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# **Bond Feasibility Study**

## **Second Lien Sewer System Revenue and Refunding Bonds, 2013 Series A**

Prepared for:  
**City of Portland Bureau of Environmental Services**



Prepared by:  
**Galardi Rothstein Group**

**JUNE 2013**

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June 25, 2013

Mr. Dean Marriott, Director  
Bureau of Environmental Services  
City of Portland  
1120 SW Fourth Avenue, Room 1000  
Portland, OR 97204

**Subject:** Bond Feasibility Study for Second Lien Sewer System Revenue and Refunding Bonds, 2013 Series A

Dear Mr. Biery:

The City of Portland Bureau of Environmental Services (the "Bureau") engaged Galardi Rothstein Group to review the Bureau's historical financial performance and projected financial plan and debt service coverage, in accordance with City of Portland (the "City") First and Second Lien Bond Ordinances. The analysis is being conducted with respect to the City's plans to issue approximately \$209 million of Second Lien Sewer System Revenue and Refunding Bonds, 2013 Series A ("Series 2013 Bonds"). [The impact of the refunding has not been incorporated into this report; however, it is expected that the refunding will generate net present value debt service savings in excess of five percent of the Refunded Bonds.]

During the course of this project the Bureau provided Galardi Rothstein Group with a variety of financial data and information. We have relied on this data and information in completing our review of the historical and projected financial results and in our preparation of this report. However, we have not independently verified the data as provided. During the course of our review and analysis, and the preparation of this report, nothing has come to our attention that would cause us to believe that the data provided by the Bureau are unreasonable. It is our opinion that the financial forecasts reported herein demonstrate that the Bureau can support the 2013 Series A Bonds from System net revenues.

We appreciate the opportunity to conduct this review and are prepared to answer any questions regarding its contents.

Sincerely,



Deborah Galardi  
Principal

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# Acronyms and Abbreviations

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BOD	Biochemical Oxygen Demand
ccf	hundred cubic feet
CIP	Capital Improvement Program
City	City of Portland, Oregon
CSO	combined sewer overflow
Bureau	Bureau of Environmental Services
EPA	U.S. Environmental Protection Agency
FY	fiscal year
O&M	operation and maintenance
PERS	Public Employees Retirement System
Net Revenue	Gross revenues less operating expenses
SDC	System Development Charges
Sq. ft.	square feet
SS	Suspended Solids
System	City's sanitary sewer and stormwater drainage systems

# 1.0 Introduction

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## 1.1 Purpose

The purpose of this report is to provide information on the City of Portland Bureau of Environmental Service (the “Bureau”) sanitary sewer and stormwater drainage system (the “System”) financial performance. The report includes information on historical System financial performance for the period Fiscal Year (FY) 2008 – FY 2012, estimated FY 2013 and projected FY 2014 – FY 2018 financial results.

The Bureau has requested that Galardi Rothstein Group prepare this report to demonstrate the financial feasibility of its planned Second Lien Sewer System Revenue and Refunding Bonds, 2013 Series A (the “2013 Series A Bonds”). The 2013 Series A Bonds will be used to fund System improvements and to repay the principal on a line of credit established to pay the costs of System capital improvements and to refund any or all maturities of the City’s Second Lien Sewer System Revenue Bonds, 2003 Series A (the “Refunded Bonds”).

## 1.2 Report Organization

This report contains the following sections:

- **Section 1 - Introduction:** outlines the purpose and content of the report.
- **Section 2 - Financial Planning and Management:** provides an overview of Bureau’s financial planning process, fund structure, and financial policies.
- **Section 3 - Customers and Usage:** describes the System customer classes, accounts and usage for the most recent five-year period.
- **Section 4 - Rates and Charges -** describes the current user rates, capital charges, and rate-setting approach.
- **Section 5 - Historical Performance:** presents the revenues, expenses, and operating results for the period FY 2008 – FY 2012.
- **Section 6 - Forecast System Performance:** presents the projected revenues, expenses, operating results for the period FY 2013 – FY 2018. Projected user rates are also provided, along with a comparison of rates with other utilities.
- **Section 7 - Assumptions and Conclusions:** provides a summary of the key assumptions used in the Bureau’s financial forecast, and Galardi Rothstein Group’s conclusions from the review.

## 2.0 Financial Planning & Management

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An overview of the Bureau's financial planning process, financial policies, and fund structure for financial reporting follows.

### 2.1 Financial Planning Process

The Bureau's financial planning process consists of three key elements:

- Development of the Capital Improvement Plan (CIP);
- Development of the Operating Plan; and
- Development of Revenue Requirements and the Funding Plan.

Initial operating and capital expenditure requirements for the System are developed through separate processes that are then brought together to develop overall revenue requirements and a corresponding 5-year funding program. The first year of the plan serves as the basis for the Bureau's upcoming year budget request. The Bureau also conducts an annual Sewer User Rate Study to determine how annual rate revenue requirements (determined in aggregate, in the financial plan) will be shared among customers of the System.

Each element of the financial planning process is discussed in more detail below.

#### 2.1.1 Development of the CIP

The CIP is developed annually using a multi-step process to identify, develop, review, score, and rank projects for funding and scheduling priority. Project request forms are completed for each project following established guidelines. A Bureau-wide stakeholder review team then scores and ranks all proposed CIP projects in accordance with established evaluation criteria and scoring instructions. The Bureau's CIP management team then evaluates the information from the process and submits final recommendations to the Bureau Director. The Bureau Director reviews the findings, makes further refinements as needed, and approves the CIP plan that is then presented to the City Council for their consideration and adoption.

#### 2.1.2 Development of the Operating Plan

The Bureau's operating planning process focuses on two primary areas: 1) routine utility operations, and 2) regulatory response and watershed health. The routine functions include the day-to-day System operations (including administration support and customer services) and the maintenance of the collection, transportation, treatment, and disposal systems. The annual review focuses on incremental improvements to programs and services, and is part of on-going efforts to review and assess the effectiveness and efficiency of basic operations and services.

Planning related to regulatory response and watershed health includes development of plans and cost estimates related to activities and programs that respond to the System regulatory requirements, or that specifically promote water quality and watershed health.

### 2.1.3 Development of Revenue Requirements and the Funding Plan

Proposed CIP and operational revenue requirements are consolidated and reviewed against available funding over a 5-year forecast period. The operating budget and CIP are then re-examined for opportunities to reduce requirements (and associated rate increases). To the extent possible, the Bureau maintains annual rate increases over the forecast period near the increases forecast in the previous year's plan.

## 2.2 Fund Structure

The Bureau's financial reporting system is organized into five funds, as described below. The first four funds below are included within the Sewage Disposal Fund, as reported in the City of Portland (the "City") audited financial statements.

