

WASTEWATER WHOLESALE RATE STUDY FY22 and FY23

Billings, MT

March 26, 2021

Executive Summary

The City of Billings, Montana (City) provides municipal wastewater service to its citizens, businesses, and industries. In addition to this retail wastewater service, the City provides wholesale wastewater service to the Phillips 66 Refinery (P66), ExxonMobil Refinery (Exxon), and the Lockwood Water and Sewer District (Lockwood). AE2S Nexus was retained to update the City’s wholesale rate model. Consistent with the contractual provisions for the individual users, a utility-basis cost of service model is used to identify cost of service based rates for Fiscal Year 2022 (FY22) as well as Fiscal Year 2023 (FY23) for P66, Exxon, and Lockwood.

The analysis resulted in the recommended cost of service rates as outlined in Tables ES.1, ES.2, and ES.3. In general, the variability in rate changes between the wholesale users is due to changes in discharges. Both refineries are seeing increases in total revenue requirements resulting from an increase in the strength they are discharging into the system. Exxon’s proposed reduction in discharges to the system also results in volumetric costs being spread over lower volumes, driving up slightly the volumetric rates. Other changes to total revenue requirements result from the final capitalization of assets into the asset base.

**Table ES.1:
Proposed ExxonMobil Wastewater Rate**

	Current	FY22	FY23
Fixed, \$/mo	\$24,200	\$32,283	\$34,528
Variable, \$/kgal	\$0.386	\$0.709	\$0.733

**Table ES.2:
Proposed Lockwood Wastewater Rate**

	Current	FY22	FY23
Fixed, \$/mo	\$26,868	\$23,582	\$25,239
Variable, \$/ kgal	\$1.084	\$1.466	\$1.514

**Table ES.3:
Proposed Phillips 66 Wastewater Rate**

	Current	FY22	FY23
Fixed, \$/mo	\$19,388	\$22,608	\$24,233
Variable, \$/ kgal	\$0.647	\$0.985	\$1.017

1.0 Introduction

AE2S Nexus was retained by the City of Billings (City) to calculate wholesale wastewater rates for wholesale customers of the City's wastewater system for Fiscal Year 2022 (FY22) and Fiscal Year 2023 (FY23), which begins July 1 and ends June 30. The three wholesale customers connected to the City's wastewater system are Lockwood Water and Sewer District (Lockwood), ExxonMobil (Exxon), and Phillips 66 Refinery (P66).

The City's wholesale rates are set by a comprehensive rate model based on standard industry rate setting methodology and practices using a Utility-Basis approach for calculating cost of service rates. The overall process is generally dictated by the contractual agreements between the City and wholesale wastewater customers with an established minimum return on equity of 15 percent. Consistent with these agreements, a 15 percent rate of return was utilized in the FY22 and FY23 rate model update for the establishment of capital related revenue requirements.

This report provides additional details on the methodology used in determining the rate for wholesale wastewater customers and summarizes the following topics:

- Wastewater system usage parameters (Section 2.0);
- Projected revenue requirements and associated assumptions (Section 3.0);
- Allocation of operating and capital-related revenue requirements (Section 4.0); and
- Calculated costs of service by user class and recommended FY22 and FY23 wastewater rates (Section 5.0).

2.0 Customers and Usage

The City owns and operates its wastewater treatment and conveyance facilities serving nearly 35,000 retail utility accounts across the City and outside city users. In addition to retail accounts, the City has contractual relationships with three wholesale users, P66, Exxon, and Lockwood, to provide wastewater service. The customer makeup, volume of wastewater flow, and strength characteristics of the wastewater for these utility accounts in large part determines how costs are allocated across different user classes. Tables 2.1 and 2.2 show the projected utility accounts across the varying customer types and the associated equivalent meters for FY22 and FY23, respectively. Growth rates are held consistent with the retail wastewater model. The equivalent meter counts provided are on a 3/4-inch meter basis as the City’s standard residential meter size is 3/4”.

**Table 2.1:
FY22 Customer Accounts**

Meter Size	Residential	Residential - Large	Commercial - Domestic	Public Buildings - Domestic	Outside City	Industrial	Total
3/4-Inch	31,321	415	1,328	14	11	0	33,089
1-Inch	384	298	366	5	5	0	1,057
1-1/2-Inch	28	140	266	15	-	0	449
2-Inch	-	65	135	21	1	0	222
3-Inch	6	36	72	24	1	0	139
4-Inch	1	18	16	5	1	0	41
6-Inch	-	23	11	4	-	0	38
8-Inch	-	4	2	2	1	0	9
10-Inch	-	-	-	-	-	0	-
12-Inch	-	1	-	-	-	0	1
Total	31,740	1,001	2,196	91	20	0	35,048
Equivalent Meters	31,880	1,770	2,961	283	51	0	36,945

**Table 2.2:
FY23 Customer Accounts**

Meter Size	Residential	Residential - Large	Commercial - Domestic	Public Buildings - Domestic	Outside City	Industrial	Total
3/4-Inch	31,477	417	1,335	14	11	0	33,254
1-Inch	386	299	367	5	5	0	1,062
1-1/2-Inch	28	141	267	15	-	0	451
2-Inch	-	65	136	21	1	0	223
3-Inch	6	37	72	24	1	0	140
4-Inch	1	18	16	5	1	0	41
6-Inch	-	23	11	4	-	0	38
8-Inch	-	4	2	2	1	0	9
10-Inch	-	-	-	-	-	0	-
12-Inch	-	-	-	-	-	0	-
Total	31,898	1,004	2,206	90	20	0	35,218
Equivalent Meters	32,038	1,771	2,970	281	51	0	37,110

FY22 and FY23 flows by customer class are shown in Table 2.3 including allocation of Inflow/Infiltration (I/I) by customer class. Minimal BOD, TSS, or TKN is presumed for I/I. In calculating these flows, reserve capacity was established for Lockwood based on their agreement and no reserve capacity was set aside for P66 or Exxon. Baseline flow contributions for Lockwood are set at 0.15 MGD based on billing history. P66 is set at 0.96 MGD based on billing history. Exxon is set at 2.1 MGD based on actual billings since the last update. The 2.1 MGD flow rate for Exxon is only used to allocate capital and capacity costs associated with the system. Operating costs for Exxon are allocated based on reduced flow rates of 356 MG annual discharge, consistent with the April through November discharges anticipated in the coming year. All three wholesale users are allocated no share of I/I in consideration of metered service of all contributed flow.

Modeled loadings for each wholesale user are consistent with sampling reports and generally average recorded strengths since connection and discharge to the system. However, Lockwood strength loadings current tracked in sampling reports are diluted with flows from Exxon, as a result Lockwood’s modeled loadings are consistent with the historical averages used in previous modeling efforts. Concentrations and loadings by customer class are shown in Table 2.4 and Table 2.5. Contributed TKN for retail users was adjusted to 45 mg/L based on updated loading information. Wholesale user flows are kept constant between FY22 and FY23 while retail customer flows included estimated growth. All customer account, customer flow, concentrations, and loadings are consistent with the Test Year assumptions made for the FY22-FY23 Wastewater Retail Rate model.

