

# WHOLESALE WATER RATES ANALYSIS

CITY OF TOLEDO &  
SEAL ROCK WATER DISTRICT

# WHOLESALE WATER RATES ANALYSIS

CITY OF TOLEDO &  
SEAL ROCK WATER DISTRICT

September 2008

prepared by:

**ECONOMIC & FINANCIAL ANALYSIS**

1409 Franklin Street • Suite 201 • Vancouver, WA 98660  
360.823.1700 • 503.228.3225 • Fax: 360.695.1804 • rjbefa@aol.com

## TABLE OF CONTENTS

SUMMARY .....	1
INTRODUCTION .....	3
REVENUE REQUIREMENTS FOR WHOLESALE CUSTOMERS .....	4
O&M EXPENSES .....	4
CAPITAL EXPENSES .....	10
ANALYSIS OF THE CURRENT SERVICE AGREEMENTS .....	15
APPENDIX .....	18

## LIST OF TABLES AND FIGURES

Table 1 Summary of Wholesale Rate & Impact on Seal Rock .....	1
Table 2 Allocation of O&M Costs to Functions .....	6
Table 3 Calculation of O&M Component of Wholesale Water Rate .....	8
Table 4 Summary of Water Users and Usage .....	8
Table 5 Analysis of Transmission and Distribution Line Values .....	9
Table 6 Valuation of Water Distribution System .....	11
Table 7 Recent Cash Acquisitions of Fixed Assets .....	12
Table 8 Seal Rock Contributions to Capital Expenditures .....	12
Table 9 Adjustments for Excluded Assets .....	13
Table 10 Calculation of Rate for Capital Assets .....	13
Table 11 Summary of Wholesale Water Rate .....	14
Table 12 List of Assets Currently in Use .....	19

## SUMMARY

The City of Toledo and the Seal Rock Water District commissioned a study 4 years ago to work out a more equitable means for the City to charge the District for water use. The current rates are the result of a flawed agreement and one law suit. The rates basically attempt to collect proportionate shares of operating costs from each user and to proportionately allocate capital costs as they are incurred by the City between the City and the District. The Wright Water District is a very small water user that is not part of the current agreement but is treated by the City as a wholesale customer similar to Seal Rock; however, the City does not attempt to collect for capital costs from Wright.

The following Table 1 shows a single calculation for water operating and capital costs for each of the two wholesale customers. The current rate structures would be abandoned the following single rate or rates (if capital is included) would be applied to usage. The current set of base rates would be eliminated.

**Table 1 Summary of Wholesale Rate & Impact on Seal Rock**

	Functions				Total
	Source, Transmission & Plant	Distribution	Billing & Meters	Management	
Annual Cost by Function	\$296,163	\$323,262	\$55,470	\$87,430	\$762,325
Annual Water Sales (1,000 gallons)	266,514,421	266,514,421	266,514,421	266,514,421	
% Allocated to function	100%	29%	0.216%	100%	
Water Usage per Year (1,000's of gallons)					
O&M rate per 1,000 gallons	\$1.1112	\$0.3517	\$0.0005	\$0.3280	\$1.7915
Working Capital (1/12 of O&M)					0.1493
Total O&M Rate					\$1.9408
Depreciation Rate					\$0.2826
Return on Equity Rate					0.3251
Sub total capital rate					\$0.6077
Total Rate per 1,000 gallons					\$2.5485

This report is a second attempt to gain concurrence by the parties (though Wright was not involved in the discussions). This second attempt was to come up with a single volumetric rate per 1,000 gallons of water usage for operating and maintenance costs, and to leave the discussion regarding how to collect for capital costs unresolved. The single commodity rate for O&M would be \$1.9408 per 1,000 gallons of water used by Seal Rock or by Wright Water Districts. The calculation of the capital cost per 1,000 gallons of water use shown in a grey-space is unchanged from the first report.

The commodity rate calculated in Table 1 is about 7 percent higher than when it was calculated in 2005. Most of the change is due to growth in operating costs and a very slight decrease in water usage. Overall the O&M costs and the proportionate use of the water system has changed very little over the past 3 years. Two other significant changes were made from the 2005 analysis, though the impact on the rate was very minor.

First, in this report the total water used by all of the parties was used to determine the commodity rate for all 4 functions analyzed—Source, transmission, and plant, Distribution, Billing & meters, and Management. In the original report from 2004, water sales were weighted by the relative number of customers benefiting from each function.

Second, the numbers of customers in the system, including Toledo's wholesale customers, the 2 meters used by Seal Rock Water District, and the 1 meter used by Wright Water District was reduced from 1,616 to 1,386 which include the 3 wholesale water meters. The original 1,616 accounts included closed accounts and double counted properties that changed customers (rental turn-over) during the year. Since this factor is only applied to the total cost of Billing & Meters which is a minor cost, the overall impact on the rate is small.

The City has to address its water source problems in the near future. The cost of making those repairs will be in the millions of dollars. Going forward, the City and its retail customers will have to decide how to allocate that cost to current and future users. The parties have 2 options: (1) the City can establish a single rate to charge the Districts that will cover its operating costs and capital costs, or (2) it can establish a long-term agreement whereby the City and the Districts agree on some formula to allocate the capital costs to each party and each party agrees to use water from system at least until all of the loans the City will have to secure are fully repaid.

Option 1 would leave the City with the total debt for the capital improvements and would have to be prepared for one of both districts finding cheaper water elsewhere. The City would be taking all of the financial risks.

Option 2 would spread the risk to the wholesale customers through long-term agreements to purchase water only from the City, and likely the City would have to agree not to take on other wholesales users that might reduce water services to the original wholesale customers. The risk the City would take is if the improvements were, for some unknown reason, fail to produce sufficient water to meet everyone's demands.



## INTRODUCTION

The City of Toledo and Seal Rock Water District jointly retained Economic & Financial Analysis (EFA) to evaluate the current water rates in Toledo and between the City of Toledo and Seal Rock Water District. Seal Rock purchases about half of the finished drinking water Toledo produces. Seal Rock is dependent on Toledo for all of its water supply and Toledo is dependent on Seal Rock to pay for producing water. The two have had an agreement for over 10 years and Seal Rock has invested in meters and a water transmission line to connect to Toledo's water system.

The relationship between the two entities is codified in a 1994 *Water Purchase Contract*. Also, Toledo is facing major capital improvements to use its water rights and transmit the water from two sources: the Siletz River in the summer and Mill Creek in the fall, winter, and spring. Water treatment is essential because of turbidity problems with the Siletz River water, and iron, manganese and algae problems with the Mill Creek Reservoir water. The water treatment plant (WTP) was built in 1975 and has an average capacity of 1.2 million gallons per day (mgd) and a peaking capacity of 3.0 mgd for brief periods.

The agreement between Toledo and Seal Rock is for sale of up to 1.25 mgd, or about 100 percent of average daily production capacity and about 42 percent of peaking capacity (the agreement which is discussed later in this report does not clearly state that the 1.25 mgd of capacity for Seal Rock is average daily or peaking capacity). Currently Seal Rock's average usage is under 0.5 mgd.

