB review is inconsistent with best practices. It stated that PURB’s function “appears to end prematurely during the rate approval process” because PURB plays no role when certain budget items are considered by the Mayor and/or Commissioner-in-Charge. The report recommended, among other things, that if the Commissioners are to retain the ability to amend the budget after the normal approval process ends, then PURB should be given an opportunity to review and comment on any late-entry budget items.³⁰

b. Proposals for an Independent Utility Commission

In 2010, the Portland Charter Review Commission heard testimony from witnesses concerned about rising water and sewer rates and non-utility expenditures such as the Water House. A member of the Charter Review Commission told your committee that Commission members perceived a conflict of interest inherent in placing both ratemaking and policymaking for the utilities in the hands of the City Council. They believed that the limits on property taxes put a strain on the general fund and created an incentive to raise utility rates and divert ratepayer dollars. They concluded that PURB has insufficient power to ensure that revenue from rates is properly used.⁶⁵

As a solution, the Charter Review Commission conducted preliminary work on, but never completed, a proposal for an appointed Independent Utility Commission (“IUC”) which would be responsible for developing annual budgets and rates for water and sewer service. The proposal

would have required a supermajority vote by the City Council to revise the recommended budget and rates.

In 2011, Commissioner Dan Saltzman began work on an ordinance which would have created an IUC that would be responsible for proposing annual budgets and rates for utility services. Under that proposal, the City Council would have retained the power to reject or amend the rates and budget by majority vote. The Saltzman IUC would consist of individuals with expertise in fields such as municipal finance, utility finance and ratemaking. The ordinance was never brought to the full City Council for a vote.

Other municipal water and sewer utilities have governing structures similar to the IUC proposals. In Hillsboro, Oregon, the water utility is a department of the city but is governed by an appointed utilities commission. Likewise, the water utilities in the cities of Tacoma, Washington and Anchorage, Alaska are among those governed by appointed boards and subject to varying levels of oversight by elected city councils.⁶⁶

c. Anderson v. City of Portland

In December 2011, three citizens sued the City, claiming that a portion of the fees citizens pay for water and sewer service are “diverted” for uses unrelated to the provision of water and sewer services. The lawsuit, *Anderson v. City of Portland*, seeks an order that the City reimburse the water and sewer funds for the amount spent on projects that are allegedly in violation of the City charter.⁶⁷

The challenged expenditures include (1) the amount assessed from the BES and PWB (along with every other city agency) to fund “voter owned elections” – the system in place from 2005 to 2010 to provide public campaign funding of qualified candidates for city-wide office; (2) funds to develop and produce the Portland Loos; (3) funds to relocate pipes to accommodate streetcar and light rail projects; and (4) BES funds used to acquire Riverview Cemetery property.^{67, 68}

The City states that its potential liability associated with all of the claims in the pending lawsuit could be as much as \$50 million. As of the date of publication of this report, there is no final ruling on the merits of the challengers' claims.

d. Portland Water District Ballot Measure

A group of citizens active in water governance issues, with financial support from certain industrial customers of PWB and BES,⁶⁹ have proposed a ballot measure that would amend the Portland City Charter to create a Portland Public Water District. (the “District”) The measure will be on the ballot in the May 11, 2014 election.⁷⁰

The measure would create a District administered by a governing board of seven directors elected by zone from among all electors of the City. (§16-102) It would amend the city charter to transfer to the District the powers of the City Council relating to operating and financing the City's sewer, water and wastewater systems. It gives the district the power to prepare and adopt a budget (§16-103(4)(d)), set water rates (§11-105) and set sewer rates. (§11-302) It states that it would transfer

control of the property used for those systems to the District. (§16-103) The measure states that the District may not (1) regionalize or privatize water or sewer service, (2) commingle Bull Run water with drinking water from a source other than the Columbia South Shore Well Field, or (3) adopt regulations for the Bull Run Watershed that are less protective or enhancing of water quality than the regulations in place on July 1, 2013. (§16-103)

The measure transfers from the City to the District the right to sell surplus water to customers outside of the City and to enter into contracts relating to sewage disposal and treatment (§11-101, 11-302). The measure requires the City to issue bonds at the direction of the District.

The measure addresses at length the qualifications for, and election of, the directors having the power to administer the water and sewer systems. The measure provides that the seven directors be elected from each of seven zones drawn by the City Council. The seven zones “shall be... coextensive with the zones established for the board of Portland Public Schools....” Each member of the board must reside in the zone from which he or she is elected. (§16-104) Members will serve without salary. (§16-105)

The measure identifies several groups of individuals who may not run for election for the board. (§16-105) Those include elected officials; anyone employed by the City currently or in the previous 72 months; any individual who has a contract with the City or District related to water or sewer services or who is an employee of an individual or firm with such a contract; and anyone who currently or within the previous 36 months was a member of PURB or the BAC of PWB or BES. While the proponents state that these provisions are designed to prevent conflicts of interest, the broad exclusion of those having contracts with PWB, BES and the proposed district, and employees of entities having such contracts, could disqualify thousands of individuals from running for the board. The Portland Tribune reports that the bureaus currently have contracts with hundreds of businesses, including PGE, Pacific Power, Fred Meyer, and a number of engineering, design and construction firms. The employees of those entities would be disqualified from serving as directors of the District. Also disqualified would be employees of various environmental groups that have had contracts with BES for tree planting and bird surveys.⁷¹

Questions not resolved by the plain language of the measure include whether a charter amendment is legally sufficient to transfer PWB and BES assets to the new district; whether city residents not within the boundaries of the Portland Public Schools District will be entitled to vote for members of the board; and whether the prohibition on election of elected officials to the board would prevent a current member from running for a second term.