**Table 2.3:
Annual Customer Flows**

Customer Class	Fiscal Year 2022			Fiscal Year 2023		
	Contributed Flow (MG)	I/I (MG)	Total (MG)	Contributed Flow (MG)	I/I (MG)	Total (MG)
Residential	1,528	2,268	3,795	1,535	2,257	3,792
Residential - Large	581	862	1,443	584	858	1,441
Commercial - Domestic	910	1,351	2,261	915	1,345	2,259
Public Buildings - Domestic	79	117	196	79	117	196
Outside City	40	59	100	40	59	99
Lockwood	56	0	56	56	0	56
Lockwood Reserve	210	0	210	209	0	209
Retail Reserve Capacity	6,189	0	6,189	6,167	0	6,167
Phillips 66	352	0	352	352	0	352
ExxonMobil	776*	0	776	776	0	776
Total	10,720	4,658	15,378	10,720	4,635	15,355

*776MG was used for capital/capacity allocations. O&M allocations based on 356MG.

**Table 2.4:
FY22 Average Daily Concentrations (mg/L) and Calculated Annual Loadings (lbs)**

Customer Class	BOD – Capacity (mg/L)	TSS – Capacity (mg/L)	TKN – Capacity (mg/L)	lbs. of BOD	lbs. of TSS	lbs. of TKN
Residential	200	200	45	2,833,657	2,833,657	857,584
Residential – Large	200	200	45	1,077,053	1,077,053	325,962
Commercial - Domestic	200	200	45	1,688,322	1,688,322	510,958
Public Buildings - Domestic	200	200	45	146,561	146,561	44,356
Outside City	200	200	45	74,310	74,310	22,489
Lockwood & Lockwood Reserve*	170	88	48	375,908	195,704	107,332
Retail Reserve Capacity	200	200	45	10,329,978	10,329,978	2,324,245
Phillips 66	46	147	25	134,254	431,775	73,940
ExxonMobil**	47	39	15	305,868	255,164	98,672
Total				16,965,911	17,032,524	4,365,538

*Lockwood Reserve is not allocated any strength charges for O&M allocations as they are allocated their share of capital costs only.

**ExxonMobil O&M allocations based on identified strengths at reduced 356MG flows.

**Table 2.5:
FY23 Average Daily Concentrations (mg/L) and Calculated Annual Loadings (lbs)**

Customer Class	BOD - Capacity	TSS - Capacity	TKN – Capacity	lbs. of BOD	lbs. of TSS	lbs. of TKN
Residential	200	200	45	2,845,450	2,845,450	859,494
Residential – Large	200	200	45	1,081,565	1,081,565	326,697
Commercial - Domestic	200	200	45	1,695,345	1,695,345	512,095
Public Buildings - Domestic	200	200	45	147,180	147,180	44,457
Outside City	200	200	45	74,619	74,619	22,539
Lockwood & Lockwood Reserve*	170	88	48	375,908	195,704	107,332
Retail Reserve Capacity	200	200	45	10,329,978	10,329,978	2,324,245
Phillips 66	46	147	25	134,254	431,775	73,940
ExxonMobil**	47	39	15	305,868	255,164	98,672
Total				16,963,945	17,030,558	4,363,572

*Lockwood Reserve is not allocated any strength charges for O&M allocations as they are allocated their share of capital costs only.

**ExxonMobil O&M allocations based on identified strengths at reduced 356MG flows.

3.0 Revenue Requirements

Revenue requirements are defined as the amount of revenues required to fully fund operations and maintenance (O&M) requirements as well as capital-related expenses. A financially sustainable utility will work to ensure that all identified revenue requirements are covered by revenues through either non-rate revenues or user charges. While capital revenue requirements can be generally calculated using either the cash-basis approach or the utility-basis approach, O&M are generally based on budgeted or planned expenditures for the given rate year. The contractually agreed upon method for calculating wholesale user capital requirements is the utility-basis approach. Using the utility-basis for rate setting, capital-related expenses are calculated based on asset depreciation and on the established rate of return on capital assets.

3.1 Operations and Maintenance

O&M is considered all expenses associated with the actual running of the wastewater collection and treatment system. O&M expenses include costs with operating the system as well as maintaining the collection and treatment system in good working order. Specific costs include administrative, billing and collections, electricity and chemical, compliance costs, and others.

While O&M expenses are a portion of total revenue requirements, all O&M expenses are not applied to revenue requirements. Non-rate revenue is subtracted from O&M expenses before they are applied to total revenue requirements needed from rates. Non-rate revenues include sewer permits, sale of material/labor, miscellaneous revenue, collection of bad debt, wastewater supply, and charge for services. Table 3.1 summarizes O&M expenses, non-rate revenues applied, and the resulting net O&M related revenue requirements. Consistent with previous analyses, wastewater treatment, and collection system costs (note: collection system costs are primarily allocated to non-wholesale users) are allocated on a fully variable basis using contributed flows to apportion these costs. Environmental affairs costs were allocated evenly on a variable (flow) basis and a fixed (meter) basis. Customer costs are allocated on a fully fixed (meter) basis.

FY22 O&M expenses are based on preliminary budget projections with FY23 inflated at approximately 4 percent from FY22 baseline costs (less one-time budgetary requests).

**Table 3.1:
O&M Related Revenue Requirements**

Line Item	Fiscal Year 2022			Fiscal Year 2023		
	Total	Fixed	Variable	Total	Fixed	Variable
Administrative	\$1,862,847	\$1,862,847	\$0	\$2,094,921	\$2,094,921	\$0
Utility Commercial & Meter	\$72,160	\$72,160	\$0	\$75,046	\$75,046	\$0
Wastewater Treatment	\$6,147,162	\$0	\$6,147,162	\$6,393,048	\$0	\$6,393,048
Distribution & Collection	\$1,630,262	\$0	\$1,630,262	\$1,695,472	\$0	\$1,695,472
Environmental Affairs	\$476,160	\$238,080	\$238,080	\$495,206	\$247,603	\$247,603
O&M Total	\$10,188,591	\$2,173,087	\$8,015,504	\$10,753,695	\$2,417,570	\$8,336,124
Less: Non-Rate O&M Revenue	-\$370,920	-\$370,920	\$0	-\$370,920	-\$370,920	\$0
Total O&M Revenue Requirement	\$9,817,671	\$1,802,167	\$8,015,504	\$10,382,775	\$2,046,650	\$8,336,124

3.2 Capital Costs

Consistent with the negotiated wholesale user agreements, this wholesale rate analysis uses the utility-basis for calculating capital costs. Under this approach, capital costs for wholesale are calculated by identifying the rate of return and then applying that rate of return to the net assets of the system (i.e., the undepreciated value of the system). Owner capital costs are simply the difference between the identified cash-based net capital costs and the identified wholesale user specific capital costs (arrived at through the utility method). As the Owner rates are not calculated through this model, the capital costs attributable to those user classes have little to no bearing on the resulting wholesale capital costs.