- **Sewer System Operating Fund** – Accounts for revenues and expenses associated with the development, maintenance, and operation of the System. The additional debt service requirements on the proposed bonds will be recovered from user charges that are collected in this fund and subsequently transferred to the Debt Redemption Fund.
- **Sewer System Debt Redemption Fund** – Provides for the funding the principal and interest on revenue bonds, notes, and state loans issued to finance System improvements. This fund receives transfers from the Operating Fund to pay debt service.
- **Sewer System Construction Fund** – Receives revenues, such as bond proceeds, that are dedicated to System capital projects. Reimburses the Sewer System Operating Fund for direct expenditures for capital projects, as well as indirect costs for personal services and materials and services.
- **Sewer System Rate Stabilization Fund** – Provides the Bureau the ability to smooth forecast rate increases by offsetting annual fluctuations in System revenue requirements. Transfers to and from this fund affect the System gross revenues, operating expenses, and debt service coverage. The Master Ordinance recognizes transfers to the Rate Stabilization Fund as operating expenses in the year in which the transfers are made. Transfers from the Rate Stabilization Fund to the Operating Fund are considered part of gross revenues in the year in which they are transferred.
- **Environmental Remediation Fund** – Currently used by the Bureau to manage the City's participation in the Portland Harbor Superfund investigation. Expenditures for the City's share of the Portland Harbor Superfund investigation project are financed through dedicated fees on City utility bills, which are deposited in this fund. This practice allows the Bureau to distinguish the Portland Harbor Superfund investigation project from routine sewer system operations, which are budgeted for and funded within the Sewer System Operating Fund.

## 2.3 Financial Policies

The Bureau's financial planning and rate-making processes are guided by a set of policies prepared by the Bureau. These policies include:



**Rate Stabilization:** The Bureau attempts to smooth rate changes over the 5-year forecast interval. This policy is aimed at maintaining financial stability and predictability in context of changing regulatory requirements and operating needs. The Bureau's Rate Stabilization Fund is the primary tool for achieving this policy – transfers from the Rate Stabilization Fund to the Sewer System Operating Fund reduce funding requirements from rates. Such transfers are programmed in years when system requirements exceed target rate increases. Conversely, transfers from the Sewer System Operating Fund to the Rate Stabilization Fund are programmed in years when other funding requirements are less acute. The practice of transferring funds to and from the Rate Stabilization Fund allows the Bureau to manage annual revenue requirements from rates in a manner that is consistent with rate stabilization objectives, and also to be used as a tool to meet debt service coverage and ending fund balance policy objectives (discussed below).

**Rate Setting:** System rates are set on a cost of service basis, meaning that rates are designed to charge customers for their proportional cost of collecting, transporting, and treating discharges to the System. Cost-of-service ratemaking is also required by Environmental Protection Agency rules (40 CFR s 35.2140) as a condition of having received federal grants.

**Debt Service Coverage:** The Bureau's current planning standard is to set rates adequate to provide Net Revenues (gross revenues less operating expenses) including transfers from the Rate Stabilization Fund equal to or greater than 1.50 times the annual debt service requirement on first lien debt, and 1.30 times the annual debt service requirement on all (first and second lien) debt. These targets exceed the requirements specified in the existing debt covenants, which are as follows for outstanding first lien revenue bonds:

- Net income without transfers to or from the Rate Stabilization Fund must be equal to, or greater than 1.0 times the current year debt service.
- Net income including transfers to or from the Rate Stabilization Fund must be equal to, or greater than 1.2 times the current year debt service.

For combined outstanding first lien and second lien bonds, the coverage requirements are:

- Net income without transfers to or from the Rate Stabilization Fund must be equal to, or greater than 1.0 times the current year debt service.
- Net income including transfers to or from the Rate Stabilization Fund must be equal to, or greater than 1.1 times the current year debt service.

The dollar difference between the planning standard and the Bureau's actual debt service coverage requirement provides a margin of safety for meeting the minimum required coverage.

**Ending Fund Balances:** The Bureau's current policy is to maintain combined ending fund balances within the Operating Fund and the Rate Stabilization Funds equal to or greater than 10 percent of each year's operating expenses. If necessary, the Bureau may increase the combined ending fund balance requirement to provide a temporary reserve against additional risks that may arise.

The Construction Fund ending fund balance is targeted at 35 percent of the next year's CIP, or \$500,000, whichever is greater, for planning purposes. Actual ending fund balance will

differ depending on the rate of expenditures within the Bureau's capital program and the timing of CIP borrowings.

## 3.0 Customers & Usage

Sewer rates are the primary source of revenue for the System, both historically and as projected. This section presents information on historical customer growth and usage patterns, as these trends inform assumptions related to future customer growth and revenue.

### 3.1 Customer Growth

Table 3-1 indicates the number of customer accounts by class for the most recent five-year period (FY 2009 through FY 2013). The Bureau tracks customers both by the type of customer (e.g., single-family residential, multifamily residential, and commercial), and the service received (both sanitary and storm, or storm only). Most customers receive both sanitary and stormwater services; however, there are some stormwater only accounts, as shown in Table 3-1, and customers that receive water service from another provider. are included within the single-family accounts.

**Table 3-1**  
**City of Portland**  
**Bureau of Environmental Services**  
**Average annual number of accounts by customer class**

	2009	2010	2011	2012	2013
<u>Residential</u>					
Single-Family	155,138	156,373	155,796	154,300	154,682
Stormwater Only	334	332	328	328	328
Multifamily	10,233	10,260	10,282	10,646	10,736
<b>Total Residential Accounts</b>	<b>165,706</b>	<b>166,965</b>	<b>166,406</b>	<b>165,274</b>	<b>165,745</b>
<u>Commercial/Industrial</u>					
Monthly	3,424	3,406	3,423	3,409	3,418
Quarterly	10,009	9,843	10,008	9,955	9,946
Clean Water to Storm	17	17	15	15	15
Storm Drainage Only					
Monthly	20	20	20	18	20
Quarterly	149	147	145	135	127
<b>Total Commercial &amp; Industrial</b>	<b>13,619</b>	<b>13,433</b>	<b>13,612</b>	<b>13,533</b>	<b>13,526</b>
<b>Total System</b>	<b>179,324</b>	<b>180,398</b>	<b>180,018</b>	<b>178,807</b>	<b>179,272</b>

As shown in Table 3-1, overall, the Bureau's customer base has remained relatively flat throughout the historical period analyzed, despite some annual fluctuations. In the most current year (FY 2013), residential customer growth increased by 0.25 percent, and commercial remained flat.

### 3.2 Customer Usage

Customers are billed sanitary service on the basis of water use (winter average month or actual use); stormwater services are billed based on impervious area (single-family residential accounts set at a class average, and measured for all other customers). Some commercial and industrial customers are also assessed “extra-strength” charges because their wastewater discharge exceeds domestic strength concentrations. For these customers, additional charges are assessed based on the measured or estimated pounds of biochemical oxygen demand (BOD) and Total Suspended Solids (TSS) discharged that are in excess of domestic strength limits.

Table 3-2 presents billing units by customer class for the most recent 5-year period (FY 2009 through FY 2013). For all customer classes, annual sanitary volumes decreased during the historical period, reflecting decreases in water use per account (see Table 3-3 and related discussion) and limited customer growth. Impervious area remained flat for residential customers, but increased slightly for multifamily and commercial customers, primarily as a result of recent Bureau efforts to update impervious area measures.