In this report, EFA determines develops a wholesale water rate for Toledo's major wholesale customer—Seal Rock. This wholesale rate is developed using a utility basis of cost accounting, and provides preliminary recommendations to set a wholesale water rate. EFA relies on rate making principles and methods employed by most state utility regulators including Oregon. The state of Oregon regulates the rates of privately-owned water companies, and they apply rate making methods established through a rich history of regulated utilities.

This report consists of 4 chapters. In the first chapter, EFA establishes the revenue requirements for Toledo to supply water. Revenues requirements divided by the units of water supplied is the wholesale water rate. The second chapter is a review of the existing water agreement with proposed changes. In the third chapter, we discuss how the wholesale rate derived in the first chapter can be applied and administered over future years. The final chapter recommends a wholesale rate and changes to the agreement. An appendix contains detailed listings of fixed assets and a summary of annual water usage by customer class in Toledo.

## REVENUE REQUIREMENTS FOR WHOLESALE CUSTOMERS

Toledo's revenue requirements to own and operate the water system have to include all O&M and capital costs. Utility rates are a cost-based method and not a profit-maximizing method. Determining rates is grounded in the costs of owning and operating a water system. Annual revenue requirements from rates are determined so as to collect no more than the total annual long-run costs associated with operations and ownership.

Annual revenue requirements in total have three major elements—O&M costs, depreciation, and return on invested capital. The general equation for determining revenue requirements is:

$$RR = O\&M + \text{Annual Depreciation} + \text{Rate of Return} \times (\text{Rate Base})$$

Each of these terms is discussed below.

We begin with O&M expenses based on Toledo's current budget for the water utility. The cost of capital is based on Toledo's current list of capital assets that are currently used to obtain, produce, pipe, and store potable water for the benefit of retail and wholesale customers. Toledo operates its water utility as an enterprise fund which means that 100 percent of its costs are paid from water rates and other water-related rates and charges.

### O & M EXPENSES

Table 2 shows the line-item costs from the current year budget and the allocation of each line-item to one of four functions—(a) source, transmission & water treatment plant, (b) distribution, (c) billing & meters, and (d) management. The City budgets water into two broad categories: *Category 1 Plant* which includes the two sources of water, raw water transmission lines, and the water treatment plant; and, *Category 2 Distribution* which includes all of the piping from the treatment plant to reservoirs, fire hydrants, and to each customer's water meter. Within the budgets are included management costs (as transfers to the general fund) and reserves for future capital expenditures (transfers to reserve funds).

To determine how much of the total operating costs to allocate to wholesale customers, EFA through analysis of individual line items and interviews with staff allocated the costs to one of four functions used in varying amounts by wholesale customers. One-hundred percent of the cost of obtaining raw water from the sources, transmitting it to the water treatment plant, and treating the water are shared by Toledo and wholesale customers. The distribution system is only partially used by wholesale customers. The cost of monthly meter reading, billing, and meter maintenance is only fractionally used by wholesale customers. Management costs are a necessary overhead to any organization. Each line item as shown in Table 2 is allocated wholly or partially to each of these four functions.

The allocation of Category 1 line items is straightforward with 2 exceptions.

A Transfer to the general fund line item is for a utility billing clerk and for management. EFA estimated from the City's personnel costs and interviews with staff the cost amounts to \$28,470 per year

The transfer to water reserve is a capital savings account that is excluded as an operating cost and accounted for indirectly below as a capital cost.

The allocation of Category 2 line items also is straightforward with 3 exceptions.

A Transfer to the general fund line item is for management and this amount is listed under the management category.

The transfer to the public works department includes a meter reader/maintenance person. The person reads the customer meters, and handles meter turn-off and turn-on services, meter change outs, and meter servicing. These tasks are handled by a full-time public works staff that spends an estimated ½ of their time on meter reading and servicing at an annual cost of \$27,000.

The transfer to the water reserve is a capital savings account that is excluded as an operating cost and accounted for indirectly below as a capital cost.

In sum, the City spends \$762,325 on operations, annually. About 39 percent of O&M costs are for the water source, transmission, and treatment; 42 percent is for transmission of treated water, storage, and distribution; 7 percent is for meter reading and maintenance, and 11 percent is management.

**Table 2 Allocation of O&M Costs to Functions**

	2009 Budget	Source, Transmission & Plant	Distribution	Billing & Meters	Management	Total
Source, Raw Water Transmission, Treatment Plant						
Full time	89,700	89,700				89,700
Call time	8,250	8,250				8,250
Overtime	6,300	6,300				6,300
Social Security	7,975	7,975				7,975
Health Insurance	16,775	16,775				16,775
Workers' Comp	3,530	3,530				3,530
Retirement	2,980	2,980				2,980
Office Supplies	300	300				300
Electricity	45,150	45,150				45,150
Telephone & pagers	2,200	2,200				2,200
Alarms	2,000	2,000				2,000
Equipment repair	1,000	1,000				1,000
Vehicle repair	400	400				400
Building repair	1,000	1,000				1,000
Systems repair	8,400	8,400				8,400
Travel & training	2,000	2,000				2,000
Membership & subscriptions	200	200				200
Gas, Oil, & Tires	1,250	1,250				1,250
Insurance	4,120	4,120				4,120
Supplies	20,000	20,000				20,000
Contract & other services	12,600	12,600				12,600
Transfers to General fund	57,950					57,950
Transfers to Public works	54,713	54,713				54,713
Transfers to PW Equip. reserve	1,740	1,740				1,740
Transfers to water reserve	40,825					40,825
Transfers to retirement reserve	3,580	3,580				3,580
Sub total	394,938	296,163	0	28,470	29,480	354,113

Wholesale Water Rates Analysis

	2009 Budget	Source, Transmission & Plant	Distribution	Billing & Meters	Management	Total
Finished Water Transmission, Distribution, Storage Reservoirs						
Office supplies	5,250		5,250			5,250
Data processing support	1,500		1,500			1,500
Electricity	2,625		2,625			2,625
Equipment repair	1,000		1,000			1,000
Systems repair	32,000		32,000			32,000
Supplies	8,750		8,750			8,750
Contract & other services	8,000		8,000			8,000
Transfers to General fund	57,950			57,950		57,950
Transfers to Public works	284,672		257,672	27,000		284,672
Transfers to PW Equip. reserve	6,465		6,465			6,465
Transfers to water reserve	40,825					0
Sub total	449,037	0	323,262	27,000	57,950	408,212
Total		296,163	323,262	55,470	87,430	762,325
		39%	42%	7%	11%	100%

These annual O&M costs by function are converted to a rate per 1,000 gallons of water use. Notice that all costs will be converted to a dollar rate per 1,000 gallons of water used. Table 3 shows the calculations of this rate for O&M costs by function.