Your committee discusses the arguments for and against this measure and its recommendations in Section L below.

The ballot measure, the *Anderson v. City of Portland* lawsuit, and the various reports and proposals discussed above, show an acute level of concern regarding how budgets and rates are set, and how ratepayer funds are used.

I. THE CURRENT GOVERNING SYSTEM IS INSUFFICIENT TO ENSURE THAT RATES PAY ONLY FOR CORE UTILITY SERVICES

By law, ratepayer funds must be used for delivery of utility services. But the current system of governance has resulted in approval of budgets directing PWB and BES funds to non-mission-critical projects. Even if those expenditures are not the major part of current rates, your committee believes that ratepayers are rightly concerned about how their utility dollars are being spent. The following discussion shows the shortcomings inherent in the current governance system.

1. State Law, City Charter, Bond Covenants

State law requires that utility charges be “just and equitable.” This means the charges should not materially exceed the costs of providing the utility service, and the money collected must be spent to finance the service. State law gives the City Council authority to collect fees for utility services, but this money may not be spent on services not related to the utility. Violation of this provision could lead to classification of the revenue as an “unauthorized tax” subject to repayment to ratepayers.

The City Charter authorizes the collection and expenditure of ratepayer money for purposes directly related to operation of the sewer utility.

Portland has issued revenue bonds to fund its capital projects. Bond covenants require that the City establish rates in connection with the water and sewer system that are sufficient to pay “all operating expenses and lawful charges.” The covenants further require the City to operate the water and sewer systems in a “safe, sound, efficient, and economic manner in compliance with all regulations and laws.” The City Attorney contends that this requirement is met by ensuring that water and sewer funds are spent only for water and sewer related services.⁶¹

While state law, the city charter, and bond covenants set parameters for use of ratepayer funds, their constraints are not self-executing and cannot prevent misuse of funds. Instead, they provide guidance for city leaders and, as is the case with *Anderson v. City of Portland*, can set the stage for costly lawsuits to resolve whether they have been violated.

2. City Council

In 1913, Portland adopted the commission form of government, and it is the only city of its size to continue to use that model. The commission form of government combines legislative and administrative responsibilities in a group of elected commissioners – the City Council. The City Council makes city policy, enacts ordinances, and approves budgets for expending City funds, while individual commissioners administer the city bureaus.⁷²

Your committee heard testimony that the assignment of administrative duties to commissioners means that bureaus may lack consistent management and direction. For example, due to elections and bureau reassignments, PWB was administered by four different commissioners in a recent one-year period.⁷³

Given that elected officials run the bureaus, short-term political expediency can substitute for best practices in program implementation, monitoring and evaluation. Short-term thinking is of

particular concern for utilities such as PWB and BES which must build and maintain capital improvements that will be in use for decades.

Portland's system of governance relies on the City Council to set the PWB and BES rates and budget. As noted above, despite systems in place for transparency and public input, the budget process has allowed "pet projects" to be added at the last minute.

3. PURB and BAC

The Public Utility Review Board and the Budget Advisory Committees for PWB and BES are appointed to oversee the bureaus and charged with adding public input and transparency to the budgeting and rate-setting process. They play an advisory role and do not actually set PWB and BES budget and rates. The members are interested citizens who may not have a background or expertise in areas such as utility finance and engineering. As the Red Oak Consulting report concludes, the role that those entities plays ends too soon for them to have any influence on last-minute budget and rate changes made by the members of the City Council.

4. Auditor

The Portland City Auditor has the ability to examine BES and PWB expenditures and assess whether they are for delivery of utility services. But that work can be done only after the fact and cannot prevent the agencies or the City Council from directing ratepayer funds to non-mission-critical projects. Further, the Auditor has no power to enforce any recommendation regarding the use of ratepayer funds.

5. Recent changes to budgeting and management

Commissioner Nick Fish is the current Commissioner-in-Charge of both PWB and BES. He described to your committee various initiatives he has adopted to improve transparency and accountability in budgeting and rate setting.⁷³ These include having the bureaus work together for the first time to coordinate and align budget processes, expanding benchmarking for best practices, and adopting a modified zero-based budgeting process.

In January 2014, the Portland City Council approved a five-year contract with the Citizens Utility Board (CUB), under which CUB will conduct analyses of the bureaus' budgets and policy proposals. CUB, which for nearly 30 years has advocated for residential utility customers, states that it will be an independent consumer advocate and will offer recommendations to the City Council on topics including capital spending, project priorities, and rates. CUB will play only an advisory role and will have no authority to set budgets and rates. It will advocate for the interests of residential users, but evidently not for the interests of commercial and industrial users. CUB will receive no funding from the City and will instead be supported by donations.⁷⁴

Your committee commends these efforts but notes that they do not change the institutional structures that led to the current lack of confidence in the bureaus.