**Table 3-2**  
**City of Portland**  
**Bureau of Environmental Services**  
**Historical Sanitary Volumes, Impervious Area and Extra Strength Load**

	2009	2010	2011	2012	Estimated 2013
<u>Residential</u>					
Annual Sanitary Volume (ccf)					
Single-Family	8,619,075	8,466,871	8,177,705	7,995,991	7,974,155
Multifamily	4,277,348	4,173,491	4,130,140	4,057,654	4,017,655
Total Residential Volume (ccf)	12,896,423	12,640,362	12,307,845	12,053,645	11,991,811
Impervious Area (1,000 sq. ft.)					
Single-Family	363,200	363,000	360,060	363,387	363,696
Multifamily	78,926	78,961	78,665	79,137	79,472
<u>Commercial</u>					
Sanitary Volume (ccf)	8,621,224	8,391,167	8,278,451	7,969,513	7,988,978
Impervious Area (1,000 sq. ft)	296,774	301,165	303,264	305,887	314,187
Extra Strength (annual lbs)					
BOD	7,339,760	6,239,669	7,054,928	7,969,689	9,761,874
SS	1,355,098	1,007,255	1,614,212	1,664,223	1,482,415

Extra strength loadings (pounds of BOD and TSS) increased in 2011 and 2012 (compared to prior years) as the Bureau expanded its extra-strength program to include additional high strength customers. Prior to 2011, the extra-strength program applied only to a limited number (about 75) large industrial customers whose wastewater discharges are monitored and sampled. The Bureau has expanded the program to include non-monitored customer

types (e.g., restaurants and laundries) where industry data shows average concentrations for these customers to be in excess of domestic strength limits.

Table 3-3 presents historical monthly billable sanitary volumes and impervious area per account (or per dwelling unit for multifamily) for the historical period analyzed. Over this period, sanitary use per account decreased steadily for all customer types, by about 1.8 percent per year for single-family and commercial, and 1.5 percent per year for multifamily. The downward trend moderated some in FY 2013, with single-family residential volumes per account down 0.5 percent and a slight increase for commercial customers.

The reduction in usage levels during the period analyzed is likely related to both conservation efforts (including installation of water efficient plumbing fixtures) and continued slow economic growth. These usage trends have been experienced nationally, as well as locally.

**Table 3-3**  
**City of Portland**  
**Bureau of Environmental Services**  
**Historical Monthly Use per Account/Dwelling Unit**

<b>Customer Class</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>Estimated 2013</b>
<u>Residential</u>					
Sanitary Volume					
Single-Family (ccf/account)	4.63	4.51	4.37	4.32	4.29
Multifamily (ccf/DU)	4.24	3.94	3.94	4.04	3.99
Impervious Area					
Single-Family (1,000 sq. ft./account)	2.34	2.32	2.31	2.35	2.35
Multifamily (1,000 sq. ft./DU)	0.93	0.92	0.92	0.92	0.92
<u>Commercial</u>					
Sanitary Volume (ccf/account)	53.5	52.8	51.4	49.7	49.8
Impervious Area (1,000 sq. ft./account)	21.8	22.4	22.3	22.6	23.2

Table 3-3 also shows changes in impervious area per account over the historical period. Unlike sanitary volumes, impervious area per account has generally increased, in part due to the Bureau’s recent efforts to collect updated measurements for multifamily and commercial customers.

# 4.0 Rates and Charges

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The Bureau prepares a Sewer User Rate Study annually to determine how System revenue requirements from rates should be recovered from individual customer classes and rate components.

## 4.1 User Rates

Table 4-1 shows the historical System rates for the current and previous 4 years. The Bureau’s existing rate structure consists of the following three components:

- Sanitary Volume Rates
- Sanitary Extra-Strength Charges
- Impervious Area Charges

**Table 4-1**  
**City of Portland**  
**Bureau of Environmental Services**  
**Historical System Rates and Charges**

	2009	2010	2011	2012	2013
<b>Residential</b>					
Sanitary Sewage Volume Rate (\$/ccf) (1)	\$6.17	\$6.61	\$7.01	\$7.63	\$8.20
Impervious Area (\$/1,000 sq.ft.) (1)	\$8.07	\$8.64	\$9.42	\$9.65	\$10.18
<b>Commercial/Industrial</b>					
Sanitary Sewage Volume Rate (\$/ccf)	\$6.347	\$6.743	\$7.135	\$7.719	\$8.181
Impervious Area (\$/1,000 sq.ft.)	\$8.77	\$9.25	\$10.00	\$10.30	\$10.77
Clean Water to Storm Sewer Rates (\$/ccf)	\$0.651	\$0.726	\$0.736	\$0.777	\$0.824
Industrial Extra Strength Rates					
BOD (\$/lb)	\$0.505	\$0.527	\$0.547	\$0.583	\$0.574
SS (\$/lb)	\$0.603	\$0.639	\$0.667	\$0.711	\$0.696

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(1) Includes Portland Harbor rates.

The sanitary sewer volume rate recovers costs related to sanitary sewer flows (beginning in the collection system and ending with treatment and discharge) and normal strength loadings (the costs of purifying wastewater). The impervious area charge recovers the costs of the stormwater drainage program which includes the management of both volume and quality of stormwater drainage (generated by impervious surfaces).

The Bureau charges a subset of its commercial/industrial customers for extra strength sanitary sewage discharges based upon either: 1) individual samples taken, or 2) class

averages applied to specific types of customers (e.g., restaurants). Separate rates are charged commercial/industrial customers who discharge “clean water” (water generally used in industrial processes for cooling) directly to the stormwater system.

Sanitary volume and impervious area charges include rates to recover costs associated with the Willamette River/Portland Harbor Superfund investigation. The revenues from these rates are deposited into the Bureau’s Environmental Remediation Fund and are identified separately on the customer’s bill.

#### **4.1.1 Residential Bills**

The sanitary volume portion of a residential customer bill is based on the unit costs presented in Table 4-1 and the customer’s individual metered water consumption. During winter periods<sup>1</sup>, residential customers are charged based on actual metered consumption. For non-winter periods, bills are based on the lesser of winter average usage or actual use. Sewer bills for commercial/industrial accounts are based on unit costs, metered water use (except for certain authorized, metered uses of water not discharged to the sanitary sewer system, such as water used for irrigation), and/or metered sanitary sewer discharges.

The average bill for a single-family residential customer currently is \$59.57 (FY 2013), based on the average annual monthly use per account (approximately 4.29 ccf). Table 4-2 provides a comparison of combined sewer and stormwater bills for an average single-family customer, effective as of July 1, 2013, for various agencies on a regional and national level. Sample single-family monthly bills provided in Table 4-2, range from a low of \$16.73 to a high of \$108.08. Variations in bills relate to a number of factors including, whether an agency is subject to NPDES Phase 1 stormwater permitting and CSO requirements (as is the case for the Bureau), and the average usage per account.

The City provides a discount program for low-income customers. The program currently provides a 46 percent discount to qualified low-income residential customers.

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<sup>1</sup> Because customers are billed quarterly and in different cycles, the specific winter period will vary across customers, but is established by the first meter read occurring after February 1 of each year, and includes the previous 3-month period.