Annually, the City sells 266,514,421 gallons of water and sells water to Seal Rock (125,430,240 gallons) and Wright WD (740,000 gallons). Table 4 shows the sources of demand for 2005, 2007, and 2008. EFA uses the 2008 data to calculate the rate.

**Table 3 Calculation of O&M Component of Wholesale Water Rate**

	Functions				Total
	Source, Transmission & Plant	Distribution	Billing & Meters	Management	
Annual Cost by Function	\$296,163	\$323,262	\$55,470	\$87,430	\$762,325
Annual Water Sales (1,000 gallons)	266,514,421	266,514,421	266,514,421	266,514,421	
% Allocated to function	100%	29%	0.216%	100%	
O&M rate per 1,000 gallons	\$1.1112	\$0.3517	\$0.0005	\$0.3280	\$1.7915
Working Capital (1/12 of O&M)					0.1493
Total O&M Rate					\$1.9408

The allocation of costs for the source, raw water transmission, and water treatment plant is derived by dividing total system-wide usage into the costs allocated to this function—\$1.1112 per 1,000 gallons.

**Table 4 Summary of Water Users and Usage**

	Toledo	% Annual Δ	Seal Rock	% Annual Δ	Wright Creek	% Annual Δ	Total	% Annual Δ
2005	148,644,237		125,236,000		895,000		274,775,237	
% Total	54.1%		45.6%		0.3%		100%	
2007	138,163,610	-3.66%	135,252,450	3.85%	725,000	-10.53%	273,416,060	-0.25%
% Total	50.5%		49.5%		0.3%		100%	
2,008	140,344,181	1.57%	125,430,240	-7.54%	740,000	2.05%	265,774,421	-2.83%
% Total	52.8%		47.2%		0.3%		100.0%	
Overall		-1.9%		0.1%		-6.3%		-1.1%

The rate for the distribution function requires an adjustment for the portion of the distribution system actually used by wholesale customers. Water taken by the wholesale users does not use all of the distribution system in the City, but only about 29 percent of it. EFA derived this percentage by evaluating the existing distribution system that is used by wholesale customers. Table 5 shows the calculations. The City's water master plan has an inventory of the lineal feet of pipe by pipe diameter. EFA used these data and replacement costs to install the various size diameter pipes to evaluate the distribution system. Table 5 shows the calculations. Also based on the maps in the master plan, only pipes that are 10-inches or more in diameter are used for wholesale water distribution. The ratio of the cost of these pipes to the cost of all of the piping is approximately 29 percent. EFA uses this percentage as a reasonable estimate of the amount of O&M costs for the distribution system that benefit wholesale users. This criterion eliminates all of the water line laterals that serve retail customers.

**Table 5 Analysis of Transmission and Distribution Line Values**

In. Diameter	Feet	% Total	\$/l.f.	Replacement Cost	% Total	Used by Wholesale Customers	% of total Replacement Cost
2	415	0.3%	39.56	16,417	0%	0%	0%
4	15,690	12.5%	39.56	620,696	10%	0%	0%
6	67,593	54.1%	45.40	3,068,722	47%	0%	0%
8	17,597	14.1%	51.77	910,997	14%	0%	0%
10	15,579	12.5%	59.33	924,302	14%	100%	14%
12	10,595	8.5%	69.23	733,492	11%	100%	26%
18	2,240	1.8%	87.37	195,709	3%	100%	29%
30	190	0.2%		Included as part of the WTP asset value			29%
	125,024	100%		6,470,335	100%		29%

Source: KPFF 1998 pp 37-39

Back to Table 2, only 29 percent of the O&M costs for distribution are allocated to the wholesale rates and that amount is divided by total annual water sales that use these pipes. The pipes actually used by the wholesale customers also carry water used by some of Toledo's retail customers, but not by all of Toledo's retail customers. Multiplying the cost for distribution by 29% and dividing by the amount of water used produces a rate of \$0.3517 per 1,000 gallons.

Billing and meter maintenance is similarly allocated to the wholesale water rate. Only 3 of the 1,386 customers (retail plus wholesale) are billed and have meters, or 0.216 percent of total billing costs. This cost divided by the amount of water used by the two wholesale customers' results in a rate of \$0.0005 per 1,000 gallons.

Management costs are allocated system wide using total annual water sales divided into total annual management costs. The management rate is \$0.3280 per 1,000 gallons.

The summation of these 4 cost function is \$1.7915 per 1,000 gallons.

While these data produce rates carried out to 4 places to the right of the decimal point, the implied accuracy is somewhat of an illusion. Unexpected drops in revenues and increases in costs (e.g., for energy) result in variations in net operating income. For this reason, rate regulating agencies permit various fractions actual costs to be added to the revenue requirements to account for unforeseeable cash-flow problems. In Oregon, the Public Utility Commission permits the inclusion of working capital at the rate of 1/12 (8.3333 percent) of known O&M costs into the rate calculations, unless a regulated utility can show higher historic variance in operating revenues and costs.<sup>1</sup> This cost is shown separately in Table 6 and is calculated as 1/12 of the raw O&M rate per 1,000 gallons, \$0.1493 for a total rate of \$1.9408

## CAPITAL EXPENSES

These calculations are not changed since the 2005 report. As shown in the appendix a few capital improvements have been added to the system, but depreciation has eliminated other assets as fully depreciated. An approximation of the changes indicates a near zero change. Also, since these calculations are based on original costs the bulk of the cost data do not change. One change that was made had to do with payments from Seal Rock to Toledo for capital improvements. Seal Rock paid this outstanding debt, though in the 2005 study the capital assets involved with excluded from the calculations.

Unlike labor, electricity, and chemicals that are purchased and used in the same year, or nearly so, capital is purchased in one year and then used up over the next several years (10 to 80 years). Each year capital assets are in use they are microscopically diminished so that at the beginning of each subsequent year, less of the capital assets are available for future use. Accounting for capital costs has been a controversial issue in rate making, and over 100 years of experimenting with different accounting procedures, court tests, and forensic evaluations have brought the regulated utilities industry to the following formula for determining the annual cost of capital.

$$\text{Annual cost of capital} = \text{annual depreciation} + \text{net book value} \times \text{rate of return}$$

$$\text{Where: net book value} = \text{original cost of the assets} - \text{accumulated annual depreciation}^2$$

Table 6 summarizes the capital assets used by Toledo in its water utility. A complete list of assets is contained in the appendix including those assets EFA eliminated. Various assets still listed on Toledo's fixed assets list include assets that are no longer used either because they are physically or functionally antiquated, or no longer exist. Also, the City lists several still functioning assets but at zero value.

Recent changes to accounting standards will require Toledo (and all other municipalities) to revise, update, and improve record keeping for fixed assets. Even before paring down the list of assets currently in use, Toledo's booked asset values probably understate the actual assets in use. For example, the

---

<sup>1</sup> The combined variance in Toledo's net operating income between 2000 and 2004 averages about 35 percent, which is high relative to regulated utilities.

