



## Questions and Answers from the City of Portland Utility Rate Review Meeting on March 19, 2014

On March 19, 2014, the City of Portland held a two-hour meeting at Parkrose High School in East Portland. The purpose of the meeting was to review rates for the sewer, stormwater, and drinking water services provided by the Bureau of Environmental Services (BES) and the Portland Water Bureau (PWB). The meeting included an open house, a brief presentation, testimony from participants in the audience, and brief remarks from each member of the Portland City Council. All questions are listed below, grouped by topic. The responding agency (BES or PWB) is identified before its response.

### Residential Bill Payments

#### 1. Why can't I pay my bill monthly? (Rather than quarterly.) Why do you not give monthly billing as an option?

##### Portland Water Bureau Response

The City recently began rolling out a new monthly statement option, which allows customers to pay their bills monthly. If you sign up for monthly billing, the Water Bureau will continue to read your meter once every three months, but you will receive a monthly statement. Each month, the statement will be sent to you by email as part of the paperless billing program, known as e-bill. To sign up, visit [www.portlandoregon.gov/water/64398](http://www.portlandoregon.gov/water/64398).

#### 2. Will you continue the senior citizen subsidy on monthly bill payments?

##### Portland Water Bureau Response

Both utility bureaus offer financial assistance for qualifying customers, regardless of age. There are several programs available, including ongoing bill discounts of close to 50 percent; crisis vouchers up to \$150; free leak and

fixture repair; and free water conservation information and devices. Details and enrollment information are available at [www.portlandoregon.gov/water/financialassistance](http://www.portlandoregon.gov/water/financialassistance).

### **3. What is the difference between “Stormwater Off-Site” and “Stormwater On-Site” on our water and sewer bill?**

#### **Bureau of Environmental Services Response**

The stormwater **on-site** charge pays for the costs of managing stormwater runoff from individual properties. Residents and businesses can avoid some or all of this charge by managing their stormwater on-site and enrolling in the Clean River Rewards program. Details and enrollment information are available at [www.portlandoregon.gov/bes/41976](http://www.portlandoregon.gov/bes/41976).

The stormwater **off-site** charge pays for the costs of managing stormwater runoff reaching public rights-of way, which includes keeping streets free of flooding and keeping pollutants out of local rivers and streams. It also pays for restoring the health of Portland’s urban watersheds and for the other costs related to Portland’s stormwater permit under the Clean Water Act. This part of the bill is not discounted.

### **4. When will the \$32.54 monthly debt service sewer payments end, and will our sewer bills go down when it is paid?**

#### **Bureau of Environmental Services Response**

Much of the debt service payment is for the cost of building facilities to control combined sewer overflows (CSOs), including the East and West Side “Big Pipes” and the Swan Island Pump Station. These facilities were built to prevent raw sewage from overflowing our pipes into the river, as required by federal mandate. The city will repay the last of these revenue bonds by 2036.

Even after the Big Pipe-related debt is paid off, the City still has to continue maintain and replace Portland’s aging sewer pipes, incorporate cost-saving green infrastructure to help manage stormwater and improve water quality, and maintain our capacity to pump and treat sanitary sewage and stormwater. Issuing additional revenue bonds is necessary to fund much of this work, so the amount of debt service in the bill will not decline over the next several years. Issuing bonds does increase rates over the long run, but paying cash for major system improvements would increase rates by much more in the short run.

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## Utility Rates

### 5. Why is my water and sewer rate so much higher than average?

The typical residential utility bill is about one-third water and two-thirds sewer and stormwater. Your water and sewer charges both depend a great deal on how much water you use. The average single-family residential bill presented at the Utility Rate Review meeting was based on usage of 5 hundred cubic feet (5 ccf), or 3,740 gallons, in a month. The sewer portion of the bill is based on the winter average indoor water consumption so that outdoor water uses, such as lawn watering, are not included. The Water Bureau offers registration for a home water use audit and tips for saving water on its website at [www.portlandoregon.gov/water/efficiency](http://www.portlandoregon.gov/water/efficiency). Residents and businesses can reduce some or all of their on-site stormwater charge by managing their stormwater on-site and enrolling in the Clean River Rewards program. Details and enrollment information are available at [www.portlandoregon.gov/bes/41976](http://www.portlandoregon.gov/bes/41976).

### 6. How are water rate averages figured?

#### Portland Water Bureau Response

The typical monthly residential customer's water bill is calculated at 5 hundred cubic feet (ccf) or 3,740 gallons.