**Table 4-2  
City of Portland  
Bureau of Environmental Services  
Comparison of Average Single-Family Combined Sewer and Stormwater Bills (1)**

<b>Local/Regional</b>	<b>Monthly Bill</b>
Seattle, WA	\$80.60
Lake Oswego, OR	73.55
Olympia, WA	63.74
<b>PORTLAND, OR</b>	<b>62.74</b>
Tacoma, WA	62.65
Newport, OR	61.96
Milwaukie, OR	59.95
Woodburn, OR	56.57
Spokane, WA	55.15
Puyallup, WA	53.66
McMinnville, OR	51.83
Vancouver, WA	50.41
Bend, OR	49.70
Yachats, OR	49.25
Tigard, OR	46.70
Clackamas Co. Service District #1, OR	46.45
Beaverton, OR	45.37
Washington. Co. (Clean Water Services), OR	44.70
Eugene, OR	44.50
Tualatin, OR	44.05
Ashland, OR	41.92
Salem, OR	40.82
Corvallis, OR	38.82
Gresham, OR	36.14
<b>National</b>	<b>Monthly Bill</b>
Atlanta, GA	\$108.08
Honolulu, HI	97.20
Juneau, AK	67.34
Cincinnati, OH	66.26
<b>PORTLAND, OR</b>	<b>62.74</b>
Knoxville, TN	59.45
Sacramento, CA	56.98
Richmond, VA	55.60
Kansas City, MO	49.25
San Diego, CA	48.66
Charlotte, NC	48.18
San Francisco, CA	47.36
Washington DC	44.34
Fort Collins, CO	42.46
Boston, MA	42.44
Nashville, TN	36.69
Denver, CO	36.03
Colorado Springs, CO	35.17
Cleveland, OH	25.63
Salt Lake City, UT	16.73

(1) Bills are calculated based on the average sewer volume as reported by each agency, and are estimated to be effective July 1, 2013.



### 4.1.2 Consistency with Industry Practices

The Bureau bases its sewer user rates on cost-of-service principles. This approach is in conformance with EPA guidelines, which require that sewage system operation and maintenance costs be recovered from customers in proportion to system usage.

The primary objective of the Bureau’s approach is to set rates and charges in a way that balances equity goals with administrative costs. The techniques the Bureau employs in setting user fees and charges are common to most wastewater and stormwater utilities around the country, and conform to principles established by the Water Environment Federation. There are five basic steps to the rate methodology:

1. Identify total System revenue requirements
2. Apply revenue offsets to calculate “net revenue requirements from rates”
3. Allocate net revenue requirements to service parameters (Flow, Strength, Drainage)
4. Determine unit costs of service for service parameters
5. Calculate sanitary sewer and stormwater rates

An emerging trend in the sanitary sewer industry is the disaggregation of commercial/industrial customers into subclasses based on sewage strengths. The Bureau’s expansion of its extra-strength program (discussed previously), is consistent with this trend and cost-of-service principles.

## 4.2 Capital Charges

The Bureau has several charges designed to recover capital costs from new customers of the System. These include the sanitary system development charge (SDC), the stormwater SDC, and line and branch charges. Historical capital charges are provided in Table 4-3. The sanitary and stormwater SDCs are subject to state statutes governing SDCs and have been calculated as “reimbursement fees” under requirements of ORS 223.299. Line and branch charges are not subject to these requirements.

**TABLE 4-3**  
**City of Portland**  
**Bureau of Environmental Services**  
**Sewer System Capital Charges**  
*(Fiscal years ending June 30)*

Source	2009	2010	2011	2012	2013
<b>System Development Charges</b>					
Sanitary (\$/EDU)	\$3,520	\$3,835	\$4,089	\$4,335	\$4,335
Stormwater					
Impervious area (\$/1,000 sq. ft.)	\$136.00	\$145.00	\$154.00	\$164.00	\$164.00
Front Footage (\$/ft)	\$4.27	\$4.52	\$4.78	\$5.12	\$5.12
Vehicle Trip (\$/trip)	\$2.23	\$2.37	\$2.51	\$2.68	\$2.68
<b>Line and Branch Charges</b>					
Line Charge	\$0.99	\$1.11	\$1.20	\$1.29	\$1.39

**TABLE 4-3**  
**City of Portland**  
**Bureau of Environmental Services**  
**Sewer System Capital Charges**  
*(Fiscal years ending June 30)*

Source	2009	2010	2011	2012	2013
Branch Charge	\$3,127	\$3,669	\$4,319	\$4,844	\$5,059
EDU = Equivalent Dwelling Unit					

The purpose of the Bureau’s sanitary and stormwater SDCs is to ensure that new customers pay an equitable portion of the costs of major sanitary and drainage system facilities that serve the entire community. These facilities are normally constructed with excess capacity in anticipation of future growth and development within the community. As this growth occurs, new customers pay connection and development charges to “reimburse” existing ratepayers for a share of the costs of these major facilities. In the case of the stormwater SDC, new customers are also reimbursing existing customers for the provision of the capacity for draining the public right of way, and for draining excess runoff from properties adjacent to the right of way.

Line and branch charges recover the costs of local collector sewers from the properties they serve.

## 5.0 Historical Performance

The Portland City Council has regularly adopted rate increases in order to collect revenue sufficient to fund operating and capital expenditures (including, debt service), and to maintain bond coverage requirements and target ending fund balances.

### 5.1 Revenues

Table 5-1 presents historical System gross revenue. Total revenue from service charges increased steadily during the 5-year period from \$194.1 million to \$244.1 million, which represents an average annual increase of 5.9 percent. Rate revenue during this period increased due to annual increases in user rates. Rate revenue growth was moderated due to the fact that customer usage levels per account decreased.

**Table 5-1**  
**City of Portland**  
**Bureau of Environmental Services**  
**Historical System Gross Revenue (1) By Source (\$1,000) (2)**

Source	2008	2009	2010	2011	2012
Service Charges & Fees	\$194,084	\$207,909	\$217,557	\$231,883	\$244,059
Wholesale Contracts	3,323	3,859	3,206	3,378	3,727
Other Service Charges & Miscellaneous	8,380	3,401	3,011	6,122	3,800
Subtotal Operating Revenue	\$205,787	\$215,169	\$223,774	\$241,384	\$251,586
System Development Charges	11,043	7,791	4,566	5,431	9,138
Interest Earnings	8,231	7,287	2,115	1,981	1,091
Cash Transfers In:					
Transfers from Rate Stabilization	118	10,000	9,750	29,500	18,585
Other Funds	923	1,331	1,234	2,095	2,363
Gross Revenues	\$226,102	\$241,578	\$241,440	\$280,391	\$282,764

Source: Bureau of Environmental Services

(1) Gross Revenues, as defined by the First Lien Bond Ordinance, do not include capital related transfers.

(2) Totals may not foot due to rounding.

In addition to revenue from customer service charges, the Bureau also received \$3.0 to \$4.0 million per year from wholesale service agreements. Other operating revenues include licenses and permits, rents and reimbursements, and miscellaneous sources. Revenue from SDCs generally declined with the local economy during the historical period; however, these revenues have increased in recent years, beginning in FY 2012.

Gross revenues also include interest income and transfers from the Bureau's Rate Stabilization Fund. Rate stabilization fund transfers are used to smooth rate increases, and are included in coverage calculations.

## 5.2 Expenses

Table 5-2 shows historical operating expenses for the System for the historical period. Total operating expenses varied between \$84.9 million in FY 2009 and almost \$98.5 million in FY 2008. This variability was primarily due to a \$17.0 million transfer to the Rate Stabilization Fund in FY 2008. Excluding the transfer to the Rate Stabilization Fund, operating expenses increased annually at an average of 3.5 percent over the historical period.