<sup>2</sup> Many practitioners have argued to use replacement costs instead of original costs to account for inflation. When original cost is used, agencies often compensate by permitting the rate of return to be high enough to account for inflation. The nominal interest rate paid and charged by banks has three components: time value of money, risk, and inflation. See for example, Regulated Industries, Gellhorn & Pierce, Jr., 1982.

distribution system has an asset value of only \$686,177. Given the physical inventory of pipes in Toledo's master plan, we can easily conclude that Toledo has not booked the cost of every water line in the City. Also, the list of excluded assets includes a number of components of the WTP that have zero construction values associated with them. These may have been grant funded or paid from property taxes collected to repay the general obligation bonds issued to build the WTP. In past years, municipalities commonly booked only assets purchased with rate revenues. Water lines that were built by developers or through local improvement districts or grants may not have been booked. Similar problems probably exist with the other components.

**Table 6 Valuation of Water Distribution System**

Component	No. of Components	Purchase Price	Annual	Accumulated	Net Book Value
Distribution	29	\$686,177	\$23,695	\$457,415	\$188,359
Equipment	0	0	0	0	0
Planning	1	3,050	610	0	0
Reservoir	4	224,997	4,859	166,254	58,743
Sources	16	583,458	18,121	229,415	354,043
System	19	94,491	7,088	40,923	30,617
Transmission	1	1,200,000	24,000	768,526	431,474
WTP	31	2,094,134	63,830	1,030,025	1,061,159
<b>Totals</b>	<b>101</b>	<b>\$4,886,307</b>	<b>\$142,204</b>	<b>\$2,692,558</b>	<b>\$2,124,395</b>

Source: See Appendix.

The distribution system includes all of the large to small water lines that connect the three reservoirs with the retail customers and Seal Rock. Equipment and planning have zero net book value. Normally, these assets would include tools and rolling stock used to maintain the water system, and planning or engineering studies to evaluate and expand the water system. This deficiency is in part made up in operating costs because Toledo charges its departments rent for equipment shared by the various public works divisions (water, sewer, roads, and parks). Annual transfers of those rents are made from the water operating fund to the general fund where the equipment is purchased.

Toledo has three reservoirs one of which is used to supply Seal Rock, the Wright Creek Water District, and many of Toledo's retail customers. The two sources are described above and include the original cost of land and rights of way associated with the sources. System is a net or result of accounting for all other assets. This category of assets includes small equipment purchased for use for the water utility only. Transmission is the treated water transmission line from the Ammon road reservoir that connects to both Seal Rock and Wright Creek Water District. Finally the WTP is the water treatment plant and piping to and inside of it.

In total, the original \$4,886,307 is more than half depreciated leaving a net book value of \$2,124,395 as of June 30, 2005. Annual depreciation is \$142,204. At this rate of depreciation, the remaining useful life of the water system is 15 years (net book value divided by annual depreciation).

The appendix shows those assets that are not used by wholesale customers, or were paid for by Seal Rock separately from the water rate. These include assets recently purchased that Seal Rock agreed to pay ½ of these cost. These items are shown as Table 7 and Seal Rock has paid its total share of these costs.

**Table 7 Recent Cash Acquisitions of Fixed Assets**

Asset #	Description	Amount
1744	Miox system	\$ 36,732.00
1745	Pump Station reroof	\$5,620
1787	Pump rebuild	13,966
1789	Plant Renewal	493,214
1790	Generator	45,490
10005	Mill Ck Design	4,359
10005	Mill Ck Line	42,486
10005	Environmental Review - Mill Ck	21,190
10005	Mill Ck	2,703
10008	Refurbish Pump	9,040
10009	Tank Study	1,997
10020	Feasibility Study	6,280
10021	Johnson Pump	5,700
<b>Total</b>		<b>\$688,777</b>

Source: City of Toledo financial records.

**Table 8 Seal Rock Contributions to Capital Expenditures**

Fiscal year	Billed	Paid	Balance
1999 -00	\$82,915.94		\$82,915.94
2000 -01	210,189.05	(\$40,000.00)	253,104.99
2001 -02	28,379.76	(50,000.00)	231,484.75
2002 -03	8,050.60	(50,000.00)	189,535.35
2003 -04	13,736.27	(85,000.00)	118,271.62
2004 -05		(118,271.62)	0.00
<b>Totals</b>	<b>\$343,271.62</b>	<b>(\$343,271.62)</b>	

Source: City of Toledo financial records.

Table 9 shows the purchase price, depreciation, and net book value of the excluded assets. Table 10 shows how the annual depreciation and net book value net of excluded assets with a rate of return contribute to the wholesale water rate. The resulting net book value is reduced from \$2,124,395 to \$1,488,676, and annual depreciation is reduced from \$142,204 to \$77,665. These two data are used to develop the capital portion of the wholesale water rate.

Depreciation is viewed as an operating expense in that it represents the annual consumption of capital much in the way electricity or barrels of chemicals are consumed. Annual depreciation net of assets is included in the revenue requirements, and divided by total annual water sales and adds \$0.28265 to the wholesale water rate.

The net book value net of excluded assets is the rate base. It represents the remaining value of past investments on which a rate of return is appropriate. It is similar to the return a company would expect from making an investment in any other long-lived asset such as a delivery truck or airplane used by a package delivery service.

The rate of return that is applied to rate base and added to the revenue requirement is a source of debate and may be adjusted depending on circumstances. For Toledo, the interest rate it would likely pay on a 25 year revenue bond would be about 5.0 percent. This is a current average in the market for municipalities the size of Toledo, less than 10,000 populations with an unrated, uninsured, bank-qualified revenue bonding authority. The Oregon PUC accepts rates ranging from 10 percent to 15 percent for privately-owned and regulated utilities. At 5.0 percent applied to the rate base produces a revenue requirement of \$74,434. Dividing the return on rate base by the annual water sales is \$0.27089 per 1,000 gallons.

**Table 9 Adjustments for Excluded Assets**

Asset Description	Purchase Price	Depreciation		Net Book Value
		Annual	Accumulated	
Totals	\$4,886,307	142,204	2,692,558	2,124,395
Less Excluded Assets	(1,343,960)	(64,539)	(669,213)	(635,719)
Net of Excluded Assets	\$3,542,347	\$77,665	\$2,023,345	\$1,488,676

Source: See Appendix.

**Table 10 Calculation of Rate for Capital Assets**

	Cost Allocation	Volume (g)	% to Wholesale Rate	\$/1,000 g
Depreciation, Net	77,665	274,775,237	100%	

				0.28265
Book Value, Net Depreciation, Net City-only Assets	1,488,676			
Rate of return	5.00%			
Return on Investment	74,434	274,775,237	100%	<u>0.27089</u>
Sub total				<u>0.55354</u>

The total wholesale water rate—with O&M and capital costs—is summarized in Table 11. O&M costs amount to \$1.8085 per 1,000 gallons and capital costs amount to \$0.55354 per 1,000 gallons. The total wholesale rate is \$2.3621 per 1,000 gallons.