### 7. Why should our rates pay for police and firefighter retirements?

Police and firefighter retirements are funded by property taxes. Water, sewer, and stormwater rates do not pay for police and firefighter retirements. Water, sewer and stormwater rates pay for water, sewer, and stormwater operations, maintenance, and replacement of aging or failing assets.

### 8. Why should our rates pay for superfund when there is federal money for this?

#### Bureau of Environmental Services Response

Superfund is based on the "polluter pays principle," meaning Potential Responsible Parties (PRPs) including industries and companies that have, or may have, contributed contamination to a Superfund site should bear the investigation and possible cleanup costs. According to the Environmental

Protection Agency (EPA), PRPs pay for and conduct investigations and cleanup for the overwhelming majority of sites across the United States. These are usually current or previous owners or operators of properties or businesses. The City of Portland is considered a potentially responsible party and that's why the city is currently participating in the investigation of the Willamette. It should be noted that Congress allowed the tax on chemicals—which provided money for the Superfund—to lapse many years ago. There is essentially no federal money available.

**9. How would restoring the SWNI Watershed Resource Center affect rates when \$73,000 is 0.007% of the BES budget, a miniscule amount?**

**Bureau of Environmental Services Response**

Based on input from the community and the need for BES to work more closely on a long-term funding plan for the Watershed Resource Center, on Tuesday, April 8, Commissioner Fish asked Mayor Hales to remove this cut package from the budget. For the FY 2014-15, the cut amount will be covered by offsets in the Watershed Services budget.

**10. Why is there such a large difference between the actual rate and the estimated rate?**

**Portland Water Bureau Response**

The estimated water rates are forecasted 12 to 18 months prior to the adoption of the budget and final water rates. The estimates use conservative economic escalation factors provided by the City Economist. As the budget is developed, the economic factors and assumptions, such as bond rates and the inflation rate, are updated to current projections. In addition, factors such as ending fund balances, cost-of-living adjustments, and the operating and capital budgets are refined throughout the process. Rates continue to be updated until the budget is adopted by City Council.

**Bureau of Environmental Services Response**

Environmental Services' actual rates have tracked very closely with the five-year forecast, which is updated each year.

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## Relationship to the Community

### 11. What are water and sewer bureaus doing to build our community?

The Portland Water Bureau and Bureau of Environmental Services provide drinking water, wastewater, and stormwater systems to residential, commercial, and industrial customers. The two bureaus support public health and safety and a clean environment, which makes Portland a desirable place to live and work. Both bureaus are dedicated to stewardship—supporting system reliability and resilience—so that these benefits are available to meet today’s needs as well as those of future generations.

#### Water Bureau Additional Information

The Water Bureau makes efforts to engage the community during the design and construction of its major and significant projects. The bureau’s capital projects provide jobs for people at many local companies.

The Water Bureau also offers water-efficiency assistance at community events such as street festivals, Fix-It Fairs, and events for new home buyers. The Water Bureau maintains a hotline and website with water-efficiency information and resources. The BIG (Business, Industry, and Government) program provides technical assistance to commercial customers on water-efficiency opportunities. The Water Bureau has partnerships with several groups dedicated to energy efficiency and sustainability. Details on many of these projects are available on the bureau’s website, [www.portlandoregon.gov/water/29334](http://www.portlandoregon.gov/water/29334).

#### Bureau of Environmental Services Additional Information

Environmental Services makes significant efforts to provide public involvement opportunities during design and construction of its sewer and stormwater projects. The bureau’s Clean Rivers Education Program provides free classroom and field lessons to K–12 students, covering topics such as water chemistry, stormwater management, and the wastewater treatment process. Through the Community Watershed Stewardship grants, Environmental Services, in partnership with Portland State University, provides grants to individuals and organizations to make improvements in their neighborhoods and communities, while also improving the health of the city’s watersheds. Environmental Services also supports Green Street

Stewards, volunteers who work with the bureau to help keep green street facilities clean and functioning properly. Finally, Environmental Services sewer and stormwater projects provide living-wage jobs to hundreds of people, many of whom work for local companies.