Before any rate of return can be applied to the net assets of the system (or net system value), net system value must be calculated. Often referred to as net plant in service (NPIS), the system value is determined by identifying the assets in service by the end of FY20 and then adding the assets expected to be placed in service by the end of FY21. The calculated FY22 NPIS totals \$173 Million. The calculated FY23 NPIS totals \$182.6 Million. Table 3.2 outlines the fixed assets and depreciation resulting in the current NPIS. FY23 depreciation increases based on fully capitalizing the WWTF expansion and incorporating preliminary depreciation figures into the model.

**Table 3.2:
Fixed Assets and Depreciation by Functional Category**

	FY22 Ratebase	FY22 Depreciation	FY23 Ratebase	FY23 Depreciation
Collection	\$47,745,671	\$1,130,896	\$49,998,470	\$1,205,734
Trunks/ Interceptors	\$30,019,968	\$728,237	\$31,418,008	\$775,321
Lift Stations	\$2,985,511	\$94,064	\$3,099,854	\$98,741
Common Conveyance	\$611	\$82	\$529	\$82
Preliminary Treatment	\$9,335,858	\$154,034	\$9,853,641	\$168,755
Lab	\$105,348	\$15,803	\$93,875	\$15,930
Primary Treatment	\$5,113,301	\$91,113	\$5,392,164	\$99,242
Secondary Treatment	\$6,228,690	\$258,511	\$6,403,406	\$268,008
Residuals	\$1,150,792	\$77,934	\$1,140,776	\$79,557
Disinfection/Outfall	\$6,548,311	\$121,061	\$6,897,822	\$131,406
Secondary Treatment – Nutrient Removal	\$63,792,335	\$217,809	\$68,279,272	\$318,827
Customer	\$532	\$18	\$550	\$19
Exclude From Ratebase	\$0	\$0	\$0	\$0
Indirect	\$0	\$0	\$0	\$0
	\$173,026,928	\$2,889,562	\$182,578,368	\$3,161,622

Once identified, NPIS is then allocated across customer classes based on ownership and functional cost component. The methodology used to allocate ownership remains consistent with previous wholesale rate analyses for the City. P66 was allocated a portion of the treatment system assets consistent with P66’s proportional share of the overall flow and strength loading of the treatment system. Similarly, P66 was allocated a proportional share of the collection system consistent with the assets used to convey wastewater through City trunk lines from P66 to the WWTP. P66’s allocated share of the collection system is limited to the infrastructure utilized for conveyance of wastewater.

For Lockwood and Exxon, no sole proportion of the NPIS was identified, nor were any collection system related costs as they connect directly to the WWTP (near the headworks of the facility) through non-City assets. Exxon is allocated their proportionate share of treatment assets consistent with Exxon’s proportional share of flow, strength loading, and conveyance in each portion of the system. The allocation of capital requirements for Lockwood, Exxon, and P66 are shown in Table 3.3. The allocation of NPIS and depreciation is then used to calculate the utility-basis of capital costs for all wholesale users. For this analysis, the rate of return is set at the established minimum of 15 percent for P66, Exxon, and Lockwood. Table 3.4 identifies the calculated capital costs.

**Table 3.3:
Allocation of Net Plant in Service and Depreciation Expenses**

Ownership	FY22 Net Fixed Assets	FY22 Depreciation Expense	FY23 Net Fixed Assets	FY23 Depreciation Expense
Joint				
Retail	\$86,690,473	\$879,185	\$92,124,223	\$1,015,805
Lockwood	\$1,719,835	\$16,453	\$1,829,485	\$19,172
Exxon	\$2,320,250	\$24,533	\$2,466,099	\$28,209
P66	\$1,544,688	\$16,177	\$1,641,679	\$18,621
Subtotal- Joint	\$92,275,246	\$936,347	\$98,061,485	\$1,081,807
Retail Only	\$80,740,846	\$1,952,952	\$84,505,540	\$2,079,535
Lockwood Only	\$0	\$0	\$0	\$0
P66 Only	\$10,837	\$263	\$11,342	\$280
Total	\$173,026,928	\$2,889,562	\$182,578,368	\$3,161,622
Retail Subtotal	\$167,431,319	\$2,832,136	\$176,629,764	\$3,095,340
Lockwood Subtotal	\$1,719,835	\$16,453	\$1,829,485	\$19,172
Exxon Subtotal	\$2,320,250	\$24,533	\$2,466,099	\$28,209
P66 Subtotal	\$1,555,525	\$16,440	\$1,653,020	\$18,901

**Table 3.4:
FY22 Utility Basis Capital Costs**

	P66	Lockwood	Exxon
Total NPIS	\$1,555,525	\$1,719,835	\$2,320,250
Additional Allowance for Working Capital	\$24,843	\$27,467	\$37,057
Total Rate Base	\$1,580,368	\$1,747,302	\$2,357,307
Rate of Return	15%		
Rate Base Capital Costs	\$237,055	\$262,095	\$353,596
Depreciation Costs	\$16,440	\$16,453	\$24,533
Total Wholesale Capital Costs	\$253,495	\$278,548	\$378,129
Residual Owner Capital Costs	\$19,963,584		

**Table 3.5:
FY23 Utility Basis Capital Costs**

	P66	Lockwood	Exxon
Total NPIS	\$1,653,020	\$1,829,485	\$2,466,099
Additional Allowance for Working Capital	\$25,755	\$28,504	\$38,423
Total Rate Base	\$1,678,775	\$1,857,989	\$2,504,521
Rate of Return	15%		
Rate Base Capital Costs	\$251,816	\$278,698	\$375,678
Depreciation Costs	\$18,901	\$19,172	\$28,209
Total Wholesale Capital Costs	\$270,717	\$297,870	\$403,887
Residual Owner Capital Costs	\$14,966,212		

3.3 Revenue Requirements

Total revenue requirements are the combination of O&M related expenses and capital related expenses. Table 3.6 and Table 3.7 detail the total revenue requirements by wholesale user and retail user.

**Table 3.6:
FY22 Revenue Requirements**

Ownership	Operating Costs	Capital Costs	Total
Retail	\$9,069,234	\$19,963,584	\$29,032,818
Lockwood & Lockwood Reserve	\$86,479	\$278,548	\$365,027
P66	\$364,419	\$253,495	\$617,914
Exxon	\$264,040	\$378,129	\$642,168
Total	\$9,784,171	\$15,166,274	\$30,657,927

**Table 3.7:
FY23 Revenue Requirements**

Ownership	Operating Costs	Capital Costs	Total
Retail	\$9,606,485	\$14,966,212	\$24,572,697
Lockwood & Lockwood Reserve	\$89,724	\$297,870	\$387,594
P66	\$378,098	\$270,717	\$648,815
Exxon	\$273,627	\$403,887	\$677,514
Total	\$10,347,935	\$19,910,277	\$26,286,621

4.0 Allocations

4.1 Customer Class Allocations

In order to identify the cost of service for customer classes, the revenue requirements in Section 3 must first be allocated to the customer classes themselves. This analysis identifies three sets of customer service allocations: fixed O&M, variable O&M, and capital (to include depreciation and NPIS). The resulting allocations are based on, in part, how reserve capacity and I/I for the various user classes are allocated to overall costs. P66 and Exxon are not allocated any reserve capacity or I/I. Lockwood is allocated reserve capacity, but not I/I. Flow percentages are based on the projected customer class wastewater flow compared to total projected flow & retail reserve capacity. BOD, TSS, and TKN percentages are based on the projected customer class specific loadings compared to the total projected loadings & the excess capacity reserved for retail.

