

PWD Cross Exhibit 1
(Morgan – Rogers)

- Public Advocate Responses to Set I from PWD
- Schedule BV-1, Table C-7
- Schedule LM_JR-4
- Rate Board Simple Model, Outline (March 20, 2023)
- Summary Chart, Adjustments

Before The
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2023 General Rate Proceeding Fiscal Years 2024 – 2025
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Set I

1. Please provide a summary schedule showing all revenue and expense adjustments for FY24 and FY25 similar to the schedule format on page 23 of PA Statement 1 supporting the proposed change to the additional revenues in FY 24 and FY 25.

Response:

Description	FY 2024	FY 2025
Revised calculation of the sales volume per account (water customers) to reflect a three-year average	(\$5,609,663) ¹	(\$5,871,068) ¹
CIP - removed the inflation escalation related to FY 2025 projects	-	(\$30,188,000)
CIP - used an average of the amounts to be rolled over from prior years into FY 2024 and FY 2025	(\$82,940,000)	(\$56,614,000)
Utilized the core PCE inflation projections from FOMC (2.6% in FY 2024, 2.1% in FY 2025) for Services	(\$7,765,459)	(\$16,029,830)
Utilized the core PCE inflation projections from FOMC (2.6% in FY 2024, 2.1% in FY 2025) for Materials and Supplies	(\$1,298,064)	(\$2,570,014)
Utilized the core PCE inflation projections from FOMC (2.6% in FY 2024, 2.1% in FY 2025) for Transfers	(\$323,155)	(\$639,809)
Utilized the core PCE inflation projections from FOMC (2.1% in FY 2025) for Chemical Costs	-	(\$11,442,813)
Utilized the core PCE inflation projections from FOMC (2.6% in FY 2024, 2.1% in FY 2025) for Equipment	(\$322,744)	(\$756,589)
Updated the Construction Fund's beginning balance consistent with new information from PWD	(8,662,394) ²	(8,662,394) ²
Increased the bond interest rate by 1.0% from the rate experienced in FY 2023 (5.0%)	(\$5,008,773)	(\$11,835,981)
Recognized a .50% (50 basis points) increase in the interest paid on funds held by PWD	(\$1,668,220) ¹	(\$1,687,298) ¹
Improved Collection of TAP Billings (Increase revenues under existing rates)	\$3,988,498	\$3,988,498
Improved Collection of TAP Credits (Increase revenues under existing rates)	\$4,926,821	\$4,926,821
Remove Lien Filing Fees for TAP (O&M adjustment)	(\$564,795)	(\$564,795)
Fund LICAP for PGW/PECO LIURP Customers (O&M adjustment)	\$1,129,500	\$1,129,500
Fund LICAP for TAP Customers (O&M adjustment)	\$600,000	\$600,000
PILOT Internal Plumbing Repair Program (O&M adjustment)	\$2,156,250	\$2,156,250
Increase UESF Funding (O&M adjustment)	\$3,000,000	\$3,000,000

¹ Effect on Revenue Requirement.

² Value reflects change to the beginning balance of the Construction Fund, not impact on the Revenue Requirement.

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2. Please provide work papers, with all formulas intact, supporting each revenue and expense adjustment stated in PA Statement 1 and the workpapers supporting Schedule LM_JR-1 through Schedule LM_JR-5.

Response:

The workpapers are attached in Attachment 1-02.

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3. Have you independently reviewed revenue and expense adjustments detailed in Mr. Colton's testimony (PA Statement 3) and shown in the table on page 23 of PA Statement 1.

Response:

No, Mr. Colton will address questions regarding his adjustments.

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4. Please confirm or deny that in making normalization adjustments over a designated period (e.g., three years) some examination is required to make sure there are no anomalies during the period proposed to be used that could bias the result rather than reflect normal experience.

Response:

Confirmed. In making normalization adjustments over a designated period , the aim is to account for anomalies in the test year. Therefore, examination is warranted if a longer time frame is required to smooth out the outlier into representative data.

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5. Please confirm or deny that billed usage per account for 5/8” residential customers was consistently declining before the pandemic (prior to FY20).

Response:

Confirmed.

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6. Please confirm or deny that the Philadelphia Water, Sewer and Storm Water Rate Board (Rate Board) found (or approved) in its Rate Determinations in 2016 and 2018 declining usage due to lower usage per account.

Response:

Finding nothing to the contrary, we will confirm.

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7. Please confirm or deny that residential billed volume per account is a primary driver of operating revenues (given 400,000+ PWD residential accounts).

Response:

Confirmed.