Table 11 Summary of Wholesale Water Rate

	Functions				Total
	Source, Transmission & Plant	Distribution	Billing & Meters	Management	
Annual Cost by Function	\$268,707	\$252,453	\$50,067	\$65,305	\$636,532
% of total cost	42%	40%	8%	10%	100%
Annual Water Sales (1,000 gallons)	274,775	200,453	126,131	200,453	
% Allocated to Functions	100%	29.00%	0.124%	100%	
O&M rate per 1,000 gallons	\$0.9779	\$0.3652	\$0.0005	\$0.3258	\$1.6694
Working Capital (1/12 of O&M)					<u>0.1391</u>
Total O&M Rate					<u>\$1.8085</u>
Depreciation Rate					0.2826
Return on Equity Rate					<u>0.2709</u>
Sub total capital rate					<u>\$0.5535</u>
Total Rate per 1,000 gallons					<u><u>\$2.3621</u></u>

## ANALYSIS OF THE CURRENT SERVICE AGREEMENTS

In general, the agreement is a 30 year agreement where Seal Rock is to be provided water so long as they demand it up to 1,250,000 gpd. The agreement is silent about usage beyond this limit, but a general provision (Part C paragraph 3) allows for mutual agreement to amend any section of the agreement.

Part A, paragraph A of the agreement Seal Rock may purchase up to 1,250,000 gallons per day of surplus water from Toledo. Surplus is defined as “. . . any water not needed by Toledo to serve its domestic residential users within the corporate City limits.” This implies that commercial and industrial customers in Toledo also purchase water that is surplus to Toledo’s domestic residential users. In the event of a water shortage, non-residential customers in both Toledo and Seal Rock, and Seal Rock’s out of district users would be the first customers to be cut off or curtailed. Although the agreement is to provide Seal Rock Toledo’s ‘surplus’ water, that is, water not needed by Toledo to serve its domestic residential users, both parties are to encourage its domestic users to curtail usage during emergency periods, and the agreement provides for a negotiated settlement of water use in the case of “. . . drought or other reason(s). . .” In such emergency, each party is to use its best efforts to “. . . deal with such unforeseen emergency in a manner which is mutually satisfactory to each party.” This implies an equality of water use in all but the most extreme circumstances.

Part C paragraph 2 (Failure to Deliver), goes on to commit the Seller (Toledo) to “. . . operate and maintain its system in an efficient manner and will take such action as may be necessary to furnish the Purchaser (Seal Rock) with quantities of water required by the Purchases.” “In the event of an extended shortage . . ., the supply of water to Purchaser’s consumers shall be reduced or diminished in the same ratio or proportion as the supply to Seller’s customers (domestic and non-domestic) is reduced or diminished.”

The agreement makes clear that Toledo owns the water system from the source up to the delivery point to Seal Rock. Toledo, therefore, has the legal and financial responsibility to maintain the system to supply water to Seal Rock, at least up to 1,250,000 gallons per day.

Part B of the agreement requires Seal Rock to pay Toledo based on three distinct charges. The first is a commodity charge equal to the same commodity charge Toledo charges its domestic (residential) customers (currently \$1.75 per 1,000 gallons). Notice that this charge is not based on any definition of cost, per se. Only that Seal Rock will pay in accordance with the charges Toledo charges its own customers for usage. Toledo charges its customers for a monthly base charge (that does not vary with usage) plus the commodity charge for actual usage of water. Seal Rock does not pay a base charge.

The second charge is for one-half of the maintenance costs of Toledo’s capital assets used for “. . . diversion, transmission, treatment and storage of water utilized or to be utilized by Seal Rock.” Notice that unlike the first charge which is based on a rate and usage, this charge is based on a defined cost that does not vary with water usage, and has the potential to fluctuate significantly from year-to-year. Also, maintenance costs for any water system are not always clearly defined. Different water utilities will set different maintenance standards—some will delay maintenance until an asset fails or nearly fails, while others will have proactive preventative maintenance programs. Toledo does not have a written policy for maintenance. Also, not all maintenance produces equal benefits. For example, if maintenance is solely

to repaint a water reservoir then no ambiguity as to the costs (and benefits) are involved. Painting the reservoir only maintains the reservoir's physical integrity and does not increase its capacity or in any way affect its daily performance to hold water. Both sets of customers (Seal Rock's and Toledo's) will benefit proportionately as a result of painting the existing reservoir. If the maintenance does increase capacity, then ambiguity results. For example, if an existing water pump in a booster station is replaced with a higher capacity pump, it is not clear that the beneficiaries are the same as those paying the costs. Will the additional capacity benefit Seal Rock more or less than Toledo?

The third charge is for the division of system development charges collected by Seal Rock. This paragraph in the agreement is ambiguously written. To understand the ambiguity, one must first understand what a system development charge is.

The state of Oregon statutes permit Toledo and Seal Rock to charge each new real estate development that connects to the water system a system development charge. The amount of the SDC is comprised of two fees—a reimbursement fee and an improvement fee. If the water system has excess capacity already built into the system, then it can calculate and charge a reimbursement fee. For example, assume that an existing water treatment plant with 2,000,000 gallons per day (gpd) capacity cost \$4,000,000 to build. Further assume that the existing users use only 1,000,000 gpd of its 2,000,000 gpd capacity. Then the water utility can have a reimbursement fee of \$2.00 per gallon of capacity. The utility can sell the 1,000,000 of excess treatment capacity. For a new single family house that uses about 300 gallons per day on a peak day of usage, the SDC reimbursement fee will be \$600.

If the water utility through its system capital improvement plan realizes that it has just enough storage capacity and it will need a new 1,000,000 gallon reservoir if growth continues, then it can create an improvement fee for the new reservoir. For the sake of simplicity assume that only new development will need the new reservoir and that it costs \$750,000 to build. Then the SDC improvement fee will be \$0.75 per gallon of storage capacity. For a new single family house that uses 300 gallons per day, the SDC improvement fee will be \$225.

The methodology to create the total SDC with reimbursement and improvement fees evaluates each component of the water system (source, transmission, treatment, storage, distribution, metering, and equipment) and determines a unit cost per gallon. The sum of the reimbursement and improvement fees become the SDC. In general terms, it is the price one has to pay to purchase the capital assets needed to supply water to a particular development. The amount of the SDC each new development pays varies proportionately with the amount of water the development is expected to use, usually applied according to the size water meter a particular development installs or according to the number of equivalent dwelling units (EDU).

In a perfect world where the utility can accurately forecast water usage, water availability, and the construction cost to supply potable water, the SDC charges will produce just enough money over time to pay the cost of building the water facilities. Development pays its way. While imperfections in our knowledge exist, the SDC does provide a reasonable estimate of future capital costs and revenues from growth.

With this background in mind, this third charge for water service seems to imply that Toledo will charge its SDC to any development that occurs in Seal Rock and Seal Rock is required to collect Toledo's SDC

and pay it to Toledo. In so doing, Toledo agrees to use the money collected to expand the water system to supply water to future developments in Seal Rock. This interpretation is standard industry practice. As development occurs, it pays a system development charge to pay for capital improvements needed to supply water to the development.