**12. How would you ensure Oregonians get work on future water projects, and how do the Water and BES departments give back to the community?**

State public contracting laws dictate how the bureaus procure contracting services. Within state law, most of the two bureaus' project work is done by local contractors. In addition, both the Water Bureau and Environmental Services have participated in the City of Portland's Prime Contractor Development Program, adopted in 2012. This program provides opportunities for local minority- and woman-owned firms to develop as prime contractors and bid on city projects. The focus of the program is minority- and woman-owned businesses and emerging small businesses (M/W/ESB). The program provides training, technical assistance, and contracting experience to these businesses on some water, sewer, and stormwater projects. The goal of the program is to integrate social equity, fiscal responsibility, and community involvement while empowering local M/W/ESB firms to grow and develop.

**Portland Water Bureau Additional Information**

The Water Bureau is currently piloting a program that promotes the inclusion of historically under-represented people, including minorities and women, in the construction industry. The Water Bureau is using this program for two large construction projects at the Kelly Butte Reservoir and the Interstate Maintenance Facility. Community and business groups, such as The Urban League of Portland, Oregon Tradeswomen, Inc., Native American Youth Family Center, Construction Apprenticeship & Workforce Solutions, Inc., Constructing Hope, Evening Trades Apprenticeship Preparation Program, Columbia Pacific Building Trades Council, Portland Youth Builders, Verde, Emerald Cities Portland, and the Northwest Regional Council of Carpenters, have been involved in this effort.

In the past five years, the Water Bureau's participation in the City of Portland's social equity programs and the current pilot program have provided more than \$16 million in subcontracts for many local minority-, women-owned, or emerging small businesses.

## **Bureau of Environmental Services Additional Information**

Most of Environmental Services' construction work is done by local contractors and the number of out-of-state contractors that are bidding is declining as the economy improves. Environmental Services created thousands of construction jobs and contracted with hundreds of local businesses from 2002 through 2011 during construction of the West and East Side Big Pipes. That included spending more than \$50 million on subcontracts with minority or women-owned firms and emerging small businesses. The Oregon Association of Minority Entrepreneurs (OAME) named Environmental Services a 2011 Public Agency of the Year, recognizing the bureau's commitment to promoting and developing entrepreneurship and economic development for minorities.

**13. What were the reasons the Water Bureau reabsorbed former public water districts? How well or poorly did these public water districts build infrastructure and keep records of the projects they did? What are the current conditions of the infrastructure they built?**

## **Portland Water Bureau Response**

The Water Bureau has assumed operations of former districts for a variety of reasons over the last 120 years. The reasons include public requests to be incorporated in to the Bull Run water system, former water districts' going out of business, and the City's annexation or purchasing of former districts.

The current condition of the infrastructure from those former districts depends on a number of variables – location, when it was installed, and the bureau's improvements since assuming operations. Some former water districts had good records and some had poor records. The bureau acquired whatever infrastructure and records were available. Once the Water Bureau assumed ownership and absorbed the infrastructure, it no longer tracked the infrastructure separately.

**14. How can we keep our Southwest Watershed Resource Center staff members?**

## **Bureau of Environmental Services Response**

BES will join with the community to understand whether the model in place since 1999 is the most effective way to deliver these vital services in the

future. The bureau needs to continue to find the best ways to leverage the good work of the active volunteers in this watershed.

**15. If BES cuts the \$73,000 grant to Southwest Neighborhoods, Inc. (SWNI) and there is a reduction in volunteer watershed stewardship projects in upper Fanno Creek, degrading water quality upstream, how will that affect BES partnerships with Clean Water Services and other downstream partner agencies?**

#### **Bureau of Environmental Services Response**

Based on input from the community and the need for BES to work more closely on a long-term funding plan for the Watershed Resource Center, on Tuesday, April 8, Commissioner Fish asked Mayor Hales to remove this cut package from the budget. For the FY 2014-15, the cut amount will be covered by offsets in the Watershed Services budget.

**16. How will BES respond to erosion concerns in SW Portland given that now the Southwest Watershed Resource Center responds to private landowner needs for technical assistance?**

#### **Bureau of Environmental Services Response**

Based on input from the community and the need for BES to work more closely on a long-term funding plan for the Watershed Resource Center, on Tuesday, April 8, Commissioner Fish asked Mayor Hales to remove this cut package from the budget. For the FY 2014-15, the cut amount will be covered by offsets in the Watershed Services budget.

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## **Managing System Assets**

**17. How will you deal with the huge deferred maintenance of both water and sewer bureaus?**

#### **Portland Water Bureau Response**

The Water Bureau continues to rank its maintenance needs in order to best use existing resources; however, some maintenance needs are not being

addressed as often as the bureau would recommend. The bureau uses Asset Management Plans to identify strategies for managing assets with the available resources. The strategies recommend the most effective mix of maintenance actions, taking into account the type of asset, the importance of the asset to daily and emergency system operations, and the consequences of asset failure. In addition, the bureau uses a computerized system to collect data on assets and automatically schedule some maintenance activities. Strategic maintenance, based on data, supported by a Computerized Maintenance Management System is a best practice that the bureau is implementing.