**Table 5-2**  
**City of Portland**  
**Bureau of Environmental Services**  
**Historical Operating Expenses (1)(2)**  
 (\$1,000)

Source	2008	2009	2010	2011	2012
Personal Services	\$34,532	\$37,650	\$39,767	\$40,513	\$45,284
Material & Services					
External	22,075	23,704	21,985	18,195	\$19,119
Internal	29,561	27,741	28,892	31,411	\$30,748
Capitalized Overhead	(10,232)	(10,863)	(10,173)	(9,932)	(9,867)
Cash Transfers Out					
General Fund Overhead	4,670	5,142	5,517	5,449	6,901
Rate Stabilization Fund	17,000	-	-	-	-
Other	871	1,497	1,225	3,785	1,782
<b>Total Operating Expenses</b>	<b>\$98,478</b>	<b>\$84,871</b>	<b>\$87,213</b>	<b>\$89,421</b>	<b>\$93,966</b>

(1) Net of depreciation, as defined by the First Lien Bond Ordinance

(2) Totals may not foot due to rounding

Operating expenses shown in Table 5-2 are net of depreciation, but include the operating portion of the Bureau’s debt service on bonds sold to finance the City’s Public Employee Retirement System (PERS) obligations (as part of “Other” expenses).

## 5.3 Historical Operating Results and Debt Service Coverage

Table 5-3 presents historical operating results and debt service coverage for the period FY 2008 through FY 2012. During this period, the Bureau met its target debt service coverage ratios in all but FY 2012, where coverage on combined First and Second Lien Bonds (with Rate Stabilization) was 1.29, narrowly missing the 1.30 target. Debt service coverage for first lien bonds (with Rate Stabilization) ranged from 1.71 to 1.95 during the historical period.

**Table 5-3**  
**City of Portland**  
**Bureau of Environmental Services**  
**Historical Operating Results and Debt Service Coverage (\$1,000)(1)**

Item	2008	2009	2010	2011	2012
<b>Gross Revenues</b>					
Operating Revenues	\$205,787	\$215,169	\$223,774	\$241,384	\$251,586
System Development Charges	11,043	7,791	4,566	5,431	\$9,138
Interest Earnings	8,231	7,287	2,115	1,981	\$1,091
Cash Transfers In:	0	0	0	0	\$0
Transfers from Rate Stabilization	118	10,000	9,750	29,500	\$18,585
Other Funds	923	1,331	1,234	2,095	\$2,363
<b>Total Gross Revenues</b>	<b>\$226,102</b>	<b>\$241,578</b>	<b>\$241,440</b>	<b>\$280,391</b>	<b>\$282,764</b>
<b>Operating Expenses</b>					
Total Operating Expenses (2)	81,477	84,871	87,213	89,421	93,966
Transfers to Rate Stabilization Fund	17,000	-	-	-	-
<b>Subtotal Operating Expenses</b>	<b>\$98,477</b>	<b>\$84,871</b>	<b>\$87,213</b>	<b>\$89,421</b>	<b>\$93,966</b>
<b>Net Revenues</b>	<b>127,625</b>	<b>156,706</b>	<b>154,227</b>	<b>190,970</b>	<b>188,797</b>
<b>Debt Service for Coverage Test</b>					
First Lien	72,343	90,026	90,032	97,804	97,790
Second Lien Bonds	22,305	29,598	28,504	48,484	49,092
<b>Total</b>	<b>\$94,648</b>	<b>\$119,624</b>	<b>\$118,536</b>	<b>\$146,288</b>	<b>\$146,881</b>
<b>Debt Service Coverage (First &amp; Second Lien Bonds)</b>					
With Rate Stabilization	1.35	1.31	1.30	1.31	1.29
Excluding Rate Stabilization	1.52	1.23	1.22	1.10	1.16
<b>Debt Service Coverage (First Lien Bonds)</b>					
With Rate Stabilization	1.76	1.74	1.71	1.95	1.93
Excluding Rate Stabilization	2.00	1.63	1.60	1.65	1.74

(1) Totals may not foot due to rounding

(2) Net of depreciation

Source: Bureau of Environmental Services

## 6.0 Forecast Performance

This section summarizes information on the Bureau's current year (FY 2013) and projected five-year System revenues, expenditures, debt service, debt service coverage and changes in fund balance. Accordingly, the forecast reflects the Bureau's judgment as of June 2013 for the 6-year period ending June 30, 2018.

### 6.1 Operating Fund Resources and Requirements

Table 6-1 summarizes the forecast resources and requirements for the Bureau's Sewer System Operating Fund. As discussed in previous sections, the Operating Fund accounts for the daily operations of the System. (Table 6-1 does not include resources and requirements of the Environmental Remediation Fund.)

**Table 6-1**  
**City of Portland**  
**Bureau of Environmental Services**  
**Sewer System Operating Fund**  
**Forecast Sources and Uses of Funds (\$1,000)**

Item	2013	2014	2015	2016	2017	2018
<b>RESOURCES</b>						
Service Charges & Fees	\$251,860	\$275,404	\$294,507	\$315,179	\$335,524	\$353,283
Connection Fees	11,185	9,910	9,364	9,909	10,494	10,773
Wholesale Contracts	4,142	3,445	3,555	3,669	3,787	3,909
Other Service Charges & Misc.	7,907	6,335	6,475	6,681	6,872	7,091
Cash Transfers In -						
Rate Stabilization Fund	10,400	-	-	-	-	3,450
Sewer Construction Fund	86,400	112,100	110,345	108,732	112,424	108,913
Capitalized Overhead	6,711	8,255	8,413	8,574	8,738	8,905
Other Funds	1,164	697	181	186	192	199
Interest Income	142	81	36	54	53	48
Beginning Fund Balance	42,105	52,999	58,176	62,214	66,539	70,786
<b>TOTAL RESOURCES</b>	<b>\$422,016</b>	<b>\$469,226</b>	<b>\$491,052</b>	<b>\$515,200</b>	<b>\$544,623</b>	<b>\$567,356</b>
<b>REQUIREMENTS</b>						
Personal Services	\$45,082	\$ 45,637	\$47,014	\$50,498	\$51,878	\$54,149
Materials & Services	34,098	36,893	38,470	40,657	43,172	44,897
Internal Services	35,479	33,153	34,689	36,233	37,722	38,986
Capital Outlay (1)	92,355	113,121	111,623	111,548	117,357	112,837
Int. Accruals/Lease Purchase	71	46	67	79	73	66
Cash Transfers -						
General Fund Overhead	7,507	6,965	7,348	7,753	7,966	8,186
Construction Fund	3,495	18,759	20,096	20,916	22,963	29,153
Rate Stabilization Fund	-	1,550	5,550	5,825	4,750	-
Debt Redemption Fund	148,269	151,949	160,579	171,426	183,984	200,474
Other Cash Transfers	2,661	2,977	3,401	3,727	3,972	4,205
Ending Fund Balance	52,999	58,176	62,214	66,539	70,786	74,404
<b>TOTAL REQUIREMENTS</b>	<b>\$422,016</b>	<b>\$469,226</b>	<b>\$491,052</b>	<b>\$515,200</b>	<b>\$544,623</b>	<b>\$567,356</b>

(1) Includes capitalized personal services, materials & services, internal services, land, equipment and capital improvements

Source: Bureau of Environmental Services

### 6.1.1 Resources

Revenues from service charges and fees, and transfers from the Sewer Construction Fund are the largest resources for the Operating Fund. Projections of new customers, water use per account, and planned rate increases are used to forecast sewer sales revenues over the forecast period. The sewer sales forecast reflects the following assumptions:

- Forecast rate increases are subject to annual City Council approval.
- The number of customer accounts will increase at an average annual rate of approximately 0.5 percent during the next 6 years. In addition to base customer growth, the Bureau will begin assessing retail stormwater rates in FY 2014 to approximately 1,400 customers in three Multnomah County drainage districts within the City’s limits (formerly treated as a single wholesale customer.)
- Water usage per account is projected to continue to decline annually at rates of 0.75 percent (for commercial and multifamily customers) to 1.5 percent (for single family residential customers).
- Average impervious area per account is projected to remain at current levels for all customers.