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8. With reference to PA Statement 1 at 17 (lines 1-3), please provide the basis for the statement that in establishing the PWD Capital Budget for future years that consideration is given to the fact that costs in the future will be higher than the current year.

Response:

In forming a budget, it is generally standard practice to account for expected costs in the future, which would therefore account for inflation.

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9. With reference to PA Statement 1 at 17 (lines 10-15) and 21 (lines 18-20), for purposes of normalizing construction expenditures to be carried forward, what period is proposed to be utilized (i.e., state number of years, specific period).

Response:

The statement at page 17, lines 10-15 of PA Statement 1 originated from PWD’s response to PA-VIII-7. In the response, PWD stated: “Approximately a third of the FY 2023 CIP Budget is likely to be carried over to FY 2024. Note this is an estimate of the cumulative carryforward of available appropriation balances.” Using the one-third rate to calculate the prior year’s carryover resulted in an amount that appeared excessive compared to other data reviewed. For example, the FY 2025 carryover amount from FY 2024 would be approximately \$252,418 ($\$764,903 \times 33\%$). Instead of attempting to normalize the prior years’ carryover amounts reflected in FY 2024 and FY 2025, the witnesses used the values provided by PWD in its analysis.

Regarding discussion at page 21, lines 18-20 of PA Statement 1, PWD’s response to PA-X-5 (A) provides the updated balance which the witnesses used.

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10. Please provide the amounts and the basis for the proposed carry forward adjustments. Identify the components of the proposed FY 23, FY 24 and FY 25 annual carry forward adjustments including the budgeted amounts carried forward from prior years and budget amounts carried forward to future years.

Response:

Please see the response to Set I-9.

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11. With reference to PA Statement 1 at 19 (lines 1-15), please provide (i) a detailed description of Federal Open Market Committee (FOMC) core inflation projections referred to in your testimony together with source documentation; and (ii) a list items that are included or excluded in this index of inflation.

Response:

(i) The FOMC projections for core personal consumption expenditures (PCE) are percent changes from the fourth quarter of the previous year to the fourth quarter of the year indicated. Core PCE inflation is the percentage rates of change in the price index for PCE excluding food and energy. The Core PCE inflation projections provided by the FOMC as of March 22, 2023 spans a range as follows:

	2018	2019	2020	2021	2022	2023	2024	2025
Actual	2.0%	1.6%	1.4%	4.7%	4.8%	-	-	-
Upper End of Range	-	-	-	-	-	4.1%	3.1%	3.0%
Upper End of Central Tendency	-	-	-	-	-	3.9%	2.8%	2.2%
Median	-	-	-	-	-	3.6%	2.6%	2.1%
Lower End of Central Tendency	-	-	-	-	-	3.5%	2.3%	2.0%
Lower End of Range	-	-	-	-	-	3.5%	2.1%	2.0%

Note that in the above table, the data for the actual values of the variables are annual.

The source documentation is:

Board of Governors of the Federal Reserve System, Federal Open Market Committee, “March 22, 2023: FOMC Projections materials, accessible version,”

<https://www.federalreserve.gov/monetarypolicy/fomcprojtabl20230322.htm>.

(ii) The core PCE inflation rate is the percentage rates of change in the price index for personal consumption expenditures less food and energy.

The list of items included in the general PCE can be broken down into a list of well over 300 items. As a result, we are providing a source to retrieve the information, rather than the full list itself detailed here. A list of the underlying category detail for PCE can be found here:

Bureau of Economic Analysis, National Data – National Income and Product Accounts, Table 2.4.5U. “Personal Consumption Expenditures by Type of Product,”

<https://apps.bea.gov/iTable/?reqid=19&step=2&isuri=1&categories=survey#eyJhcHBpZCI6MTksInN0ZXBzIjpbMSwyLDNdLCJkYXRhIjpbWyJjYXRIZ29yaWVzIiwvVW5kZXJseWluZyJd>

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The Core PCE excludes food and energy, the composition of which can be found here:

Bureau of Economic Analysis, “Composition of PCE food and energy,”

<https://www.bea.gov/sites/default/files/2018-04/Composition%20of%20food%20and%20energy%20excluded%20from%20Core%20PCE%20Price%20Index.xls>.

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12. Please confirm or deny whether changes in prices for items such as phosphoric acid, sodium hydroxide, sodium hypochlorite, blended sodium phosphate and activated carbon are included in this inflation index

Response:

Denied. The core PCE does not identify those items specifically as included. The core PCE projection makes it easier to see the underlying inflation trend. While it may not cover all items with such specificity, it is a reasonable measure of price inflation to come. Note that the PPI used by the Department for chemicals (PPI – Industrial Chemicals; Series ID WPU061) has shifted dramatically in only the past few months alone, and if the most recent value from March 2023 were referenced rather than October 2022, it would in fact be negative inflation (-7.6%) for the most recent twelve months. The witnesses believe that past inflation is a poor predictor of future inflation rates and we therefore disagree with its use regardless. This swing is, in fact, an excellent example of why past inflation is an unreliable measure.