J. HOW CAN CITY GOVERNMENT ENSURE THAT RATES PAY ONLY FOR UTILITY SERVICES?

The current governance system has few real checks against the use of ratepayer funds for non-mission-critical projects. Your committee heard from witnesses that a governance, budgeting and rate-setting system for water and sewer utilities ideally should include: the ability to receive input from community members and interest groups; the power to recommend a final budget and rates to the City Council without last-minute amendments; independence from political pressure; the ability to draw on expertise in finance, rate setting, engineering, and other disciplines associated with water, sewer and wastewater utilities; the ability to make long-term plans and to resist addressing only short-term expediencies; and the guidance of a clear delineation between what projects are and are not mission critical.

K. CONCLUSIONS

Your committee concludes as follows:

- Portland's recent rate increases are apparently commensurate with those experienced in other cities.
- Pressure for significant rate increases will continue in Portland and elsewhere, due to aging infrastructure, the costs of compliance with clean water laws and other statutes and regulations, and declining water use.
- Portland will face additional upward pressure on water rates as suburban municipalities terminate their wholesale contracts with PWB.
- Limits on increasing property taxes create pressure to use ratepayer funds for purposes other than providing water and sewer services.
- Portland's charter prohibits using ratepayer funds for purposes other than water and sewer services.
- Portland ratepayer funds have been spent for projects unrelated to water and sewer services.
- Those projects have not been the major driver of recent rate increases.
- There are no criteria in place to draw clear distinctions between expenditures that are for the delivery of utility services and those that are not.
- The current budgeting and ratemaking systems do not provide adequate and efficient checks against use of ratepayer funds for non-mission-critical purposes.
- The current budgeting and ratemaking systems are at times influenced by the priorities of the commissioner(s) in charge. Those priorities are often addressed by

last-minute budget amendments whose timing precludes citizen input and oversight.

- Members of PURB, and the BES and PWB BACs often lack expertise in rate setting, utility finance, engineering and other disciplines that would equip them to play an effective role in budgeting and rate setting.
- Thanks to its expertise as a utility watchdog, CUB will add a valuable perspective to the bureaus' planning, budgeting and ratemaking. CUB will help educate the public on issues related to water and sewer services, but CUB will not change the institutional defects identified in this report.
- Green infrastructure is widely recognized as a proper means to reduce the burden on the gray infrastructure wastewater system, and can be a means of reducing overall costs to ratepayers.
- PWB's rate structure uses a single base charge and commodity charge for all classes of customers. This practice is inconsistent with AWWA recommendations.
- BES does not use a base charge as part of its rates structure. This practice is inconsistent with industry standards.
- PWB and BES do not currently employ public least cost, least risk planning processes for long-term capital projects.

L. BALLOT MEASURE

The Portland Public Water District measure seeks an overhaul of the governance structure for water, sewer and wastewater services. Because the sponsors of the measure declined to testify before the committee to advance arguments in favor, your committee drew the following arguments from other sources – including interviews of industry representatives and financial backers of the measure, and media reports.

1. Arguments in Favor

The City Council hasn't done enough to hold the line on increases in water and sewer rates. A utility district board will resist rate increases. Green infrastructure, the Water House, and other projects show that the commissioners in charge have not adhered to the city charter and have spent revenue from ratepayers for purposes unrelated to the delivery of water and sewer services.

Due to limits on the increase in property taxes, the City has shifted to ratepayers the cost of projects that would otherwise be paid for from the general fund or not undertaken at all.

Budgeting and rate setting by BES and PWB are not transparent.

Rates are set to meet the budget and policy priorities of the commissioner(s)-in-charge, and not solely to pay for delivery of services.

A utility district separate from city government will not use ratepayer funds for purposes other than delivery of water and sewer services.

The measure will prevent regionalization or privatization of water and sewer service.

The measure will protect the Bull Run Watershed.

The measure will prevent commingling Bull Run water with water from sources other than current wells.

A utility district will continue to fight the federal mandate to build covered reservoirs.

Registered voters in Portland will be able to vote for members of the new board. The statement in the measure that board members will be elected from zones established for the Portland Public Schools District is just a starting point for drawing zones and should not cause the exclusion of voters who live in Portland but who are outside of the geographic boundaries of the Portland Public Schools District.

2. Arguments Against

The measure does not provide a mechanism for lowering, or slowing the increase of, water, sewer and wastewater rates. The recent increases in water, sewer and wastewater rates are attributable to, among other things, the Big Pipe project and LT2 compliance. There is no evidence that moving the utilities from the control of city government to a separate district will put a check on future increases.

Even if a new district were to avoid non-utility expenditures such as the Water House, there is no evidence that rate increases would be avoided in the future as a result.

It's unclear whether the measure, which amends the city charter, is adequate to put into effect a transfer of all water, sewer and wastewater assets to a new district. For example, the City's right to use water from the Bull Run watershed is the product of state law, and the measure does not purport to change, and cannot change, state law.

The measure purports to give the new district the ability to force the City to issue bonds for the District's purposes. Requiring the City to issue debt without first vetting the bond issue will put the City's strong bond rating at risk and thereby jeopardize other programs and services.

Portland Public Water District board members will be less visible than City Council members and less subject to public scrutiny, but will take over the City Council's responsibility for making decisions about setting rates and managing billions of dollars in assets.