4.2 O&M Allocations

In addition to allocating revenue requirements among customer class, O&M expenses must also be allocated along functional cost components. O&M costs are spread based on how flow-, BOD-, TSS-, and TKN-related costs are incurred throughout the system. Table 4.1 and Table 4.2 outline the breakdown in allocation across these functional categories.

**Table 4.1:
FY22 O&M Cost by Functional Category**

Line Item	Total	Flow-Use	BOD-Use	TSS-Use	TKN-Use
Collection	\$798,381	\$798,381	\$0	\$0	\$0
Trunks/ Interceptors/ Common Conveyance	\$480,625	\$480,625	\$0	\$0	\$0
Lift Stations	\$317,756	\$317,756	\$0	\$0	\$0
Preliminary Treatment	\$491,773	\$491,773	\$0	\$0	\$0
Lab	\$59,520	\$0	\$19,840	\$19,840	\$19,840
Primary / Secondary Treatment	\$1,229,432	\$245,886	\$614,716	\$368,830	\$0
Secondary / Strength Components	\$4,425,957	\$663,444	\$1,696,069	\$969,936	\$1,096,508
Customer	\$178,560	\$68,598	\$53,330	\$31,088	\$25,544
Indirect	\$0	\$0	\$0	\$0	\$0
Total O&M Revenue Requirement	\$7,982,004	\$3,066,463	\$2,383,955	\$1,389,693	\$1,141,892

**Table 4.2:
FY23 O&M Cost by Functional Category**

Line Item	Total	Flow-Use	BOD-Use	TSS-Use	TKN-Use
Collection	\$830,316	\$830,316	\$0	\$0	\$0
Trunks/ Interceptors/ Common Conveyance	\$499,850	\$499,850	\$0	\$0	\$0
Lift Stations	\$330,466	\$330,466	\$0	\$0	\$0
Preliminary Treatment	\$511,444	\$511,444	\$0	\$0	\$0
Lab	\$61,901	\$0	\$20,634	\$20,634	\$20,634
Primary / Secondary Treatment	\$1,278,610	\$255,722	\$639,305	\$383,583	\$0
Secondary / Strength Components	\$4,602,995	\$689,982	\$1,763,912	\$1,008,733	\$1,140,368
Customer	\$185,702	\$71,342	\$55,463	\$32,331	\$26,566
Indirect	\$0	\$0	\$0	\$0	\$0
Total O&M Revenue Requirement	\$8,115,582	\$3,189,122	\$2,479,314	\$1,445,281	\$1,187,568

4.3 Capital Cost Allocations

Like the allocation of O&M costs, NPIS capital costs must be allocated across the various cost components and the functional category as they relate to flow and strength. Table 4.3 and Table 4.4 outline the allocation of NPIS based on the functional components.

**Table 4.3:
FY22 Allocation of Net Plant in Service by Functional Category**

Category	Total	Flow - Capacity	BOD - Capacity	TSS - Capacity	TKN - Capacity
Collection	\$47,745,671	\$47,745,671	\$0	\$0	\$0
Trunks/ Interceptors/Common Conveyance	\$30,020,580	\$30,020,580	\$0	\$0	\$0
Lift Stations	\$2,985,511	\$2,985,511	\$0	\$0	\$0
Preliminary Treatment	\$9,335,858	\$1,867,172	\$1,867,172	\$5,601,515	\$0
Lab	\$105,348	\$0	\$35,116	\$35,116	\$35,116
Primary Treatment	\$5,113,301	\$1,022,660	\$1,022,660	\$3,067,981	\$0
Secondary Treatment	\$6,228,690	\$1,245,738	\$3,114,345	\$1,868,607	\$0
Residuals	\$1,150,792	\$0	\$805,554	\$345,237	\$0
Effluent/ Outfall	\$6,548,311	\$6,548,311	\$0	\$0	\$0
Secondary Treatment – Nutrient Removal	\$63,792,335	\$9,562,371	\$24,445,839	\$13,979,907	\$15,804,217
Customer	\$532	\$311	\$96	\$77	\$49
Indirect	\$0	\$0	\$0	\$0	\$0
Total Fixed Asset	\$173,026,928	\$100,998,325	\$31,290,782	\$24,898,440	\$15,839,382

**Table 4.4:
FY23 Allocation of Net Plant in Service by Functional Category**

Category	Total	Flow - Capacity	BOD - Capacity	TSS - Capacity	TKN - Capacity
Collection	\$49,998,470	\$49,998,470	\$0	\$0	\$0
Trunks/ Interceptors/Common Conveyance	\$31,418,536	\$31,418,536	\$0	\$0	\$0
Lift Stations	\$3,099,854	\$3,099,854	\$0	\$0	\$0
Preliminary Treatment	\$9,853,641	\$1,970,728	\$1,970,728	\$5,912,185	\$0
Lab	\$93,875	\$0	\$31,292	\$31,292	\$31,292
Primary Treatment	\$5,392,164	\$1,078,433	\$1,078,433	\$3,235,298	\$0
Secondary Treatment	\$6,403,406	\$1,280,681	\$3,201,703	\$1,921,022	\$0
Residuals	\$1,140,776	\$0	\$798,543	\$342,233	\$0
Effluent/ Outfall	\$6,897,822	\$6,897,822	\$0	\$0	\$0
Nitrification	\$68,279,272	\$10,234,956	\$26,165,277	\$14,963,207	\$16,915,833
Customer	\$550	\$320	\$100	\$80	\$51
Indirect	\$0	\$0	\$0	\$0	\$0
Total Fixed Asset	\$182,578,368	\$105,979,801	\$33,246,076	\$26,405,316	\$16,947,175

Applying the rate of return to the NPIS results in capital costs associated with the current rate base. Table 4.5 and Table 4.6 outline these rate base capital costs (excluding depreciation) allocated across the same functional categories for FY22 and FY23, respectively.