The Bureau’s projected rates by rate component are shown in Table 6-2. Most components are forecast to increase at an average annual rate of 5 percent to 6.5 percent through FY 2018.

**Table 6-2**  
**City of Portland**  
**Bureau of Environmental Services**  
**Projected Rates**

	Adopt ed 2013	Adopt ed 2014	2015	2016	2017	2018	Avg. Annual Change
<b>Residential</b>							
Sanitary Sewage Volume Rate (\$/ccf)	\$8.20	\$8.75	\$9.31	\$9.89	\$10.46	\$11.05	6.2%
Impervious Area (\$/1,000 sq.ft.)	\$10.18	\$10.52	\$11.10	\$11.74	\$12.38	\$13.06	5.1%
<b>Commercial/Industrial</b>							
Sanitary Sewage Volume Rate (\$/ccf)	\$8.181	\$8.735	\$9.295	\$9.875	\$10.437	\$11.029	6.2%
Impervious Area (\$/1,000 sq.ft.)	\$10.77	\$11.12	\$11.74	\$12.42	\$13.10	\$13.81	5.1%
<b>Clean Water Rates</b>							
To Storm Sewer only (\$/ccf)	\$0.824	\$0.883	\$0.928	\$0.975	\$1.021	\$1.068	5.3%
<b>Extra Strength Rates</b>							
BOD (\$/lb)	\$0.574	\$0.601	\$0.632	\$0.664	\$0.695	\$0.727	4.8%
SS (\$/lb)	\$0.696	\$0.744	\$0.782	\$0.822	\$0.860	\$0.900	5.3%

Source: Bureau of Environmental Services

As shown in Table 6-1, annual revenue from service charges is projected to increase from an estimated \$251.9 million in FY 2013, to \$353.3 million in FY 2018, an average annual increase of 7.0 percent. The average annual increase in revenue exceeds the rate increases shown in Table 6-2 due largely to the impact of additional stormwater customers from within the drainage districts. The Bureau plans to phase-in the retail stormwater rates for these customers over four years, beginning FY 2014, with additional revenues estimated to be \$2.9 million. By FY 2017 (the end of the phase-in period), additional revenue from these customers is estimated to be about \$14 million (an increase of 5 percent over existing total service charge revenue).

Other operating revenues include revenues from connection fees (\$11.2 million in FY 2013), wholesale charges (\$4.1 million in FY 2013), and other fees and charges (\$7.9 million in FY 2013). Wholesale revenues have been adjusted down in FY 2014, compared with FY 2013 due to the conversion of customers within the Multnomah County drainage districts to retail billing.

Transfers are planned from the Rate Stabilization Fund to the Operating Fund in FY 2013 (\$10.4 million) and FY 2018 (\$3.5 million). Transfers from the Construction Fund to the Operating Fund reimburse the Operating Fund for expenses associated with capital projects. These expenses are then capitalized as part of the project cost. Construction Fund transfers fluctuate annually over the forecast period – from a low of \$86.4 million in FY 2013, to a high of \$112.1 million in FY 2014 – based on the forecast CIP.

Other non-operating revenues include transfers from other funds and interest income.

## **6.1.2 Requirements**

Table 6-1 also presents the forecast financial requirements of the Operating Fund. These include operating requirements as well as cash transfers for construction, debt redemption, general City overhead reimbursement, and other purposes.

**Operating Expenses.** Operating expenses include personal services, materials and services, internal services, transfers for general fund overhead, and transfers to the Rate Stabilization Fund and other funds. The operating expense forecast reflects the Bureau's existing operating budget, assumed cost escalation factors, as well as service additions associated with the CIP and other programs.

Personal services costs are estimated to be \$45.1 million in FY 2013, and are forecast to increase an average of 3.7 percent per year to \$54.2 million in FY 2018. Personal services cost increases reflect projected increases in salaries related to staffing levels planned for the forecast period, as well as benefit costs increasing at a rate greater than inflation..

Materials and services costs are estimated to be \$34.1 million in FY 2013, and are projected to increase at an average annual rate of 5.7 percent throughout the forecast period. The materials and services cost forecast reflects both one-time expenses and on-going service additions, in addition to general cost escalation factors.

Internal services costs are estimated to be \$35.5 in FY 2013. Internal services costs are projected to be nearly \$39.0 million at the end of the forecast period – an annual average increase of 1.9 percent. Transfers for general fund overhead are projected to increase about 1.8 percent per year during the forecast period. Other cash transfers included a portion of



the Bureau’s PERS bond obligation allocated to operating personnel that averaged about \$2.7 million per year.

As transfers from the Rate Stabilization Fund are considered operating revenues for debt coverage purposes, operating expenses also include transfers to the Rate Stabilization Fund. The forecast resources and requirements for the Rate Stabilization Fund are shown in Table 6-3. Transfers to the Rate Stabilization Fund are forecast in FY 2013 and FY 2018, and transfers from the Rate Stabilization Fund are planned between FY 2014 and FY 2017. This practice is consistent with the Bureau’s goal to keep rates stable and predictable over the long term, while meeting its necessary operating and capital requirements.

**Table 6-3**  
**City of Portland**  
**Bureau of Environmental Services**  
**Sewer System Rate Stabilization Fund**  
**Forecast Sources and Uses of Funds (\$1,000)**

Item	2013	2014	2015	2016	2017	2018
<b>RESOURCES</b>						
Interest On Investments	\$52	\$9	\$20	\$72	\$116	\$147
Transfer From Operating Fund	-	1,550	5,550	5,825	4,750	-
Beginning Fund Balance	12,357	2,009	3,567	9,137	15,034	19,900
<b>TOTAL RESOURCES</b>	<b>\$ 12,409</b>	<b>\$3,567</b>	<b>\$9,137</b>	<b>\$15,034</b>	<b>\$19,900</b>	<b>\$20,047</b>
<b>REQUIREMENTS</b>						
Cash Transfer-SSOF/SSCF	10,400	-	-	-	-	3,450
Ending Fund Balance	2,009	3,567	9,137	15,034	19,900	16,597
<b>TOTAL REQUIREMENTS</b>	<b>\$12,409</b>	<b>\$3,567</b>	<b>\$9,137</b>	<b>\$15,034</b>	<b>\$19,900</b>	<b>\$20,047</b>

Source: Bureau of Environmental Services

**Capital Requirements.** Capital-related expenses in the Operating Fund include capital outlays (predominantly CIP expenditures), as well as transfers to the Debt Redemption Fund and Construction Fund. These expenditures account for roughly two-thirds of Operating Fund requirements over the forecast period. In FY 2013 capital related expenses are estimated to be \$244.2 million. These requirements are projected to increase to \$342.5 million in FY 2018. The CIP will be funded predominantly through debt proceeds (reflected in the increased transfers to the Debt Redemption Fund shown in Table 6-1) and Operating Fund transfers (ranging from \$3.5 million to \$29.2 million in Table 6-1). Capital financing is discussed in more detail in the subsection immediately following.