Most municipal wholesale water agreements allow for a pass through of the supplier's SDC to the purchaser's new users. However, there are two complications. First, the amount of water Seal Rock is allowed to purchase is limited to 1,250,000 gpd. It isn't clear from the Toledo's own capital improvement plan, whether the improvements add up to provide Seal Rock up to but not more than 1,250,000 gpd or if it's for more than 1,250,000 gpd. Among other variables, the amount of capacity ultimately utilized by both parties will be determined in the future as development occurs. Second this paragraph concludes with a general statement of intent that goes beyond a mere SDC analysis: "The intent is for each party to pay in proportion to its demand for capital improvements." This charge is more like the first in that it does not specifically define a capital cost, but only requires a knowable amount of revenue be passed from Seal Rock to Toledo.

The agreement is internally contradictory and likely, on close scrutiny, it may not legally handle the establishment and distribution of SDC revenues. It also seems unmanageable particularly if a severe drought occurred and if one community grows much faster than the other. Ownership of the water resource and capital assets is solely that of the City, but Seal Rock has made investments of its own to connect to the system as its long-term water supply. Both Seal Rock and the City would benefit from a more concise agreement. A new agreement likely would benefit the Wright Water District as well though it is not a party to the agreement.

## APPENDIX

DRAFT

Table 12 List of Assets Currently in Use

Component	Life Years	Tag	Asset Description	Date Acquired	Purchase Price	Annual	Accumulated	Net Book Value
Distribution	5	326	Utility tapering tool	1/1/68	\$ 350	70.00	0	-
Distribution	20	332	Pipe threading set	1/1/66	\$ 150	7.50	0	-
System	20	335	Backhoe buckets	1/1/77	\$1,200	60.00	0	-
Source	50	399	Siletz Pump Station	1/1/60	\$70,000	1,400.00	66,536	3,464
WTP	20	405	Jar test	1/1/77	\$ 450	22.50	0	-
Source	50	437	Mill Ck Pump Station	1/1/68	\$27,753	555.06	21,936	5,817
System	10	514	Radio	1/1/84	\$ 450	45.00	0	-
System	10	515	Radio	1/1/84	\$ 450	45.00	0	-
System	10	519	Radio	1/1/84	\$ 450	45.00	0	-
WTP	50	702	Water Treatment Plant assets	1/1/75	\$ 1,400,000	28,000.00	910,422	489,578
WTP	20	702	Valve actuator	6/1/92	\$3,550	177.50	2,678	872
WTP	20	702	Telemetry and chart recorders	12/23/92	\$ 800	40.00	581	219
WTP	20	702	Steel Doors	2/16/93	\$ 520	26.00	374	146
WTP	20	702	Level control system	7/9/93	\$2,290	114.50	1,601	689
WTP	20	702	Treatment Plant Upgrades	1/1/95	\$53,828	2,691.40	33,646	20,182
WTP	20	702	Treatment Plant Upgrades	6/30/98	\$3,891	194.55	1,752	2,139
WTP	50	702	Treatment Plant Upgrades	1/1/99	\$23,985	479.70	4,077	19,908
System	10	719	Compressor	6/12/87	\$7,500	750.00	0	-
System	10	721	Radio	1/1/84	\$ 450	45.00	0	-
Distribution	20	851	Wagon Road pump station	1/1/77	\$28,284	1,414.20	0	-
Reservoir	50	996	Beech Street Reservoir	1/1/60	\$13,000	260.00	12,357	643
Reservoir	50	997	Graham St Reservoir	1/1/69	\$60,000	1,200.00	46,221	13,779
Reservoir	50	998	Ammon Road Reservoir	1/1/69	\$150,000	3,000.00	115,553	34,447
System	10	1032	Radio	5/1/89	\$ 335	33.50	0	-
System	10	1035	Radio	5/1/89	\$ 335	33.50	0	-
System	10	1037	Radio	5/1/89	\$ 335	33.50	0	-
System	10	1076	Sidebox	5/4/90	\$ 334	33.40	0	-
System	10	1077	Sidebox	5/4/90	\$ 333	33.30	0	-

City of Toledo & Seal Rock Water District

Component	Life Years	Tag	Asset Description	Date Acquired	Purchase Price	Annual	Accumulated	Net Book Value
System	10	1111	Gas torch set	9/1/89	\$ 527	52.70	0	-
System	10	1118	90 Ford Ranger 4x2	3/1/90	\$8,830	883.00	0	-
WTP	10	1121	Work stool	7/1/89	\$ 139	13.90	0	-
WTP	10	1122	Chair	7/1/89	\$ 450	45.00	0	-
WTP	10	1123	Chair	7/1/89	\$ 450	45.00	0	-
WTP	10	1124	Printer stand	7/1/89	\$ 166	16.60	0	-
WTP	10	1125	Computer table	7/1/89	\$ 218	21.80	0	-
WTP	20	1126	Desk	7/1/89	\$ 445	22.25	401	44
WTP	10	1131	Lineman test sets	12/1/89	\$ 440	44.00	0	-
WTP	20	1155	Waveform monitor	12/13/89	\$2,036	101.80	1,787	249
System	10	1157	Toolbox	5/22/90	\$ 374	37.40	0	-
System	50	1158	Sideboxes	5/4/90	\$ 330	6.60	113	217
Distribution	20	1187	Hydraulic Pump	5/1/91	\$ 473	23.65	383	90
Distribution	20	1188	Speedshore	6/12/91	\$2,610	130.50	2,096	514
Distribution	10	1189	Pressure test kit	5/1/91	\$ 279	27.90	0	-
Distribution	50	1216	Water lines added in 1986	6/30/86	\$3,593	71.86	1,510	2,083
Transmission	50	1218	Seal Rock Water Line	6/30/73	\$ 1,200,000	24,000.00	816,526	383,474
Distribution	50	1219	Water lines added in 1988	6/30/88	\$13,737	274.74	5,223	8,514
Distribution		1220	Land	6/30/91	\$84,400	-	0	84,400
WTP	10	1231	Floor polisher	8/15/90	\$ 637	63.70	0	-
Distribution	50	1236	A St Water line replacement	8/29/90	\$2,087	41.74	703	1,384
Distribution	50	1237	Additions to system	6/30/89	\$5,097	101.94	1,836	3,261
Source	50	1237	Extension of water line - Mill Ck Road	4/1/91	\$1,468	29.36	477	991
Distribution	50	1239	Water lines, distribution system	1/1/60	\$409,200	8,184.00	388,953	20,247
Source	100	1240	Mill Creek Dam	6/30/68	\$244,000	2,440.00	95,220	148,780
Source	100	1240	Mill Ck Dam repairs	6/30/93	\$22,895	228.95	3,207	19,688
Source	100	1240	Mill Creek Dam repairs & construction	8/1/93	\$61,259	612.59	8,528	52,731
System	20	1289	Air Blower	6/1/92	\$ 360	18.00	272	88
WTP	20	1290	Chlorine analyzer	6/1/92	\$2,200	110.00	1,660	540