**Table 4.5:
FY22 Rate Base Capital Costs by Functional Category**

	Flow - Capacity	BOD - Capacity	TSS - Capacity	TKN - Capacity	Total
Collection	\$4,885,301	\$0	\$0	\$0	\$4,885,301
Trunks / Interceptors / Common Conveyance	\$3,072,229	\$0	\$0	\$0	\$3,072,229
Lift Stations	\$305,475	\$0	\$0	\$0	\$305,475
Preliminary Treatment	\$199,239	\$195,545	\$587,679	\$0	\$199,239
Lab	\$0	\$3,678	\$3,684	\$3,706	\$0
Primary Treatment	\$109,124	\$107,101	\$321,875	\$0	\$109,124
Secondary Treatment	\$132,928	\$326,159	\$196,044	\$0	\$132,928
Residuals	\$0	\$84,364	\$36,220	\$0	\$0
Effluent/ Outfall	\$698,746	\$0	\$0	\$0	\$698,746
Nitrification	\$1,020,365	\$2,560,160	\$1,466,692	\$1,667,826	\$1,020,365
Customer	\$32	\$10	\$8	\$5	\$32
Indirect	\$0	\$0	\$0	\$0	\$0
Total	\$10,423,440	\$3,277,016	\$2,612,201	\$1,671,537	\$17,984,194

**Table 4.6:
FY23 Rate Base Capital Costs by Functional Category**

	Flow - Capacity	BOD - Capacity	TSS - Capacity	TKN - Capacity	Total
Collection	\$3,360,280	\$0	\$0	\$0	\$3,360,280
Trunks / Interceptors / Common Conveyance	\$2,112,531	\$0	\$0	\$0	\$2,112,531
Lift Stations	\$208,334	\$0	\$0	\$0	\$208,334
Preliminary Treatment	\$147,161	\$140,518	\$423,429	\$0	\$711,108
Lab	\$0	\$2,231	\$2,241	\$2,274	\$6,746
Primary Treatment	\$80,530	\$76,895	\$231,711	\$0	\$389,136
Secondary Treatment	\$95,633	\$228,290	\$137,583	\$0	\$461,506
Residuals	\$0	\$56,938	\$24,511	\$0	\$81,449
Effluent/ Outfall	\$515,083	\$0	\$0	\$0	\$515,083
Nitrification	\$764,278	\$1,865,655	\$1,071,660	\$1,229,259	\$4,930,851
Customer	\$21	\$7	\$5	\$3	\$37
Indirect	\$0	\$0	\$0	\$0	\$0
Total	\$7,283,855	\$2,370,534	\$1,891,139	\$1,231,536	\$12,777,064

Prior to arriving at total revenue requirements for wholesale users, depreciation is added into capital costs after the rate of return and allowance for working capital is applied to the asset base. Table 4.7 and Table 4.8 outline the depreciation capital costs by functional category that are included into overall capital costs.

**Table 4.7:
FY22 Depreciation Capital Costs by Functional Category**

	Flow – Capacity	BOD - Capacity	TSS – Capacity	TKN - Capacity	Total
Collection	\$1,205,734	\$0	\$0	\$0	\$1,205,734
Trunks / Interceptors / Common Conveyance	\$775,403	\$0	\$0	\$0	\$775,403
Lift Stations	\$98,741	\$0	\$0	\$0	\$98,741
Preliminary Treatment	\$33,751	\$33,751	\$101,253	\$0	\$168,755
Lab	\$0	\$5,310	\$5,310	\$5,310	\$15,930
Primary Treatment	\$19,848	\$19,848	\$59,545	\$0	\$99,242
Secondary Treatment	\$53,602	\$134,004	\$80,402	\$0	\$268,008
Residuals	\$0	\$55,690	\$23,867	\$0	\$79,557
Effluent/ Outfall	\$131,406	\$0	\$0	\$0	\$131,406
Nitrification	\$47,792	\$122,178	\$69,870	\$78,988	\$318,827
Customer	\$11	\$3	\$3	\$2	\$19
Indirect	\$0	\$0	\$0	\$0	\$0
Total	\$2,366,288	\$370,784	\$340,250	\$84,300	\$3,161,622

**Table 4.8:
FY23 Depreciation Capital Costs by Functional Category**

	Flow - Capacity	BOD - Capacity	TSS - Capacity	TKN - Capacity	Total
Collection	\$1,130,896	\$0	\$0	\$0	\$1,130,896
Trunks / Interceptors / Common Conveyance	\$728,319	\$0	\$0	\$0	\$728,319
Lift Stations	\$94,064	\$0	\$0	\$0	\$94,064
Preliminary Treatment	\$30,807	\$30,807	\$92,420	\$0	\$154,034
Lab	\$0	\$5,268	\$5,268	\$5,268	\$15,803
Primary Treatment	\$18,223	\$18,223	\$54,668	\$0	\$91,113
Secondary Treatment	\$51,702	\$129,256	\$77,553	\$0	\$258,511
Residuals	\$0	\$54,554	\$23,380	\$0	\$77,934
Effluent/ Outfall	\$121,061	\$0	\$0	\$0	\$121,061
Nitrification	\$32,649	\$83,466	\$47,732	\$53,961	\$217,809
Customer	\$10	\$3	\$3	\$2	\$18
Indirect	\$0	\$0	\$0	\$0	\$0
Total	\$2,207,731	\$321,576	\$301,024	\$59,230	\$2,889,562

As each wholesale user is allocated their attributable portion of the overall O&M, Capital, and Depreciation, the rate modeling further breaks down these costs into the various flow and strength based categories across both capacity (fixed) and use (variable) categories. The capital costs as they relate to Lockwood specifically are shown in Table 4.9 and Table 4.10 for FY22 and FY23, respectively.

**Table 4.9:
FY22 Lockwood Specific Costs by Functional Category**

	Flow - Capacity	BOD - Capacity	TSS - Capacity	TKN - Capacity	Flow - Use	BOD - Use	TSS - Use	TKN - Use	Total
Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Trunks / Interceptors / Common Conveyance	\$3	\$0	\$0	\$0	\$23	\$0	\$0	\$0	\$26
Lift Stations	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Preliminary Treatment	\$5,467	\$6,987	\$10,870	\$0	\$7,066	\$0	\$0	\$0	\$30,391
Lab	\$0	\$1,872	\$939	\$2,239	\$0	\$282	\$141	\$341	\$5,814
Primary Treatment	\$3,018	\$3,857	\$6,000	\$0	\$0	\$0	\$0	\$0	\$12,875
Secondary Treatment	\$4,188	\$13,380	\$4,163	\$0	\$3,533	\$8,728	\$2,616	\$0	\$36,608
Residuals	\$0	\$3,929	\$873	\$0	\$0	\$0	\$0	\$0	\$4,802
Effluent/ Outfall	\$19,400	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$19,400
Secondary Treatment – Nutrient Removal	\$25,831	\$84,393	\$25,028	\$60,543	\$9,533	\$24,083	\$6,879	\$18,823	\$255,111
Customer	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Indirect	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$57,907	\$114,417	\$47,874	\$62,782	\$20,155	\$33,093	\$9,635	\$19,163	\$365,027

**Table 4.10:
FY23 Lockwood Specific Costs by Functional Category**

	Flow - Capacity	BOD - Capacity	TSS - Capacity	TKN - Capacity	Flow - Use	BOD - Use	TSS - Use	TKN - Use	Total
Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Trunks / Interceptors / Common Conveyance	\$3	\$0	\$0	\$0	\$24	\$0	\$0	\$0	\$27
Lift Stations	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Preliminary Treatment	\$5,796	\$7,400	\$11,513	\$0	\$7,302	\$0	\$0	\$0	\$32,011
Lab	\$0	\$2,068	\$1,037	\$2,479	\$0	\$291	\$145	\$352	\$6,372
Primary Treatment	\$3,196	\$4,080	\$6,348	\$0	\$0	\$0	\$0	\$0	\$13,624
Secondary Treatment	\$4,316	\$13,777	\$4,287	\$0	\$3,651	\$9,010	\$2,701	\$0	\$37,742
Residuals	\$0	\$3,930	\$873	\$0	\$0	\$0	\$0	\$0	\$4,803
Effluent/ Outfall	\$20,517	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,517
Secondary Treatment – Nutrient Removal	\$27,889	\$91,033	\$26,997	\$65,328	\$9,851	\$24,860	\$7,103	\$19,437	\$272,498
Customer	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Indirect	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$61,716	\$122,288	\$51,056	\$67,807	\$20,828	\$34,161	\$9,949	\$19,789	\$387,594

The O&M, Capital, and Depreciation costs as they relate to Exxon specifically are shown in Table 4.11 and Table 4.12 for FY22 and FY23, respectively.