The measure is unclear in several respects, and may be subject to legal challenges if it passes. For example, it states that the members will be elected from seven districts approximating the Portland Public School District. That provision omits large portions of East Portland which are not part of the Portland Public School District.

The measure potentially prohibits thousands of people from running to serve on the District board because of their, or their employers', contractual relationships with PWB and BES. It excludes those who work for some environmental organizations from running for office, but not representatives of industrial users of the water and sewer systems.

The new district might not agree to take on the Portland Harbor Superfund cleanup costs, and therefore, the City's share of the cost may be paid from the general fund and not by ratepayers. This will put a strain on the general fund.

The measure shifts permitting related to water, sewer, and wastewater service to the District and will require a separate permitting bureaucracy. This will undermine efforts to streamline construction permitting within the City. There is benefit to having the water and sewer systems within city government because this encourages and facilitates coordination with other government bureaus in planning and permitting.

The new district would be subject to oversight by the state auditor only if requested by the new board members.

PWB has expended substantial time and resources seeking to obtain a waiver of the federal mandate to build covered reservoirs. All avenues to avoid that mandate have been exhausted, Portland must proceed to build covered reservoirs, and a new water district will not be able to avoid the associated costs.

While the measure states that it would prevent privatizing water and sewer resources and prevent the district from commingling Bull Run and Willamette water in the water delivered to customers, there is no indication that either of these events is being contemplated.

3. Discussion

Your committee acknowledges the concerns of the sponsors and supporters of the measure. These include water and sewer rates that have been rising at a much faster rate than inflation, spending of PWB and BES funds on non-mission-critical projects, and lack of transparency in PWB and BES budgeting.

Your committee does not endorse other apparent goals of the sponsors, such as continuing to fight the federal mandate to cover PWB's reservoirs. Your committee concludes that PWB has spent a substantial amount of time and resources seeking a waiver of the regulation, and has now exhausted all avenues of appeal and has rightly determined that it must move to discontinue use of open reservoirs.

As shown by the recent battles over fluoridation and covered reservoirs, Portlanders feel strongly about where their water comes from, how it's managed, and who controls it. Your committee concludes that, even if every criticism of the current governance of PWB and BES is well founded, the proposed Portland Public Water District measure is not the solution. There is no evidence that the creation of a new district separate from the city government would reverse the trend toward higher rates. If anything, a new district may increase the costs to ratepayers by decoupling PWB

and BES from the administrative services they share with other city bureaus. And removing PWB and BES from city government will make it more difficult for the City to engage in integrated planning regarding issues such as public health, housing and transportation.

An elected Portland Public Water District board will have a lower profile than the City Council and as a result will likely be subject to less scrutiny by the public and the media. Your committee is especially troubled by the provision that would disqualify thousands of city residents from serving on the board. This so-called conflict of interest provision is much too broad and will prevent participation by talented and qualified individuals, to the detriment of ratepayers.

The measure brings with it too much uncertainty. It is far from clear that an amendment to the city charter will be legally sufficient to create a government entity independent of the City. A charter amendment may not be sufficient to transfer water and sewer assets worth billions of dollars – including state-granted water rights and federally-approved agreements to manage the Bull Run watershed – from the City to the new district. A charter amendment likewise may not be effective to transfer to the new entity the rights and obligations associated with PWB’s and BES’s wholesale contracts. All of these issues may spark costly litigation if the measure passes. Finally, if the measure passes, a court may have to decide whether it improperly excludes many residents of the east side from voting for board members.

The measure states that the new district must protect water and sewer resources from threats including regionalization and privatization. This is a solution in search of a problem; your committee found no evidence that the City is considering either regional governance of water and sewer resources, or privatization. Proponents of the measure say it will protect against using the Willamette River as a drinking water source. Your committee learned that Bull Run and the Columbia South Shore Well Field provide more than enough water for PWB’s customers and the agency has no plans to draw water from new sources. The measure purports to protect against nonexistent threats and does not offer a better model of governance.

The measure comes before voters at a time when city government is vulnerable to criticism for the self-inflicted wounds of the Water House and other non-mission-critical projects, and when ratepayers are feeling the sting of growing water and sewer bills. But the answer is not to throw the baby out with the bathwater. As described below, more modest steps can improve the process of setting PWB and BES budgets and rates and enhance the effectiveness and efficiency of the bureaus.

M.RECOMMENDATIONS

Water District Measure: Your committee recommends a “no” vote on the measure to create an independent Portland Public Water District.

Portland Water and Sewer Authority: Your committee makes the following recommendations to improve the existing governance structure:

Your committee recommends that the City establish a semi-autonomous Portland Water and Sewer Authority (the “Authority”) as part of the City government to administer PWB and BES and to

promote independent, accountable, sustainable, and effective management and oversight. The Authority will better insulate the utilities from political and special interest pressure and help ensure accountability for long-term planning and efficient management.

The Authority will consist of an odd number of members appointed by the City Commissioner selected by the Mayor. The City Council will delineate specific technical qualifications for each position to ensure that the Authority includes individuals with expertise in utility finance, engineering and other fields relevant to utility management. This will help ensure that the members provide informed management and oversight. Authority member terms will not be coextensive with City Council terms; this will minimize the potential for undue influence in Authority appointments.