### **Bureau of Environmental Services Response**

Environmental Services also uses asset management best practices to cost-effectively maintain its system. With over a third of the pipe system more than 80 years old, the bureau expects its current maintenance needs to increase. The bureau believes that it is doing the right amount of maintenance and it needs to ensure that adequate funding is available to do so.

### **18. What investments have you made in sensors and information technology to collect the data you need to optimize system replacements?**

### **Portland Water Bureau Response**

The Water Bureau monitors the water system using a Supervisory Control and Data Acquisition (SCADA) system. SCADA allows operations staff to access sensor information in hundreds of locations in the water system. Piping is the biggest part of the system, in terms of cost. Monitoring the drinking water pipe condition with information technology is more difficult. Most pipes are buried so it is very expensive to access them. Some pipe monitoring requires shutting down the pipe.

The bureau has used some of the best and most innovative technologies on a one-time basis to assess the condition of some of the most high-risk water pipes. The bureau has used both non-intrusive methods—such as acoustic leak detection and broadband electromagnetic methods—and intrusive internal inspections that require shutting down the pipe. Many pipe failures, especially those due to settlement or loading, are difficult to predict, regardless of the available information technology. Water industry research suggests that the

future of water pipe condition monitoring is in optical fiber technology, but this would be available for new pipes only.

### **Bureau of Environmental Services Response**

Environmental Services' system is highly automated with thousands of inputs from various data-gathering sources throughout the large facilities and the sewer and stormwater system. Environmental Services uses sensors and real time technology throughout the sewer and stormwater system. The Operations Center at the Columbia Boulevard Treatment plant remotely monitors and controls the operation of 100 pump stations and the Tryon Creek Wastewater Treatment Plant. Environmental Services has a fiber loop connecting these facilities as well as a telemetry system for those facilities not connected to the fiber loop. Sewer levels are monitored electronically throughout the City and critical locations have motorized gates that are operated from the Operations Center. Water and effluent (water leaving the treatment plant) quality can also be monitored either with data collectors that are picked up and downloaded or delivered electronically by telemetry. Environmental Services also uses a network of rain gages that gives us information about potential and post-impact influences of weather systems in the area.

### **19. What are you doing to build the models you will need to replace and rebuild the systems in an efficient manner?**

### **Portland Water Bureau Response**

Currently, the Water Bureau models system needs by gathering data on each asset or asset group. Data on asset condition, useful life, and failure modes are used to create deterioration curves to help forecast when an asset might fail. The bureau then assesses how failure may affect the environment, society, the bureau's ability to deliver water, and how much the failure would cost. These factors are used to create strategies for system-wide maintenance, repair, and replacement and for forecasting future funding requests.

The bureau is also investing in an update to the hydraulic model of the piping system. This update will help the bureau better understand how the system performs. The bureau is also researching models to help forecast future short- and long-term investment needs.

An efficient system replacement plan takes more than a model, however. It takes good data, and the right business processes. The bureau continues to

gather data and use good business processes to support decisions based on its objectives to minimize the City's risk and total life cycle costs.

### **Bureau of Environmental Services Response**

Environmental Services also uses the best management practices described by Water for planning and system-wide maintenance. The BES hydraulic model of the sanitary and combined sewers surpasses those of most utilities of similar size. It was necessary for Environmental Services to develop such a robust hydraulic model in order to be successful in the design of the combined sewer overflow (CSO) control system. Environmental Services is currently in development of a similar model for the stormwater system.

### **20. Are the rates too low? Given the 400-year replacement cycle of the already aging pipes, should we repair more pipes sooner? Are we investing too little?**

### **Portland Water Bureau Response**

The Water Bureau's Budget Advisory Committee (BAC) reviewed water rates from the perspective of debt (evaluating whether the bureau is too debt heavy or whether it should cash-finance more capital work with water rates). At the BAC's December 4, 2014, meeting City Debt Manager Jonas Biery gave an overview of the City's debt program and explained the process of preparing for a bond sale to finance Water Bureau capital projects. Bureau Finance and City Debt Management staff look at several factors including the nature of the capital project or projects that need funding—such as whether the projects contribute to regulatory compliance or address a critical asset, the utility's ability to repay the obligation, and whether funding is already available. The strategy of using bonds pays for the cost of the asset over time—generally 25 years or over the life of the asset—spreads the cost to all the users of the capital project.