**Table 4.11:
FY22 Exxon Specific Costs by Functional Category**

	Flow - Capacity	BOD - Capacity	TSS - Capacity	TKN - Capacity	Flow - Use	BOD - Use	TSS - Use	TKN - Use	Total
Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Trunks / Interceptors / Common Conveyance	\$9	\$0	\$0	\$0	\$147	\$0	\$0	\$0	\$156
Lift Stations	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Preliminary Treatment	\$15,967	\$5,685	\$14,173	\$0	\$45,337	\$0	\$0	\$0	\$81,162
Lab	\$0	\$3,117	\$2,500	\$4,236	\$0	\$504	\$403	\$688	\$11,447
Primary Treatment	\$8,813	\$3,138	\$7,823	\$0	\$0	\$0	\$0	\$0	\$19,775
Secondary Treatment	\$12,230	\$10,887	\$5,428	\$0	\$22,668	\$15,603	\$7,493	\$0	\$74,309
Residuals	\$0	\$3,197	\$1,138	\$0	\$0	\$0	\$0	\$0	\$4,335
Effluent/ Outfall	\$56,656	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$56,656
Secondary Treatment – Nutrient Removal	\$75,436	\$68,668	\$32,632	\$55,658	\$61,163	\$43,051	\$19,704	\$38,016	\$394,328
Customer	0	0	0	0	0	0	0	0	0
Indirect	0	0	0	0	0	0	0	0	0
Total	\$169,111	\$94,692	\$63,695	\$59,893	\$129,315	\$59,158	\$27,600	\$38,704	\$642,168

**Table 4.12:
FY23 Exxon Specific Costs by Functional Category**

	Flow - Capacity	BOD - Capacity	TSS - Capacity	TKN - Capacity	Flow - Use	BOD - Use	TSS - Use	TKN - Use	Total
Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Trunks / Interceptors / Common Conveyance	\$8	\$0	\$0	\$0	\$152	\$0	\$0	\$0	\$160
Lift Stations	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Preliminary Treatment	\$16,926	\$6,022	\$15,011	\$0	\$46,852	\$0	\$0	\$0	\$84,812
Lab	\$0	\$3,479	\$2,791	\$4,734	\$0	\$520	\$416	\$710	\$12,651
Primary Treatment	\$9,332	\$3,320	\$8,276	\$0	\$0	\$0	\$0	\$0	\$20,929
Secondary Treatment	\$12,605	\$11,210	\$5,589	\$0	\$23,426	\$16,108	\$7,738	\$0	\$76,676
Residuals	\$0	\$3,197	\$1,139	\$0	\$0	\$0	\$0	\$0	\$4,336
Effluent/ Outfall	\$59,917	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$59,917
Secondary Treatment – Nutrient Removal	\$81,445	\$74,071	\$35,199	\$60,057	\$63,208	\$44,444	\$20,348	\$39,260	\$418,033
Customer	0	0	0	0	0	0	0	0	0
Indirect	0	0	0	0	0	0	0	0	0
Total	\$180,234	\$101,300	\$68,006	\$64,791	\$133,639	\$61,072	\$28,502	\$39,971	\$677,514

Finally, the O&M, Capital, and Depreciation costs as they relate to P66 specifically are shown in Table 4.13 and Table 4.14 for FY22 and FY23, respectively.

**Table 4.13:
FY22 P66 Specific Costs by Functional Category**

	Flow - Capacity	BOD - Capacity	TSS - Capacity	TKN - Capacity	Flow - Use	BOD - Use	TSS - Use	TKN - Use	Total
Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Trunks / Interceptors / Common Conveyance	\$1,918	\$0	\$0	\$0	\$317	\$0	\$0	\$0	\$2,235
Lift Stations	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Preliminary Treatment	\$6,193	\$2,495	\$23,983	\$0	\$44,437	\$0	\$0	\$0	\$77,108
Lab	\$0	\$2,859	\$8,830	\$6,650	\$0	\$478	\$1,474	\$1,114	\$21,403
Primary Treatment	\$3,419	\$1,377	\$13,238	\$0	\$0	\$0	\$0	\$0	\$18,034
Secondary Treatment	\$4,744	\$4,779	\$9,185	\$0	\$22,218	\$14,799	\$27,396	\$0	\$83,120
Residuals	\$0	\$1,403	\$1,926	\$0	\$0	\$0	\$0	\$0	\$3,330
Effluent/ Outfall	\$21,976	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$21,976
Nitrification	\$29,261	\$30,141	\$55,218	\$41,707	\$59,949	\$40,831	\$72,046	\$61,556	\$390,707
Customer	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Indirect	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$67,510	\$43,054	\$112,380	\$48,357	\$126,921	\$56,107	\$100,916	\$62,669	\$617,914

**Table 4.14:
FY23 P66 Specific Costs by Functional Category**

	Flow - Capacity	BOD - Capacity	TSS - Capacity	TKN - Capacity	Flow - Use	BOD - Use	TSS - Use	TKN - Use	Total
Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Trunks / Interceptors / Common Conveyance	\$2,011	\$0	\$0	\$0	\$329	\$0	\$0	\$0	\$2,340
Lift Stations	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Preliminary Treatment	\$6,566	\$2,643	\$25,401	\$0	\$45,922	\$0	\$0	\$0	\$80,532
Lab	\$0	\$3,207	\$9,909	\$7,467	\$0	\$493	\$1,522	\$1,150	\$23,748
Primary Treatment	\$3,620	\$1,457	\$14,005	\$0	\$0	\$0	\$0	\$0	\$19,082
Secondary Treatment	\$4,889	\$4,921	\$9,458	\$0	\$22,961	\$15,277	\$28,291	\$0	\$85,797
Residuals	\$0	\$1,403	\$1,927	\$0	\$0	\$0	\$0	\$0	\$3,330
Effluent/ Outfall	\$23,241	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$23,241
Secondary Treatment – Nutrient Removal	\$31,592	\$32,512	\$59,562	\$45,004	\$61,953	\$42,152	\$74,399	\$63,570	\$410,744
Customer	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Indirect	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$71,918	\$46,144	\$120,262	\$52,471	\$131,166	\$57,923	\$104,213	\$64,720	\$648,815

4.4 Allocation of Total Revenue Requirements

Wholesale rates are based on the total allocation of both O&M costs and capital costs. Table 4.15 and Table 4.16 outline this total allocation of revenue requirements. As not all customer classes incur these costs equally, Table 4.17 and Table 4.18 outline each customer classes' share of functional cost components.