The Authority will have the power to appoint an Administrator for each utility and through those Administrators oversee and manage PWB and BES. The City Council will be prohibited from engaging in any administrative functions related to the Authority and the utilities.

The Authority will operate in an open and transparent manner, holding hearings, adopting budgets, setting utility rates and conducting other business required to perform its duties.

After the establishment of the Authority, the City Council will continue to set policies for water, sewer and wastewater services and management. The Authority will be responsible for administering the utilities in conformance with those policies. The City Council will in particular establish criteria for determining which expenditures relate to the delivery of utility services. The Authority and bureaus will administer those criteria. The Authority will receive input from PWB and BES staff related to matters such as staffing levels and capital expenditures.

The City Council will approve budgets submitted to it by the Authority, but will be prohibited from including, excluding, or altering budget line items. The City Council will approve or reject the bureaus' budget in total only. In the event that a budget is rejected, the Authority will be required to consider the City Council's grounds for disapproval and reissue a proposed budget accordingly.

City Council members may advocate for particular projects during the budget setting process and before the Authority submits a budget for approval. The Authority will be responsible for determining whether each such proposed project meets the stated criteria for delivery of utility services, and should be included in the budget under consideration.

In conjunction with creation of the Authority, the PURB will be phased out. The BAC and CUB will continue to advise the Authority regarding the budgeting and rate setting process.

Planning, Budgeting and Ratemaking:

Your committee recommends that a single commissioner be responsible for both BES and PWB in order to facilitate communication and coordinated planning and budgeting.

Your committee recommends that any significant proposed expenditure of ratepayer revenues be accompanied by a Utility Rate Impact Statement demonstrating how the budget item supports or is related to providing utility services and how it will affect utility rates.

Your committee recommends that PWB foster relationships with neighboring jurisdictions and solicit additional wholesale customers as a means of spreading costs and minimizing future water rate increases.

Your committee recommends that PWB and BES assess their benchmarking practices and expand or adjust them as necessary to assure ratepayers that the bureaus operate in an efficient and effective manner. Your committee further recommends that the bureaus invite public participation in, and review of, their benchmarking analyses.

Your committee recommends that the new Authority initiate a public least cost, least risk planning process for ensuring that all alternatives to meet growth, regulatory requirements, and improvements are weighed against each other and are vetted by stakeholders who share a common interest in providing the best water service at the least cost and risk.

Your committee recommends that the new Authority solicit participation by the public, customer groups such as CUB, environmental organizations and other interested parties in the least cost, least risk and rate-setting processes to ensure that the action plans and rates contemplated by the bureaus are thoroughly vetted. Your committee notes that least cost, least risk planning will not necessarily cause water, sewer and wastewater rates to drop, but will ensure efficient long-term planning.

Your committee recommends that the PWB follow standard utility practice and transition to AWWA base charges to better reflect cost causation. This process will reduce cross-subsidization and result in different base charges for different classes of customers. To phase in any resulting rate changes, this transition should take place over a number of years.

Your committee recommends that BES follow standard utility practice and establish a base charge to better align its rate structure with the underlying cost structure. The level of the base charge should be subject to input from the public, customer groups, and other interested parties.

Public outreach:

- To maximize the benefits of the public policy reforms recommended in this Report, your committee further recommends that the City of Portland fully inform and engage city residents in the issues and activities related to the management, oversight and rate regulation of their water, sewer and wastewater utilities. Specifically, the City Council should design and implement a strategy and set of action steps which promote the public interest by: raising awareness about these public utilities; informing the public about the best practices for management and regulation of these assets for the long term; and building an informed constituency for the prudent and independent management and oversight of these vital city functions.

Few local issues are more important than the wise stewardship of our natural water resources and the prudent, transparent operation of our multi-billion dollar water, sewer and wastewater

infrastructure. Your committee recommends that the City Council take advantage of the opportunity to enhance public confidence in the management of its water, sewer and wastewater utilities.

N. SIGNATURES

Respectfully submitted,

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Q. GLOSSARY

AWWA	American Water Works Association
BAC	Budget Advisory Committee
Base Charge	The monthly or quarterly fee charged by a utility regardless of usage.
Benchmarking	The methodology that provides a means of assessing performance through comparison with peer utilities. Benchmarking can address a wide variety of internal metrics (e.g., worker safety) as well as customer service.
Biochemical Oxygen Demand	The oxygen required by microorganisms to break down the organic content of sanitary sewage, measured in pounds per hundred cubic feet of sanitary sewage flow.
Bull Run	Watershed located in the Mt. Hood National Forest, which is the primary water supply for the City of Portland and other metro-area communities.
BES	Bureau of Environmental Services
CBO	City Budget Office
CCF	Centum cubic foot, or 100 cubic feet
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act (Superfund)
CIP	Capital Improvement Plan
Commodity Charge	The portion of a utility bill or rate based upon the volume of service(s) delivered (i.e., volume of water).
CSO	Combined sewer overflow