Certainly a 400-year replacement rate for pipes is not sustainable. It is typically more cost-effective to repair rather than replace less-consequential pipes until the break rate on a segment of pipe increases. The bureau is currently keeping up with these replacement needs. As these pipes (installed in various decades) age, the break rates will continue to increase. Pipe replacements for less consequential pipe are estimated to more than double in the coming decades.

There is, however, another group of pipes – those with a high consequence of failure (for example, pipes crossing major highways, waterways and railroads, and pipes that are the primary supply to major customers). If possible, the bureau wants to avoid the high consequences of failure of these pipes by replacing them before they fail. Efforts are ongoing to identify “the worst of the worst” of these. Current assessments indicate that the bureau will likely need to invest more in these high-consequence pipe replacements.

### **Bureau of Environmental Services Response**

Environmental Services attempts to balance the potential risk to public health and safety with the impact that maintenance and reliability efforts have on customer bills. Environmental Services believes that the bureau is spending funds wisely by doing the work with the greatest benefit first. That said, similar to Water, BES is on a 400-year replacement rate for public sewer pipes, which is not sustainable. As Environmental Services continues to improve its asset management programs over time, it may determine that more support for repair, replacement and improved resiliency of sewer infrastructure is a good investment.

## **21. What is the next thing we can do so we are not as reliant on pipes?**

### **Portland Water Bureau Response**

Portland will probably always rely on pipes to transport water from the watershed to storage facilities in town and then out to the distribution system. The majority of the water flows to homes and businesses by gravity. The Water Bureau configures new and replacement infrastructure to take advantage of gravity wherever possible. The bureau also focuses on providing redundant and reliable piping to reduce the city’s vulnerability to pipeline failures.

### **Bureau of Environmental Services Response**

Pipes and treatment facilities will always be necessary to manage stormwater and wastewater. That said, BES is a national leader in the cost-effective use of natural processes to the greatest extent possible. From green street facilities to constructed wetlands, to the use of bacteria to treat the air and manage odors from facilities, to reusing biosolids as fertilizer on farmland in eastern Oregon, BES continues to innovate and use cost-effective and sustainable green technology where possible to reduce reliance on grey infrastructure.

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## Uncovered Reservoirs

### 22. Why are Mount Tabor reservoirs being decommissioned?

#### Portland Water Bureau Response

Storing finished drinking water in facilities that are completely exposed to the air and surrounding environment is no longer allowed by federal and state law and is not recommended by public health agencies.

The Multnomah County Health Department has recommended that all uncovered finished drinking water storage facilities be removed from Portland's drinking water system.

The federal Environmental Protection Agency (EPA) has determined that storing finished drinking water (water that is ready to be directly served to homes and businesses) in uncovered reservoirs exposes the water to contamination from animal and bird waste, airborne pollutants, litter and vandalism. EPA has established a national primary drinking water regulation called the Long Term 2 Enhanced Surface Water Treatment Rule (LT2) that prohibits the continued use of uncovered reservoirs for finished drinking water storage. There is no waiver or variance from this mandate.

The Water Bureau is now subject to a regulatory schedule for ending the use of the Mount Tabor reservoirs for storing drinking water by December 31, 2015.

The three Mount Tabor reservoirs are all over 100 years old and are failing as drinking water storage facilities. The construction of new storage will provide Portland customers with reliable local storage for the next century.

### 23. Are you representing autocratic rule or the will of the people of Portland by decommissioning the Mount Tabor reservoirs?

#### Portland Water Bureau Response

The development of the national primary drinking water rule that requires Portland to end its use of the Mount Tabor uncovered reservoirs started in the United States Congress (the LT2 rule mentioned in the responses to Questions 22 and 24). There is no waiver or variance from this mandate.

The Portland City Council authorized the Water Bureau's approach for complying with the rule in 2009 based in part on five years of stakeholder input provided to the Council. Although ending the use of the Mount Tabor reservoirs for drinking water storage is clearly an unpopular outcome for many, citizen input and advocacy regarding the action has been significant.

The Portland Water Bureau is charged by City Code to manage and operate the water system in compliance with federal, state, and local regulations. The bureau's strategy for compliance was submitted to and approved by the Environmental Protection Agency in March 2009. That strategy includes disconnecting the Mount Tabor reservoirs from the public water system.