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13. Please confirm or deny whether changes in prices for lab equipment or related services are included in this index of inflation.

Response:

Denied. The core PCE does not identify those items specifically as included. The core PCE projection makes it easier to see the underlying inflation trend. While it may not cover all items with such specificity, it is a reasonable measure of price inflation to come.

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14. Please confirm or deny whether changes in prices for materials such as ductile iron pipe and curb stops are included in this index of inflation.

Response:

Denied. The core PCE does not identify those items specifically as included. The core PCE projection makes it easier to see the underlying inflation trend. While it may not cover all items with such specificity, it is a reasonable measure of price inflation to come.

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15. Please confirm or deny that even generally reported rates of inflation (Consumer Price Index) have ranged from 7.7% (October 2022) down to 5.0% (in recent past).

Response:

Confirmed. We assume the Department is referring to the United States general CPI-U unadjusted percent 12-month change. This value has fluctuated quite widely in recent times. Previously, from January 2013 through March 2021 – a span of over 8 years – the general CPI-U has remained within the bounds of negative 0.2% up to a maximum of positive 2.9%. With the abnormally high inflation of 2022, we confirm the value did hit 7.7% in October 2022 and does appear to be declining again, reaching 5.0% in March 2023..

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16. Do you dispute the fact that PWD's cost per ton for chemicals experienced in 2023, as specifically referenced in PWD Statement 4 at 4 (lines 7-12), shows an increase from 26.7% to 141.8% over FY 2022 levels.

Response:

No, we do not dispute this, however the point of an inflation adjustment is not to recover past costs. It is utilized to account for increasing costs in a future year because of expected inflation yet to come. The witnesses believe that past inflation is not a good predictor of future inflation rates. The FOMC has provided a forward-looking measure of core PCE which is a more appropriate measure for future expectations. PWD has offered no reasonable future-looking inflation rate.

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17. Do you dispute the fact that PWD has generally experienced a 43% increase in costs for materials in FY23 and that it is paying costs for valves, sleeves, couplings and ductile iron pipe in maintenance activities as set forth in Schedule OP-1 that far exceed the 2.1% - 2.6% recommended for an inflation factor in PA Statement 1 at 19 (lines 17-20), 20 (lines 11-14), 21 (lines 3-7).

Response:

We do not dispute this, however the point of an inflation adjustment is not to recover past costs. It is utilized to account for increasing costs in a future year because of expected inflation yet to come. The witnesses believe that past inflation is not a good predictor of future inflation rates. The FOMC has provided a forward-looking measure of core PCE which is a more appropriate measure for future expectations.

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18. With reference to PA Statement 1 at 22 (lines 4-8), please confirm or deny that the statement refers to the PWD response to PA-V-4.

Response:

Confirmed.

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19. If the prior question is confirmed, please also confirm that the PWD in its response to PA-V-4, in fact, recommended increasing interest rates by 1% from 2022 Special Rate Proceeding yielding 5.5% and 6.0% interest rates.

Response:

In the response to PA-V-4, PWD did indicate that increasing rates by 1% would yield 5.5% and 6.0%.

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20. With reference to PA Statement 1 at 22 (lines 4-8), please explain how in adopting the recommendation set forth in the response to PA-V-4, your proposal as to interest rates to be utilized is so different.

Response:

The recommendation is different because when all the data is considered, the 5.5% and 6.0% used by PWD do not appear to be supported.

The 1.0% increase recommended by the Financial Advisors is, to a large extent, anecdotal. There is no data to show the derivation of the 1.0% increase besides the assertions of the Financial Advisors.

In the March 2, 2022 memo presented as Attachment PA-V-4B, the Financial Advisors recommended that PWD should use 4.0%, 4.5% and 6.0% interest rates for budgeting purposes for FY 2023, 2024 and 2025, respectively. Evidence provided by PWD states that interest rates on tax-exempt municipal bond rates measured by the BVAL quoted yield on AA and A-rated bonds were 3.76% and 4.14%, respectively on January 26, 2023. PWD bonds are rated A+ or A1 (depending on the rating agency reviewed), according to the Peer Utility Comparison attached to the Financial Panel's testimony. Hence, the continued use by PWD of 4.0% as the cost of debt for FY 2023 appears reasonable. Therefore, applying the Financial Advisors 1.0% increase to the FY 2023 cost of debt of 4.0% is reasonable.