**Table 4.15:
FY22 Allocation of Total Revenue Requirements**

Line Item	Total	Flow - Capacity	BOD - Capacity	TSS - Capacity	TKN - Capacity	Flow - Use	BOD - Use	TSS - Use	TKN - Use
Revenue Requirements									
O&M	\$9,784,171	\$349,401	\$649,190	\$427,347	\$376,229	\$3,066,463	\$2,383,955	\$1,389,693	\$1,141,892
Capital	\$20,873,756	\$12,631,171	\$3,598,592	\$2,913,226	\$1,730,767				
Total	\$30,657,927	\$12,980,572	\$4,247,782	\$3,340,573	\$2,106,997	\$3,066,463	\$2,383,955	\$1,389,693	\$1,141,892

**Table 4.16:
FY23 Allocation of Total Revenue Requirements**

Line Item	Total	Flow - Capacity	BOD - Capacity	TSS - Capacity	TKN - Capacity	Flow - Use	BOD - Use	TSS - Use	TKN - Use
Revenue Requirements									
O&M	\$10,347,935	\$396,801	\$737,260	\$485,321	\$427,269	\$3,189,122	\$2,479,314	\$1,445,281	\$1,187,568
Capital	\$15,938,686	\$9,650,142	\$2,741,319	\$2,231,389	\$1,315,836				
Total	\$26,286,621	\$10,046,943	\$3,478,578	\$2,716,711	\$1,743,105	\$3,189,122	\$2,479,314	\$1,445,281	\$1,187,568

**Table 4.17:
FY22 Allocation of Functional Revenue Requirements to Customer Class**

Customer Class	Total	Flow - Capacity	BOD – Capacity	TSS - Capacity	TKN - Capacity	Flow - Use	BOD - Use	TSS - Use	TKN - Use
Residential	\$9,169,108	\$3,518,873	\$901,866	\$676,866	\$507,642	\$1,362,381	\$1,091,633	\$611,123	\$498,724
Residential – Large	\$3,485,113	\$1,337,499	\$342,793	\$257,272	\$192,951	\$517,832	\$414,922	\$232,283	\$189,561
Commercial – High	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Public Buildings – Domestic	\$474,241	\$182,002	\$46,646	\$35,009	\$26,256	\$70,465	\$56,461	\$31,608	\$25,795
Outside City	\$240,452	\$92,279	\$23,651	\$17,750	\$13,312	\$35,727	\$28,627	\$16,026	\$13,079
Lockwood	\$145,155	\$12,198	\$25,394	\$10,730	\$14,787	\$20,155	\$33,093	\$9,635	\$19,163
Lockwood Reserve	\$219,872	\$45,709	\$89,023	\$37,144	\$47,995	\$0	\$0	\$0	\$0
Retail Reserve Capacity	\$10,227,031	\$5,459,819	\$2,145,175	\$1,727,643	\$894,394	\$0	\$0	\$0	\$0
Phillips 66	\$617,914	\$67,510	\$43,054	\$112,380	\$48,357	\$126,921	\$56,107	\$100,916	\$62,669
ExxonMobil	\$642,168	\$169,111	\$94,692	\$63,695	\$59,893	\$129,315	\$59,158	\$27,600	\$38,704
Total Revenue Requirement	\$30,657,927	\$12,980,572	\$4,247,782	\$3,340,573	\$2,106,997	\$3,066,463	\$2,383,955	\$1,389,693	\$1,141,892

**Table 4.18:
FY23 Allocation of Functional Revenue Requirements to Customer Class**

Customer Class	Total	Flow - Capacity	BOD - Capacity	TSS - Capacity	TKN - Capacity	Flow - Use	BOD - Use	TSS - Use	TKN - Use
Residential	\$8,245,337	\$2,729,971	\$791,916	\$583,217	\$442,149	\$1,413,674	\$1,132,578	\$634,229	\$517,605
Residential – Large	\$3,134,081	\$1,037,671	\$301,010	\$221,683	\$168,063	\$537,342	\$430,497	\$241,072	\$196,743
Commercial – Domestic	\$4,912,647	\$1,626,541	\$471,831	\$347,486	\$263,437	\$842,280	\$674,800	\$377,879	\$308,394
Commercial – High	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Public Buildings – Domestic	\$426,489	\$141,207	\$40,962	\$30,167	\$22,870	\$73,122	\$58,582	\$32,805	\$26,773
Outside City	\$216,225	\$71,591	\$20,767	\$15,294	\$11,595	\$37,072	\$29,701	\$16,632	\$13,574
Lockwood	\$152,466	\$13,000	\$27,214	\$11,482	\$16,043	\$20,828	\$34,161	\$9,949	\$19,789
Lockwood Reserve	\$235,128	\$48,717	\$95,074	\$39,574	\$51,763	\$0	\$0	\$0	\$0
Industrial	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Retail Reserve Capacity	\$7,637,919	\$4,126,093	\$1,582,361	\$1,279,542	\$649,923	\$0	\$0	\$0	\$0
Phillips 66	\$648,815	\$71,918	\$46,144	\$120,262	\$52,471	\$131,166	\$57,923	\$104,213	\$64,720
ExxonMobil	\$677,514	\$180,234	\$101,300	\$68,006	\$64,791	\$133,639	\$61,072	\$28,502	\$39,971
Total Revenue Requirement	\$26,286,621	\$10,046,943	\$3,478,578	\$2,716,711	\$1,743,105	\$3,189,122	\$2,479,314	\$1,445,281	\$1,187,568

5.0 Costs by Class and Proposed Rates

For FY22, the total revenue requirements attributable to wholesale users to be recovered through rates are \$1,625,109. P66 is allocated \$617,914 of these costs, Exxon is allocated \$642,168, and Lockwood is allocated \$365,027 of these. Table 5.1 shows these costs across the categories of fixed O&M, variable O&M, depreciation, and return on NPIS. For FY23, the total revenue requirements attributable to wholesale users to be recovered through rates are \$1,713,923. P66 is allocated \$648,815 of these costs, Exxon is allocated \$677,514 and Lockwood is allocated \$387,594. Table 5.2 shows these costs across the categories of fixed O&M, variable O&M, depreciation, and return on NPIS for FY23. Wholesale rates are set as a function of the total cost of serving these users with wastewater service. The rate is broken into both a fixed and variable component. Table 5.3 and Table 5.4 outline the proposed rates.