Wholesale Water Rates Analysis

City of Toledo & Seal Rock Water District

Component	Life Years	Tag	Asset Description	Date Acquired	Purchase Price	Annual	Accumulated	Net Book Value
Distribution	20	1291	Plastic pipe crimping tool	2/1/92	\$ 126	6.30	97	29
Distribution	10	1292	Pump	6/1/92	\$ 891	89.10	0	-
Source	20	1347	Air valve	4/8/93	\$ 158	7.90	112	46
Distribution	10	1533	Stars software for handheld meter reading	6/5/95	\$3,987	398.70	0	-
Distribution	5	1534	Handheld meter reading device	5/1/95	\$5,670	1,134.00	0	-
Distribution	10	1535	Probe meter reader	5/1/95	\$ 422	42.20	0	-
Planning	5	1539	Water SDC study	2/6/95	\$3,050	610.00	0	-
System	5	1539	Water master plan payment	6/30/98	\$1,048	209.60	0	-
WTP	20	1543	Water level indicator	11/9/94	\$ 216	10.80	137	79
Distribution	20	1544	Pipe locator	10/18/94	\$2,932	146.60	1,863	1,069
WTP	20	1545	Portable colorimeter	10/3/94	\$ 785	39.25	500	285
Distribution	20	1547	Gas detection system	3/21/95	\$1,109	55.45	681	428
Distribution	15	1594	Tapping machine	1/4/96	\$1,392	92.80	1,067	325
Distribution	20	1595	Pneumatic valve exerciser	1/16/96	\$4,323	216.15	2,477	1,846
Distribution	5	1596	Drill rod w/ adapters	4/1/96	\$ 720	144.00	0	-
Distribution	20	1597	Earth Borer	4/1/96	\$2,153	107.65	1,211	942
Distribution	10	1692	Backflow tester	10/7/96	\$ 629	62.90	0	-
WTP	10	1716	Pressure washer	10/7/97	\$2,598	259.80	2,529	69
Distribution	10	1717	Meter replacement program	6/30/98	\$81,681	8,168.10	73,558	8,123
Distribution	10	1717	Meter Upgrades FY 2001	6/30/01	\$10,514	1,051.40	6,311	4,203
Distribution	10	1717	Meter Upgrade program for 02-03	6/30/02	\$5,487	548.70	2,745	2,742
WTP	20	1744	Miox disinfection system	2/4/99	\$36,732	1,836.60	15,438	- Exclude
Source	20	1745	Reroof Siletz Pump Station	1/6/99	\$5,620	281.00	2,384	- Exclude
Source	10	1787	Rebuild pumps	12/30/99	\$13,966	1,396.60	10,480	- Exclude
WTP	20	1789	Water Treatment Plant Upgrades for FY 99-00	6/30/00	\$66,123	3,306.15	23,152	- Exclude
WTP	20	1789	Water Plant Renewal	6/30/01	\$418,418	20,920.90	125,583	- Exclude
WTP	10	1789	Water Plant Renewal	6/30/02	\$8,673	867.30	4,339	- Exclude

Wholesale Water Rates Analysis

City of Toledo & Seal Rock Water District

Component	Life Years	Tag	Asset Description	Date Acquired	Purchase Price	Annual	Accumulated	Net Book Value
Source	20	1790	Generator	5/17/00	\$22,745	1,137.25	8,101	- Exclude
Source	20	1790	Generator	5/17/00	\$22,745	1,137.25	8,101	- Exclude
WTP	20	1809	Water system upgrades for FY99-00	6/30/00	\$41,002	2,050.10	14,356	26,646
WTP	10	1822	Rebuild backwash pump	5/17/00	\$6,990	699.00	4,979	2,011
Distribution	5	1824	Handheld touch read unit	12/6/00	\$4,825	965.00	0	-
Source	10	10005	Environmental Review - Mill Creek Water Line replacement	6/30/02	\$21,190	2,119.00	10,601	- Exclude
Source	10	10005	Preliminary Design - Mill Creek Water Line Replacement	6/30/02	\$42,486	4,248.60	21,255	- Exclude
WTP	10	10005	Mill Creek water line replacement environmental review	6/30/03	\$2,703	270.30	1,082	- Exclude
WTP	10	10005	Mill Creek water line replacement preliminary design	6/30/03	\$4,359	435.90	1,745	- Exclude
WTP	10	10008	Refurbish pump	9/18/02	\$9,040	904.00	4,324	- Exclude
Reservoir	5	10009	Reservoir tank study and report	11/20/02	\$1,997	399.40	1,842	- Exclude
Distribution	50	New	4 to 6 increase in water line on elm Street	7/1/04	\$9,406	188.12	564	8,842
Source	10	New	Mill Creek Pump Station	9/30/03	\$15,193	1,519.28	5,698	9,495
Source	10	10020	Pump station feasibility	7/1/04	\$6,280	628.00	1,882	- Exclude
Source	15	10021	Rebuild Siletz Intake Pump	7/1/04	\$5,700	380.00	1,139	- Exclude
System	15	New	1994 John Deere Backhoe	8/30/94	\$53,000	3,533.33	45,372	7,628
System	15	New	1994 John Deere Backhoe	7/31/03	\$17,850	1,190.00	4,662	13,188
Distribution	50	Replace	Water line @ Hwy 20	7/31/04	\$5,000	100.00	292	4,708
WTP	10	Rebuild	water pump	7/31/06	\$8,300	830.00	760	7,540
Distribution	10	Chlorine	Analyzer	07/31/06	\$2,900	290	265	2,635
WTP	5	Computer		07/31/06	\$ 690	138	126	564
Totals					\$ 4,903,197	143,562	2,958,439	1,422,621

Wholesale Water Rates Analysis

2005 List of Capital Assets

Component	Life Years	Tag	Asset Description	Date Acquired	Purchase Price	Depreciation		Net Book Value
						Annual	Accumulated	
Distribution	5	326	Utility tapering tool	1/1/68	350	70.00	0	-
Distribution	20	332	Pipe threading set	1/1/66	150	7.50	0	-
System	20	335	Backhoe buckets	1/1/77	1,200	60.00	0	-
Source	50	399	Siletz Pump Station	1/1/60	70,000	1,400.00	63,736	6,264
WTP	20	405	Jar test	1/1/77	450	22.50	0	- Exclude
Source	50	437	Mill Ck Pump Station	1/1/68	27,753	555.06	20,826	6,927
System	10	514	Radio	1/1/84	450	45.00	0	-
System	10	515	Radio	1/1/84	450	45.00	0	-
System	10	519	Radio	1/1/84	450	45.00	0	-
WTP	50	702	Water Treatment Plant assets	1/1/75	1,400,000	28,000.00	854,422	545,578
WTP	20	702	Valve actuator	6/1/92	3,550	177.50	2,323	1,227
WTP	20	702	Telemetry and chart recorders	12/23/92	800	40.00	501	299
WTP	20	702	Steel Doors	2/16/93	520	26.00	322	198
WTP	20	702	Level control system	7/9/93	2,290	114.50	1,372	918
WTP	20	702	Treatment Plant Upgrades	1/1/95	53,828	2,691.40	28,263	25,565
WTP	20	702	Treatment Plant Upgrades	6/30/98	3,891	194.55	1,363	2,528
WTP	50	702	Treatment Plant Upgrades	1/1/99	23,985	479.70	3,117	20,868
System	10	719	Compressor	6/12/87	7,500	750.00	0	-
System	10	721	Radio	1/1/84	450	45.00	0	-
Distribution	20	851	Wagon Road pump station	1/1/77	28,284	1,414.20	0	- Exclude