CUB	Citizens Utility Board
CWA	Clean Water Act, which regulates discharges from wastewater treatment plants and sewage overflows into rivers and streams.
EPA	U.S. Environmental Protection Agency
FTE	Full Time Equivalent
Gray Infrastructure	The standard materials and approaches used to collect, convey and discharge stormwater from impervious surfaces such as streets and roofs. Examples of gray infrastructure include catch basins, stormwater pipes, pump stations, and outfalls.
Green Infrastructure	Systems designed to capture, partially treat, and infiltrate (or in some cases reuse) stormwater. Examples include permeable pavement streets and parking lots, and curb cut-outs that incorporate infiltration swales.
IUC	Independent Utility Commission
Least Cost, Least Risk Planning	A standard process in the utility industry that focuses on long-term planning and consideration of expected future investment, potential changes within the marketplace, and alternatives for meeting both current and anticipated demand. The process develops a roadmap to providing reliable, least cost service to customers while addressing risks and uncertainties.
LT2	Long Term 2 Enhanced Surface Water Treatment Rule, a 2006 EPA regulation addressing storage of finished drinking water and treatment for contaminants.
mgd	Million gallons per day
PURB	Public Utility Review Board
PWB	Portland Water Bureau
Portland Harbor	The stretch of the Willamette River extending from where the Columbia Slough enters the Willamette River to the Broadway Bridge. It became a Superfund site in December 2000.
SDWA	Safe Drinking Water Act.

Superfund	The name given to the environmental program created by Congress in 1980 to address hazardous waste sites.
Total Suspended Solids	The weight of suspended particulate matter per unit of sanitary sewage flow, also measured in pounds per hundred cubic feet of sanitary sewage flow.

R. REFERENCES

- ¹ Portland Water Bureau. "Population & Service Area." <http://www.portlandoregon.gov/water/29460>. 2014.
- ² Testimony to City Club of Portland Water and Sewer Committee by David Shaff, Administrator, Portland Water Bureau (September 13, 2013).
- ³ ———. "Portland Water Bureau Bond Statement: Excerpt." 2013. <http://www.portlandoregon.gov/water/article/464703>.
- ⁴ ———. "System Basics." <http://www.portlandoregon.gov/water/article/216797>. 2014.
- ⁵ Bull Run. "Bull Run Act, 16 U.S.C. § 482b Note (2001)." <http://www.portlandoregon.gov/water/article/404058>.
- ⁶ Portland Water Bureau. "Columbia South Shore Well Field." <http://www.portlandoregon.gov/water/29785>. 2014.
- ⁷ Office of the City Auditor. "City Code & Charter: Chapter 3.24 Portland Water Bureau." 2014. <http://www.portlandonline.com/auditor/index.cfm?c=28415>.
- ⁸ Portland Water Bureau. "Water Bureau History." <http://www.portlandoregon.gov/water/article/352745>. 2014.
- ⁹ ———. "Treatment Variance Request." <http://www.portlandoregon.gov/water/54913>. 2014.
- ¹⁰ Schmidt, B. "Portland finds cryptosporidium in Bull Run testing but officials hopeful they won't need to build \$90 million treatment plant." *The Oregonian*, January 5, 2012. http://www.oregonlive.com/portland/index.ssf/2012/01/portland_finds_cryptosporidium_1.html.
- ¹¹ Portland Water Bureau. "Key Events Related to the Long Term 2 Enhanced Surface Water Treatment Rule (LT2)." <http://www.portlandoregon.gov/water/article/407631>. 2014.
- ¹² Testimony to City Club of Portland Water and Sewer Committee by Mark Knudson, Chief Executive Office, Tualatin Valley Water District and Kevin Hanway, Water Director, City of Hillsboro (November 18, 2013).
- ¹³ Bureau of Environmental Services. "What We Do." <http://www.portlandoregon.gov/bes/31000>. 2014.
- ¹⁴ Testimony to City Club of Portland Water and Sewer Committee by Dean Marriott, Director, Portland Bureau of Environmental Services (September 16, 2013).