## 6.2 Capital Financing

Table 6-4 shows the forecast resources and requirements for the Sewer Construction Fund through FY 2018. Approximately 80 percent of the projected 6-year CIP total of \$638.9 million will be funded through bond proceeds. In addition to the 2013 Series A Bonds, the Bureau anticipates that it will issue revenue bonds as follows: \$107.8 million in FY 2014, \$145.0 million in FY 2015, and \$200.8 million in FY 2017. The remaining 20 percent of funding

for the CIP will come from Operating Fund transfers and other revenue sources (including interest earnings and special assessment bond proceeds).

**Table 6-4**  
**City of Portland**  
**Bureau of Environmental Services**  
**Sewer System Construction Fund**  
**Forecast Sources and Uses of Funds (\$1,000)**

Item	2013	2014	2015	2016	2017	2018
<b>RESOURCES</b>						
Line & Branch Charges	\$783	\$750	\$711	\$719	\$726	\$743
Cash Transfers In -						
Sewer System Operating	3,495	18,759	20,096	20,916	22,963	29,153
Other Funds	342					
Bond Proceeds (Revenue Bonds / LOC)	77,617	308,535	145,000		200,823	
Bond Proceeds (Spec. Assessment Bonds)		700	1,500	1,600	1,700	1,600
Miscellaneous	610					
Interest On Investments	29	472	877	852	1,069	824
Beginning Fund Balance	15,287	4,956	95,271	132,223	39,004	125,499
<b>TOTAL RESOURCES</b>	<b>\$98,163</b>	<b>\$334,172</b>	<b>\$263,456</b>	<b>\$156,310</b>	<b>\$266,284</b>	<b>\$157,819</b>
<b>REQUIREMENTS</b>						
Cash Transfers Out -						
Sewer System Operating	86,400	112,100	110,345	108,732	112,424	108,913
Capitalized Overhead (to Oper. Fund)	6,711	8,255	8,413	8,574	8,738	8,905
Sewer System Debt Redemption -- Cash						
Reserve	0	23,146	11,402	0	18,230	0
Retired Notes / Refundings	0	95,000	0	0	0	0
Miscellaneous	96	399	1,073	0	1,393	0
Ending Fund Balance	4,956	95,271	132,223	39,004	125,499	40,001
<b>TOTAL REQUIREMENTS</b>	<b>\$98,163</b>	<b>\$334,172</b>	<b>\$263,456</b>	<b>\$156,310</b>	<b>\$266,284</b>	<b>\$157,819</b>

Source: Bureau of Environmental Services

The additional bond sales planned during the forecast period will increase the Bureau's annual debt service requirements. Table 6-5 presents the forecast debt service requirements for existing first and second lien obligations and planned future second lien obligations. Existing obligations total \$146.9 million in FY 2013. Annual debt service for the 2013 Series A Bonds is estimated to be \$12.4 million, bringing total debt service requirements to almost \$159.3 million in FY 2015. Additional debt is forecast to bring the total debt service requirement to \$199.5 million in FY 2018.

**Table 6-5  
City of Portland  
Bureau of Environmental Services  
Projected Debt Service Schedule (\$1,000)**

Item	2013	2014	2015	2016	2017	2018
<b>Existing First Lien</b>						
2004A	\$12,789	\$12,782	\$12,787	\$12,782	\$12,787	\$12,786
2004B	\$6,087	\$6,080	\$6,084	\$41,428	\$41,454	-
2005A	\$7,243	\$7,243	\$7,243	\$7,243	\$7,243	\$7,243
2006A	\$12,231	\$12,226	\$12,229	\$12,229	\$12,229	\$12,230
2007A	\$33,097	\$33,098	\$33,107	-	-	-
2008A	\$26,360	\$26,357	\$26,353	\$26,357	\$26,347	\$68,647
Subtotal First Lien Debt Service	\$97,806	\$97,786	\$97,802	\$100,038	\$100,060	\$100,905
<b>Existing Second Lien Debt Service</b>						
2003A	\$4,018	\$4,017	\$4,020	\$4,021	\$4,020	\$4,016
2006B	\$6,116	\$6,118	\$6,114	\$6,114	\$6,117	\$6,118
2008B	\$11,079	\$11,082	\$11,080	\$11,080	\$11,081	\$11,082
2010	\$27,862	\$27,870	\$27,863	\$27,861	\$27,863	\$27,867
Subtotal Existing Second Lien Debt Service	\$49,075	\$49,087	\$49,077	\$49,075	\$49,080	\$49,082
<b>Proposed Second Lien Debt Service</b>						
2013A	\$0	\$3,166	\$12,412	\$12,410	\$12,411	\$12,409
2014A	\$0	\$0	\$0	\$8,801	\$7,783	\$7,785
2015A	\$0	\$0	\$0	\$0	\$13,622	\$11,102
2017A	\$0	\$0	\$0	\$0	\$0	\$18,226
Subtotal Proposed Second Lien Debt Service	\$0	\$3,166	\$12,412	\$21,211	\$33,815	\$49,522
Total Gross Debt Service	\$146,882	\$150,039	\$159,292	\$170,325	\$182,954	\$199,509

Source: Bureau of Environmental Services

Table 6-6 shows the resources and requirements for the Debt Redemption Fund. Annual principal and interest requirements include a repayment of loans from the State Revolving Fund and Oregon Economic Development Department, in addition to the first and second lien debt service requirements shown in Table 6-5. Annual requirements are funded through transfers from the Operating Fund, net of any adjustments needed to maintain an ending cash balance in the Debt Redemption Fund of \$10,000.

**Table 6-6  
City of Portland  
Bureau of Environmental Services  
Sewer System Debt Redemption Fund  
Forecast Sources and Uses of Funds (\$1,000)**

Item	2013	2014	2015	2016	2017	2018
<b>RESOURCES</b>						
Interest On Investments	\$182	\$158	\$284	\$468	\$537	\$605
Cash Transfers In :						
Sewer Operating Fund	148,269	151,949	160,579	171,426	183,984	200,474
Construction Fund	-	95,000	-	-	-	-
Bond Sale Proceeds	-	23,146	11,402	-	18,230	-
Beginning Balance						
Unrestricted Reserve	10	10	10	10	10	10
Restricted Reserve	27,871	27,871	51,017	62,419	62,419	80,649
<b>TOTAL RESOURCES</b>	<b>\$176,332</b>	<b>\$298,134</b>	<b>\$223,291</b>	<b>\$234,323</b>	<b>\$265,180</b>	<b>\$281,738</b>
<b>REQUIREMENTS</b>						
Debt Principal Retirement	72,160	75,623	83,192	89,431	96,375	110,081
Interest Expense	76,291	76,484	77,671	82,463	88,146	90,998
Payment to Escrow	-	95,000	-	-	-	-
Ending Fund Balance						
Unrestricted Reserve	10	10	10	10	10	10
Restricted Reserve	27,871	51,017	62,419	62,419	80,649	80,649
<b>TOTAL REQUIREMENTS</b>	<b>\$176,332</b>	<b>\$298,134</b>	<b>\$223,291</b>	<b>\$234,323</b>	<b>\$265,180</b>	<b>\$281,738</b>

Source: Bureau of Environmental Services

### **6.3 Forecast Operating Results and Debt Service Coverage**

Table 6-7 presents forecast operating results and debt service coverage for the forecast period. Gross revenues, including operating revenues, SDCs, and interest income, are estimated to total \$289.7 million in FY 2013, and projected to increase to \$382.4 million in FY 2018. When gross revenues are reduced by operating expenses, including transfers to the Rate Stabilization Fund, Net Revenues are estimated to be \$187.9 million in FY 2013, increasing to \$259.3 million in FY2018.