#### **24. Is the City submitting to federal rule by disconnecting the Mount Tabor reservoirs?**

##### **Portland Water Bureau Response**

Yes. There is no waiver or variance from this federal mandate. The federal Environmental Protection Agency (EPA) has determined that storing finished drinking water (water that is ready to be directly served to homes and businesses) in uncovered reservoirs exposes the water to contamination from animal and bird waste, airborne pollutants, litter, and vandalism. The EPA has established a national primary drinking water regulation that prohibits the use of uncovered reservoirs for finished drinking water storage called the Long Term 2 Enhanced Surface Water Treatment Rule (LT2). The Water Bureau is now subject to a regulatory schedule for ending the use of the Mount Tabor reservoirs for drinking water storage by December 31, 2015.

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## **Green Infrastructure**

#### **25. What is green infrastructure?**

##### **Bureau of Environmental Services Response**

Green infrastructure is any element of the system that uses natural processes to augment or replace conventional concrete and mechanical infrastructure that would otherwise be used to manage stormwater runoff. Green infrastructure reduces stormwater runoff volumes, slows runoff, and removes pollutants from stormwater. This makes green infrastructure a cost-effective

tool for managing stormwater runoff throughout the city. Green infrastructure includes green streets (bioswales), ecoroofs, wetlands, and trees. Vegetated green streets, for example, improve the quality of stormwater runoff from the street by filtering pollutants, then infiltrating that stormwater into the ground. This keeps stormwater out of sewer pipes and reduces the volume of stormwater going to the treatment plant.

A cost-benefit analysis of the Tabor to the River project tells us that over the lifetime of the infrastructure ratepayers will save \$60 million by combining traditional pipes with green streets. Even the “Big Pipe” capacity was designed assuming that nature would absorb increasing amounts of stormwater.

## **26. Is green infrastructure included in the \$19 billion of assets owned by BES and the Water Bureau?**

### **Portland Water Bureau Response**

The \$7.6 billion of Water Bureau infrastructure included in the \$19 billion total represents the replacement value of traditional built infrastructure. This amount does not include green infrastructure because the Water Bureau relies on traditional pipes to transport water.

### **Bureau of Environmental Services Response**

The built green infrastructure discussed at the City Utility Rate Review is built and managed by the Bureau of Environmental Services and is included in the asset figures.

## **27. Why is BES building street bioswales in areas that have separate storm and sanitary sewer systems?**

### **Bureau of Environmental Services Response**

Some neighborhoods are served by a sanitary sewer system and a separate system that conveys stormwater runoff, as opposed to a combined sewer that conveys sanitary sewage and stormwater in the same pipes. Environmental Services builds green streets (bioswales) in separated areas for multiple reasons. The most common reason is to remove pollutants from stormwater before it enters a nearby water body. Green streets and other green infrastructure can also address sewer capacity, local flooding or drainage problems in separated areas.

There are also many areas in the City where separated sewers drain to a combined sewer system. In these cases, green streets keep stormwater out of the combined sewer, which preserves capacity in the combined sewer pipes.

**28. If the combined overflow sewer/stormwater project is completed, why then is the City continuing to construct bioswales?**

**Bureau of Environmental Services Response**

The combined sewer overflow control program is designed to treat today's combined stormwater and sewage volumes. Future growth of the city, particularly infill, is expected to increase the volume of stormwater and sewage that needs to be managed. Environmental Services realized that there were better and cheaper ways to manage this additional volume of stormwater than just building an even larger Big Pipe. Green streets cost-effectively manage stormwater and keep runoff out of the sewer system.

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## **Citizens' Utility Board of Oregon**

**29. Can you explain the function of CUB?**

The Citizens' Utility Board of Oregon, or CUB, is a public benefit nonprofit organization. CUB was created in 1984 by a citizens' ballot initiative to represent the interests of residential ratepayers statewide. For 30 years, CUB has been a leader in ratepayer advocacy, saving ratepayers across Oregon billions of dollars. In January 2014, for the first time, the Portland City Council asked the CUB to serve as the residential ratepayer advocate for Portland utility customers. At no cost to Portland ratepayers, CUB will act as a consumer watchdog on behalf of residential ratepayers, reviewing documents, talking with bureau staff, and analyzing data in order to develop recommendations for the public and City Council. The Council resolution adopted January 8, 2014 is on the City of Portland website, [Resolution 37051](#). CUB's website is <http://oregoncub.org>.