- ¹⁵ Slovic, Beth. "Portland's \$1.4 billion Big Pipe project comes to an end after 20 years." *Oregonian*, November 25, 2011.
http://www.oregonlive.com/portland/index.ssf/2011/11/portlands_14_billion_big_pipe.html.
- ¹⁶ Bureau of Environmental Services. *Working for Clean Rivers*. 2013.
<http://www.portlandoregon.gov/bes/article/469596>.
- ¹⁷ Environmental Protection Agency. "Water: Green Infrastructure "
http://water.epa.gov/infrastructure/greeninfrastructure/gi_costbenefits.cfm. 2014.
- ¹⁸ Center for Neighborhood Technology. *The Value of Green Infrastructure*. 2010.
<http://www.cnt.org/repository/gi-values-guide.pdf>.
- ¹⁹ Testimony to City Club of Portland Water and Sewer Committee by Bill Ryan, Chief Engineer, Portland Bureau of Environmental Services (December 16, 2013, and January 9, 2014).
- ²⁰ Bureau of Environmental Services. "Financial Plan and Capital Improvement Program: System Risk--examples: Pipe Age & Condition." <http://www.portlandoregon.gov/bes/article/464728>. 2013.
- ²¹ Profita, Cassandra. "A Guide to the Portland Harbor Superfund Site."
<http://www.opb.org/news/blog/ecotrope/a-guide-to-the-portland-harbor-superfund-site/>. 2012.
- ²² Lower Willamette Group. "Portland Harbor Superfund Site."
<http://lwgportlandharbor.org/index.htm>. 2013.
- ²³ Jacklet, Ben. "Portland Harbor sinks under Superfund stigma." *Oregon Business*, December 16, 2009. <http://www.oregonbusiness.com/articles/78-january-2010/2765-supermess>.
- ²⁴ Learn, Scott. "Portland Harbor property owners make biggest pitch yet for lower-cost Superfund cleanup." *Oregonian*, March 30, 2012.
http://www.oregonlive.com/environment/index.ssf/2012/03/portland_harbor_property_owner.html.
- ²⁵ Lower Willamette Group. "Portland Harbor RI/FS: Draft Feasibility Study." 2012.
http://lwgportlandharbor.org/library/documents/2012-03/Draft%20Feasibility%20Study%20Main%20Text/2012-03-30_Draft%20FS_Compiled%20Main%20Text.pdf.
- ²⁶ Portland Water Bureau. "FY 2014-15 Budget Process & Documents."
<http://www.portlandoregon.gov/water/59498>. 2014.
- ²⁷ Bureau of Environmental Services. "Budget Advisory Committee (BAC)."
<http://www.portlandoregon.gov/bes/59917>. 2014.
- ²⁸ City of Portland. "Budget 101." 2012. <http://www.portlandonline.com/?c=41961&a=331204>.
- ²⁹ Office of Neighborhood Involvement. "City Bureaus' Budget Advisory Committee Process."
<http://www.portlandoregon.gov/oni/61270>. 2014.
- ³⁰ Red Oak Consulting. "Sewer/Stomwater/Water Rate Approval Process." 2011.

- ³¹ American Water Works Association. "Buried No Longer: Confronting America's Water Infrastructure Challenge " <http://www.awwa.org/portals/0/files/legreg/documents/buriednolonger.pdf>. 2011.
- ³² Response by Portland Water Bureau to supplemental questions from the City Club Water and Sewer Committee (October 15, 2013).
- ³³ Testimony to City Club of Portland Water and Sewer Committee by Cecelia Huynh, Portland Bureau of Environmental Services (October 7, 2013).
- ³⁴ Testimony to City Club of Portland Water and Sewer Committee by Cecelia Huynh, Finance and Support Services, Portland Water Bureau (October 7, 2013).
- ³⁵ Black & Veatch. "50 Largest Cities Water/Wastewater Rate Survey." 2013. <http://bv.com/docs/management-consulting-brochures/50-largest-cities-brochure-water-wastewater-rate-survey>.
- ³⁶ Environmental Protection Agency. "Clean Water Act (CWA)." http://cfpub.epa.gov/npdes/cwa.cfm?program_id=45. 2014.
- ³⁷ ———. "CERCLA Overview." <http://www.epa.gov/superfund/policy/cercla.htm>. 2014.
- ³⁸ ———. "Safe Drinking Water Act (SDWA)." <http://water.epa.gov/lawsregs/rulesregs/sdwa/>. 2014.
- ³⁹ American Society for Civil Engineers. "Report Card for America's Infrastructure." <http://www.infrastructurereportcard.org/a/browser-options/downloads/2013-Report-Card.pdf>. 2013.
- ⁴⁰ US Conference of Mayors--Mayors Water Council. "Trends in Local Government Expenditures on Public Water and Wastewater Services and Infrastructure: Past, Present and Future." Washington DC, 2010. <http://www.usmayors.org/publications/201002-mwc-trends.pdf>.
- ⁴¹ US Conference of Mayors. "Growth in Local Government Spending on Public Water and Wastewater--But How Much Progress Can American Households Afford?". Washington DC, 2013. <http://www.usmayors.org/pressreleases/uploads/2013/0502-report-water.pdf>.
- ⁴² Black & Veatch. "2012 Strategic Directions in the U.S. Water Utility Industry." 2012. <http://bv.com/docs/management-consulting-brochures/2012-water-utility-report.pdf>.
- ⁴³ Water Environment Federation. "What is the Problem?" <http://www.wef.org/PublicInformation/page.aspx?id=878>. 2014.
- ⁴⁴ Environmental Protection Agency. "Drinking Water Infrastructure Needs Survey and Assessment: Fifth Report to Congress." http://water.epa.gov/grants_funding/dwsrf/upload/epa816r13006.pdf. 2013.
- ⁴⁵ City Asset Managers Group. "City of Portland, Citywide Assets Report: Status and Best Practices." 2012. <http://www.portlandoregon.gov/bps/article/441932>.