Wholesale Water Rates Analysis



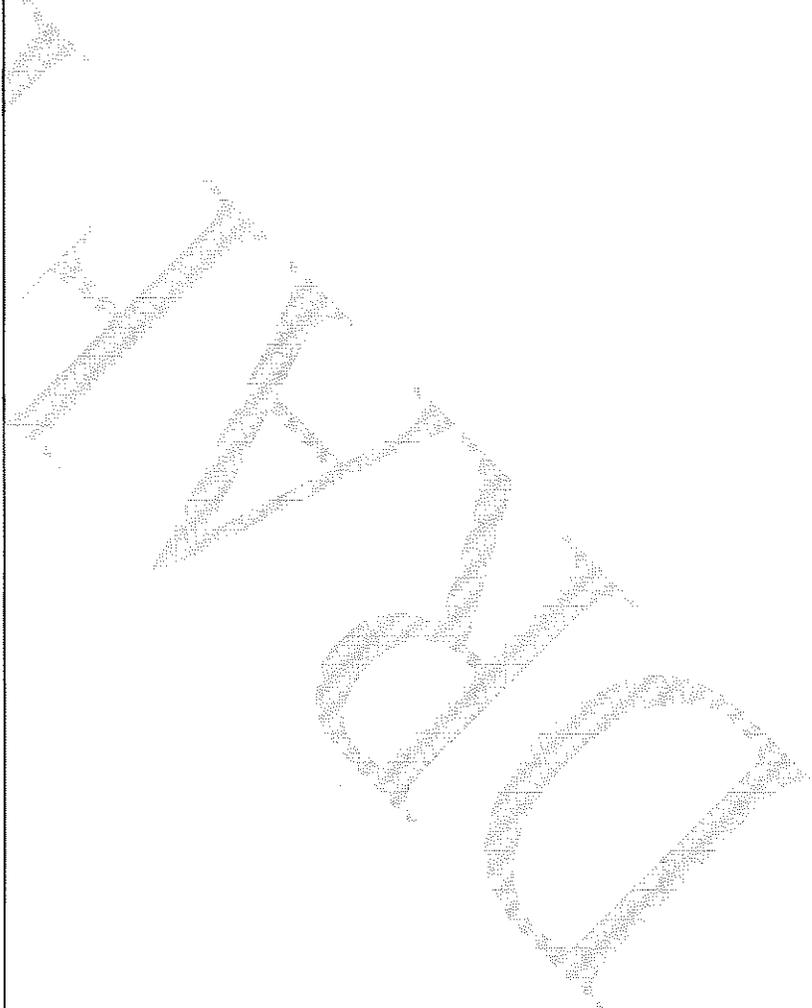


City of Toledo & Seal Rock Water District

WTP	10	1716	Pressure washer	10/7/97	2,598	259.80	2,009	589
Distribution	10	1717	Meter replacement program	6/30/98	81,681	8,168.10	57,221	24,460 Exclude
Distribution	10	1717	Meter Upgrades FY 2001	6/30/01	10,514	1,051.40	4,208	6,306 Exclude
Distribution	10	1717	Meter Upgrade program for 02-03	6/30/02	5,487	548.70	1,648	3,839 Exclude
WTP	20	1744	Miox disinfection system	2/4/99	36,752	1,836.60	11,764	24,968 Exclude
Source	20	1745	Reroof Siletz Pump Station	1/6/99	5,620	281.00	1,822	3,798 Exclude
Source	10	1787	Rebuild pumps	12/30/99	13,966	1,396.60	7,687	6,279 Exclude
WTP	20	1789	Water Treatment Plant Upgrades for FY 99-00	6/30/00	66,123	3,306.15	16,540	49,583 Exclude
WTP	20	1789	Water Plant Renewal	6/30/01	418,418	20,920.90	83,741	334,677 Exclude
WTP	10	1789	Water Plant Renewal	6/30/02	8,673	867.30	2,604	6,069 Exclude
Source	20	1790	Generator	5/17/00	22,745	1,137.25	5,826	16,919 Exclude
Source	20	1790	Generator	5/17/00	22,745	1,137.25	5,826	16,919 Exclude
WTP	20	1809	Water system upgrades for FY99-00	6/30/00	41,002	2,050.10	10,256	30,746
WTP	10	1822	Rebuild backwash pump	5/17/00	6,990	699.00	3,581	3,409
Distribution	5	1824	Handheld touch read unit	12/6/00	4,825	965.00	4,407	418 Exclude
Source	10	10005	Environmental Review - Mill Creek Water Line replacement	6/30/02	21,190	2,119.00	6,363	14,827 Exclude
Source	10	10005	Preliminary Design - Mill Creek Water Line Replacement	6/30/02	42,486	4,248.60	12,757	29,729 Exclude
WTP	10	10005	Mill Creek water line replacement environmental review	6/30/03	2,703	270.30	541	2,162 Exclude
WTP	10	10005	Mill Creek water line replacement preliminary design	6/30/03	4,359	435.90	873	3,486 Exclude
WTP	10	10008	Refurbish pump	9/18/02	9,040	904.00	2,516	6,524 Exclude
Reservoir	5	10009	Reservoir tank study and report	11/20/02	1,997	399.40	1,043	954 Exclude
Distribution	50	New	4 to 6 increase in water line on elm Street	7/1/04	9,406	188.12	188	9,218
Source	10	New	Mill Creek Pump Station	9/30/03	15,193	1,519.28	2,660	12,533
Source	10	10020	Pump station feasibility	7/1/04	6,280	628.00	626	5,654 Exclude
Source	15	10021	Rebuild Siletz Intake Pump	7/1/04	5,700	380.00	379	5,321 Exclude
System	15	New	1994 John Deere Backhoe	8/30/94	53,000	3,533.33	38,305	14,695
System	15	New	1994 John Deere Backhoe	7/31/03	17,850	1,190.00	2,282	15,568

Wholesale Water Rates Analysis

Totals	\$ 4,886,307	142,204	2,692,558	2,124,395
Less Excluded Assets	(1,343,960)	(64,539)	(669,213)	(635,719)
Net of Excluded Assets	\$ 3,542,347	\$ 77,665	\$ 2,023,345	\$ 1,488,676



DRAFT

Wholesale Water Rates Analysis

---