**Table 6-7  
City of Portland  
Bureau of Environmental Services  
Projected Operating Results and Debt Service Coverage (\$1,000)**

Item	2013	2014	2015	2016	2017	2018
Gross Revenues (1)						
Operating Revenues						
Service Charges (2)	\$254,980	\$277,523	\$295,890	\$316,149	\$336,160	\$353,730
Wholesale	4,142	3,445	3,555	3,669	3,787	3,909
Other Service Charges & Misc	4,296	3,329	3,436	3,546	3,660	3,777
Interest Earnings	595	894	1,397	1,633	1,966	1,822
System Development Charges	11,033	10,650	11,565	12,234	12,936	13,130
Cash Transfers In -						
Rate Stabilization Fund	10,400	-	-	-	-	3,450
Other Funds	4,290	2,783	2,333	2,408	2,485	2,565
<b>Total Gross Revenues</b>	<b>\$289,736</b>	<b>\$298,624</b>	<b>\$318,177</b>	<b>\$339,640</b>	<b>\$360,995</b>	<b>\$382,383</b>
Operating Expenses (3)						
Personal Services	44,673	44,887	46,243	49,707	51,566	53,828
Materials & Services	54,565	54,677	56,202	58,915	62,777	64,841
Internal Services						
Capitalized Overhead	(8,400)	(8,255)	(8,413)	(8,574)	(8,738)	(8,905)
Cash Transfers Out -						
General Fund Overhead	7,507	6,965	7,348	7,753	7,966	8,186
Rate Stabilization Fund	0	1,550	5,550	5,825	4,750	\$0
Other	3,474	3,776	4,200	4,586	4,882	5,166
<b>Subtotal Operating Expenses</b>	<b>\$101,820</b>	<b>\$103,599</b>	<b>\$111,131</b>	<b>\$118,211</b>	<b>\$123,204</b>	<b>\$123,116</b>
<b>Net Revenues</b>	<b>187,916</b>	<b>195,025</b>	<b>207,046</b>	<b>221,429</b>	<b>237,791</b>	<b>259,267</b>
Sr. Lien Debt Service for Coverage	97,806	97,786	97,802	100,038	100,060	100,905
Sr. Lien Debt Coverage	1.92	1.99	2.12	2.21	2.38	2.57
<b>Total Debt Service for Coverage</b>	<b>146,882</b>	<b>150,039</b>	<b>159,292</b>	<b>170,325</b>	<b>182,954</b>	<b>199,509</b>
<b>Total Debt Coverage</b>	<b>1.28</b>	<b>1.30</b>	<b>1.30</b>	<b>1.30</b>	<b>1.30</b>	<b>1.30</b>

**Notes:**

- (1) As defined in the First Lien Bond Ordinance
- (2) Includes revenue from Portland Harbor rates
- (3) As defined in the First Lien Bond Ordinance; excludes depreciation expense.

Source: Bureau of Environmental Services

Based on the First Lien Bond Ordinance, the minimum first lien debt service coverage requirement is 1.20 times the annual required debt service. As mentioned previously, the Bureau has established target coverage on first lien bonds of 1.50. Based on the forecast Net Revenues and projected annual first lien debt service requirements, the projected first lien coverage exceeds the established target coverage of 1.50 in each year of the forecast.

The 2013 Series A Bonds are being offered as second lien obligations. As such, they are not subject to the same coverage requirements as first lien bonds. As mentioned previously, the Bureau has established target coverage on total first and second lien debt of 1.30. Based on the forecast Net Revenues and projected total debt service requirements (including debt service on planned additional bonds in FY 2014 and FY 2017), the projected total coverage meets the established target coverage of 1.30 in each year, except FY 2013.

# 7.0 Summary of Assumptions and Conclusions

## 7.1 Principal Assumptions

In analyzing the financial forecast, the Bureau relied on certain assumptions related to future System conditions. There will usually be differences between assumed and actual conditions because events and circumstances frequently do not occur as expected, and those differences may be significant. Table 7-1 provides a summary of key economic and budget assumptions used in the forecast.

**Table 7-1**  
**City of Portland**  
**Bureau of Environmental Services**  
**Key Assumptions**

	Fiscal Year	2014	2015	2016	2017	2018
<b>Economic Assumptions</b>						
Inflation rates						
Salaries and Wages (%) (1)		0.9	2.99	2.99	2.99	2.99
External Materials & Services (%)		2.43	2.43	2.43	2.43	2.43
Internal Materials & Services (%)		3.21	3.21	3.21	3.21	3.21
Utilities (%)		2.32	2.32	2.32	2.32	2.32
Other (%)		2.69	2.69	2.69	2.69	2.69
Interest Earnings Rate (%)		0.45	0.40	0.50	0.75	0.75
Revenue Bond Interest Rate (%)		5.08	5.75	6.00	6.50	6.50
Bond Term (years)		25	25	20	20	20
Target Coverage Ratio (First & Second Lien Total)		1.30	1.30	1.30	1.30	1.30
<b>Budget Assumptions</b>						
Ending Fund Balances (% of operating expenses)		10.00	10.00	10.00	10.00	10.00
City Overhead Growth Rate (%)		2.75	2.75	2.75	2.75	2.75
Expenditure Rates (% of Budget)						
CIP		95.00	97.00	97.00	97.00	97.00
Personal Services		98.50	98.50	98.50	98.50	98.50
External Materials and Services		95.00	95.00	95.00	95.00	95.00
Internal Materials and Services		100.00	100.00	100.00	100.00	100.00

(1) Does not include inflationary increases on health and retirement benefits, which according to the Bureau are forecast to increase in excess of salary and wages.

In addition, the following are the principal assumptions used in forecasting System revenues from user charges:



- The number of customer accounts will increase at an average annual rate of approximately 0.5 percent during the next 6 years, plus additional stormwater drainage customers within three Multnomah County drainage districts.
- Sewer usage per account is projected to continue to decline annually at rates of 0.75 percent (for commercial and multifamily customers) 1.5 percent (for single family residential customers).
- Average impervious area per account is projected to remain at current levels for all customers.

## **7.2 Conclusions**

The financial forecast presented in this report represents a preliminary assessment by the Bureau of projected operating results for the period FY 2013 to FY 2018. Galardi Rothstein Group has reviewed the forecast, its underlying analysis and assumptions, and we find it to be sound and feasible. In addition, Galardi Rothstein Group offers the following opinions:

- The principal assumptions used in the financial forecast are reasonable given recent experience and economic conditions.
- The Bureau's financial planning and rate practices are comprehensive, and conform to established industry standards.
- The Bureau and the City Council have demonstrated through historical financial planning and rate increases, both a commitment to conforming to established financial policies, and effectiveness at balancing rate increases with the financial requirements of the system (including debt service coverage requirements).
- Projected operating results are consistent with the Bureau's established financial policies, and debt service requirements, and will provide funding necessary to implement the CIP as currently envisioned