- ⁴⁶ Portland Water Bureau. "City Council Work Session on the FY 2014-15 Capital Improvement Plan Budget." <http://www.portlandoregon.gov/water/63367>. 2014.
- ⁴⁷ Bureau of Environmental Services. "Environmental Services FY2014 Adopted Budget City of Portland." <http://www.portlandoregon.gov/bes/article/468989>. 2013.
- ⁴⁸ Office of the City Auditor. "Portland Water Bureau: Further advances in asset management would benefit ratepayers." 2012.
<http://www.portlandonline.com/auditor/index.cfm?a=399785&c=53777>.
- ⁴⁹ US Government Accounting Office. "Water Infrastructure: Comprehensive Asset Management Has Potential to Help Utilities Better Identify Needs and Plan Future Investments." 2004.
<http://www.gao.gov/new.items/d04461.pdf>.
- ⁵⁰ Baietti, Aldo, William Kingdom, and Meike van Ginneken. "Characteristics of Well-Performing Public Water Utilities." In *Water Supply & Sanitation Working Notes* edited by World Bank Group, 2006. <http://siteresources.worldbank.org/INTWSS/Resources/Workingnote9.pdf>.
- ⁵¹ Nationalatlas.gov. "Water Use in the United States."
http://nationalatlas.gov/articles/water/a_wateruse.html. 2014.
- ⁵² Kenny, JF, and KE Juracek. "Description of 2005–10 domestic water use for selected U.S. cities and guidance for estimating domestic water use." In *Scientific Investigations Report 2012-5163*, edited by U.S. Geological Survey, 2012.
- ⁵³ Consumption figures provided by Portland Water Bureau to supplemental questions from the City Club Water and Sewer Committee (October 15, 2013).
- ⁵⁴ KGW.com. "Commissioner: 'Water House' was a mistake " In, (2013). Published electronically August 13, 2013. <http://www.kgw.com/home/Portland-to-take-475K-loss-on-Water-House-219443621.html>.
- ⁵⁵ Mesh, Aaron. "Nick Fish Sells the Water House for \$394,950." In, *Willamette Week* (2014). Published electronically January 8. <http://www.wweek.com/portland/blog-preview-31093-nick-fish-sells-the-water-house-for-%24394500.html>.
- ⁵⁶ Schmidt, B. "Water Bureau rate proposal riles watchdogs who want \$1.6 million reimbursement: Portland City Hall roundup." In, *The Oregonian* (2013). Published electronically January 21. http://blog.oregonlive.com/portlandcityhall/2013/01/water_bureau_rate_proposal_ril.html.
- ⁵⁷ Bureau of Environmental Services. "Portland Loo Information."
<http://www.portlandoregon.gov/bes/article/408156>. 2014.
- ⁵⁸ Mesh, Aaron. "Money Bucket: Portland Wants Every city to Have its Patented Toilet." *Willamette Week*, May 15 2013. http://www.wweek.com/portland/article-20644-money_bucket.html.
- ⁵⁹ Schmidt, B. "Portland misspent water and sewer money in 2011 to buy office space, Mayor Charlie Hales says." In, *The Oregonian* (2013). Published electronically November 12.
http://www.oregonlive.com/portland/index.ssf/2013/11/portland_misspent_water_and_se.html.

⁶⁰ PolitiFact Oregon. "Are 'pet projects' to blame for Portland's high water and sewer rates?" In *The Oregonian*, edited, 2013. <http://www.politifact.com/oregon/statements/2013/jul/26/portlanders-water-reform/are-pet-projects-blame-portlands-high-water-and-se/>.

⁶¹ Office of the City Auditor. "Spending Utility Ratepayer Money: Not always linked to services, decision process inconsistent." 2011. <http://www.portlandonline.com/auditor/index.cfm?c=53775&a=342881>.

⁶² Testimony to City Club of Portland Water and Sewer Committee by Mary Wahl, Portland Bureau of Environmental Services (October 4, 2013).

⁶³ Law, Steve. "Water district fight has new \$20 million hot potato." *Portland Tribune*, November 27 2013.

⁶⁴ Editorial Board. "Our Opinion: Voters need details on city utility fee." *Portland Tribune*, December 5, 2013.

⁶⁵ Testimony to City Club of Portland Water and Sewer Committee by Justin Delaney, Standard Insurance Co. (October 29, 2013).

⁶⁶ Testimony to City Club of Portland Water and Sewer Committee by Mike Rosenberger, General Manager of Rockwood PUD (October 29, 2013).

⁶⁷ Anderson v City of Portland. "Second Amended Complaint." 2012. <http://audubonportland.org/issues/metro/files/anderson-complaint>.

⁶⁸ Testimony to City Club of Portland Water and Sewer Committee by John DiLorenzo, Jr, Davis Wright Tremaine LLP (November 1, 2013).

⁶⁹ Oregon Secretary of State. "Elections Division: Transaction Search." <https://secure.sos.state.or.us/orestar/cneSearch.do?cneSearchButtonName=search&cneSearchFileId=16404>. 2014.

⁷⁰ Redden, Jim. "Water district qualifies for May ballot." *Portland Tribune*, February 7, 2014. <http://portlandtribune.com/pt/9-news/210218-67972-water-district-qualifies-for-may-ballot>.

⁷¹ Law, Steve. "Who could run for potential water board?" *Portland Tribune*, November 7, 2013.

⁷² City Club of Portland. "City of Portland Measure 26-91: Amends Charter: Changes Form of City Government." 2007. <http://www.pdxcityclub.org/content/city-portland-measure-26-91-amends-charter-changes-form-city-government>.

⁷³ Testimony to City Club of Portland Water and Sewer Committee by Nick Fish, City Commissioner (October 21, 2013).

⁷⁴ Redden, Jim. "Citizen Utility Board asked to review water and sewer bureaus." *Portland Tribune*, January 2, 2014. <http://portlandtribune.com/pt/9-news/206320-63103-citizen-utility-board-asked-to-review-water-and-sewer-bureaus>.