**Table 5.1:
FY22 Wholesale Cost of Service**

Line Item	Fixed O&M	Variable O&M	Depreciation	Return	Total
Lockwood & Lockwood Reserve	\$4,432	\$82,046	\$16,453	\$262,095	\$365,027
Phillips 66	\$17,805	\$346,614	\$16,440	\$237,055	\$617,914
ExxonMobil	\$9,262	\$254,777	\$24,533	\$353,596	\$642,168

**Table 5.2:
FY23 Wholesale Cost of Service**

Line Item	Fixed O&M	Variable O&M	Depreciation	Return	Total
Lockwood & Lockwood Reserve	\$4,997	\$84,727	\$19,172	\$278,698	\$387,594
Phillips 66	\$20,077	\$358,021	\$18,901	\$251,816	\$648,815
ExxonMobil	\$10,444	\$263,183	\$28,209	\$375,678	\$677,514

**Table 5.3:
Proposed ExxonMobil Wastewater Rates**

	Current	FY22	FY23
Fixed, \$/mo	\$24,200	\$32,283	\$34,528
Variable, \$/ccf	\$0.386	\$0.709	\$0.733

**Table 5.4:
Proposed Lockwood Wastewater Rates**

	Current	FY22	FY23
Fixed, \$/mo	\$26,868	\$23,582	\$25,239
Variable, \$/ccf	\$1.084	\$1.466	\$1.513

**Table 5.5:
Proposed Phillips 66 Wastewater Rates**

	Current	FY22	FY23
Fixed, \$/mo	\$19,388	\$22,608	\$24,233
Variable, \$/ccf	\$0.647	\$0.985	\$1.017

Appendix A: Customer Class Allocations

Table A.1 & A.2 outline FY22 & FY23 Fixed O&M Cost of Service Characteristics by Owner/Non-Owner class. Split of Flow, BOD, TSS, and TKN are for O&M purposes are based on actual average annual flows and loadings. Retail reserve capacity is not used in O&M breakdowns.

Table A.1:
FY22 Summary of Customer Service Characteristics, Fixed O&M

Customer Class	Flow - Capacity	BOD - Capacity	TSS - Capacity	TKN - Capacity	Flow - Use	BOD - Use	TSS - Use	TKN - Use
Owners	86.27%	93.63%	89.83%	89.20%	86.27%	95.77%	93.15%	93.96%
ExxonMobil	6.43%	2.54%	2.03%	3.47%	6.43%	1.69%	1.37%	1.94%
Lockwood	1.00%	1.42%	0.71%	1.72%	1.00%	0.94%	0.48%	0.96%
Phillips 66	6.30%	2.41%	7.43%	5.61%	6.30%	1.60%	5.00%	3.14%
Total	100%	100%	100%	100%	100%	100%	100%	100%

Table A.2:
FY23 Summary of Customer Service Characteristics, Fixed O&M

Customer Class	Flow - Capacity	BOD - Capacity	TSS - Capacity	TKN - Capacity	Flow - Use	BOD - Use	TSS - Use	TKN - Capacity
Owners	86.33%	93.68%	89.90%	89.28%	86.33%	95.79%	93.19%	93.99%
ExxonMobil	6.40%	2.52%	2.02%	3.44%	6.40%	1.68%	1.36%	1.93%
Lockwood	1.00%	1.41%	0.70%	1.70%	1.00%	0.94%	0.48%	0.96%
Phillips 66	6.27%	2.39%	7.38%	5.57%	6.27%	1.59%	4.98%	3.13%
Total	100%	100%	100%	100%	100%	100%	100%	100%

Table A.3 and A.4 present FY22 & FY23 Variable Capital Cost of Service Characteristics by Owner/Non-Owner class. Split of Flow, BOD, TSS, and TKN are for O&M purposes are based on actual average annual flows and loadings.

Table A.3:
FY22 Summary of Customer Service Characteristics, Variable O&M

Customer Class	Flow - Capacity	BOD - Capacity	TSS - Capacity	TKN - Capacity	Flow - Use	BOD - Use	TSS - Use	TKN - Use
Owner	80.31%	93.63%	89.83%	89.20%	80.31%	93.63%	89.83%	89.20%
ExxonMobil	9.22%	2.54%	2.03%	3.47%	9.22%	2.54%	2.03%	3.47%
Lockwood	1.44%	1.42%	0.71%	1.72%	1.44%	1.42%	0.71%	1.72%
Phillips 66	9.04%	2.41%	7.43%	5.61%	9.04%	2.41%	7.43%	5.61%
Total	100%	100%	100%	100%	100%	100%	100%	100%

Table A.4:
FY23 Summary of Customer Service Characteristics, Variable O&M

Customer Class	Flow - Capacity	BOD - Capacity	TSS - Capacity	TKN - Capacity	Flow - Use	BOD - Use	TSS - Use	TKN - Use
Owner	80.43%	93.68%	89.90%	89.28%	80.43%	93.68%	89.90%	89.28%
ExxonMobil	9.16%	2.52%	2.02%	3.44%	9.16%	2.52%	2.02%	3.44%
Lockwood	1.43%	1.41%	0.70%	1.70%	1.43%	1.41%	0.70%	1.70%
Phillips 66	8.98%	2.39%	7.38%	5.57%	8.98%	2.39%	7.38%	5.57%
Total	100%	100%	100%	100%	100%	100%	100%	100%

Table A.5 and A.6 present FY22 & FY23 Fixed Capital Cost of Service Characteristics by Owner/Non-Owner class. Split of Flow, BOD, TSS, and TKN are for O&M purposes are based on actual average annual flows and loadings. Reserve capacity are included in these capital allocations.

**Table A.5:
FY22 Summary of Customer Service Characteristics, Depreciation & Rate Base**

Customer Class	Flow - Capacity	BOD - Capacity	TSS - Capacity	TKN - Capacity	Flow - Use	BOD - Use	TSS – Use	TKN - Capacity
Owner	91.24%	95.19%	94.82%	93.59%	90.94%	97.90%	97.23%	97.21%
ExxonMobil	5.06%	1.80%	1.50%	2.26%	5.05%	1.28%	1.06%	1.49%
Lockwood & Lockwood Reserve	1.73%	2.22%	1.15%	2.46%	1.73%	0.33%	0.17%	0.34%
Phillips 66	1.96%	0.79%	2.54%	1.69%	2.29%	0.48%	1.54%	0.96%
Total	100%	100%	100%	100%	100%	100%	100%	100%

**Table A.6:
FY23 Summary of Customer Service Characteristics, Depreciation & Rate Base**

Customer Class	Flow - Capacity	BOD - Capacity	TSS - Capacity	TKN - Capacity	Flow - Use	BOD - Use	TSS – Use	TKN - Use
Owner	91.23%	95.19%	94.82%	93.58%	90.93%	97.90%	97.22%	97.20%
ExxonMobil	5.07%	1.80%	1.50%	2.26%	5.05%	1.28%	1.06%	1.50%
Lockwood & Lockwood Reserve	1.74%	2.22%	1.15%	2.46%	1.73%	0.33%	0.17%	0.34%
Phillips 66	1.97%	0.79%	2.54%	1.69%	2.29%	0.48%	1.54%	0.96%
Total	100%	100%	100%	100%	100%	100%	100%	100%