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21. With reference to PA Statement 1 at 22 (lines 22-26) and 23 (lines 1-2), please confirm or deny that actual interest income reflects market considerations (investments made) and is not based on a calculation of simple interest.

Response:

The witnesses understanding was influenced by PWD response to PA-IX-7. In that response, PWD stated: “The 1.0% interest rate is consistent with the assumption for interest income and debt service reserve interest income interest rates in recent rate proceedings. The annual interest earnings are adjusted to reflect the market value of investments which in FY 2022 resulted in negligible interest earnings.”

While PWD is projecting higher interest rates for debt financing, it is proposing to retain the interest rate for interest income at an unchanged rate. If one accepts that interest rates are increasing for debt financing, it is unreasonable to assume that interest rates for income will remain unchanged.

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22. With reference to the recommendation made in PA Statement 1 at 22, please confirm or deny that actual interest income recognized by PWD in FY22 was less than 0.5%.

Response:

The witnesses have not analyzed PWD actual FY 2022 earnings. Therefore, they are unable to confirm or deny the 0.5% value.

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23. With reference to PA Statement 1 at 6-10, do you agree that the recommendation for stormwater management cost recovery is a part of a larger policy discussion involving other stakeholders; and that neither PWD or the Rate Board can make this decision in isolation?

Response:

The witnesses agree.

TABLE C-7: PROJECTED CAPITAL IMPROVEMENT PROGRAM
(in thousands of dollars)

Line No.	Description	Fiscal Year Ending June 30,					
		2023	2024	2025	2026	2027	2028
1	Engineering and Administration (a)	14,321	12,806	11,587	10,367	9,148	7,929
2	Plant Improvements	255,000	393,000	295,000	262,000	315,000	450,000
3	Distribution System Rehabilitation	123,060	157,100	240,100	135,100	128,100	120,100
4	Large Meter Replacement	5,000	5,000	5,000	5,000	5,000	5,000
5	Billing System	-	-	-	30,000	30,000	30,000
6	Storm Flood Relief	15,000	15,000	15,000	15,000	15,000	15,000
7	Reconstruction of Sewers	72,860	80,000	86,000	91,000	96,000	102,000
8	Green Infrastructure	83,000	90,000	90,000	170,000	170,000	170,000
9	Vehicles	12,000	12,000	12,000	12,000	12,000	12,000
10	Total Improvements	580,241	764,906	754,687	730,467	780,248	912,029
11	Inflation Adjustment (b)	-	-	30,188	59,239	97,425	154,916
12	Inflated Total	580,241	764,906	784,874	789,707	877,673	1,066,945
13	Rollforward Adjustments	(100,885)	82,940	56,614	36,983	(17,674)	(37,949)
14	Total Inflated Adjusted CIP Budget	479,356	847,846	841,488	826,690	859,999	1,028,995
15	Contingency Adjustment	(49,261)	(72,342)	(72,589)	(101,842)	(76,131)	(78,151)
16	Annual Encumbrances	430,095	775,504	768,900	724,848	783,868	950,844
17	Project Expenses (c)	337,627	513,964	606,056	757,393	791,263	865,518
18	Annual Net Encumbrances	92,469	261,541	162,844	(32,545)	(7,396)	85,326

(a) Reflects shift in capital related salary costs from capital to operating budget.

(b) Allowance for inflation of 4.0 percent per year after fiscal year 2024.

(c) Reflects annual drawdown of capital budget appropriations based on project durations and annual encumbrances.

PHILADELPHIA WATER DEPARTMENT
Capital Improvement Program
For the Rate Years Ending June 30, 2024 and 2025
(\$000s)

Line No.	Description	2023	2024	2025
1	Engineering and Administration (a)	14,321	12,806	11,587
2	Plant Improvements	255,000	393,000	295,000
3	Distribution System Rehabilitation	123,060	157,100	240,100
4	Large Meter Replacement	5,000	5,000	5,000
5	Billing System		-	-
6	Storm Flood Relief	15,000	15,000	15,000
7	Reconstruction of Sewers	72,860	80,000	86,000
8	Green Infrastructure	83,000	90,000	90,000
9	Vehicles	12,000	12,000	12,000
10	Total Improvements	580,241	764,906	754,687
11	Inflation Adjustment (b)	-	-	30,188
12	Inflated Total	580,241	764,906	784,874
13	Rollforward Adjustments	(100,885)	82,940	56,614
14	Total Inflated Adjusted CIP Budget	479,356	847,846	841,488
15	Contingency Adjustment	(49,261)	(72,342)	(72,589)
16	Annual Encumbrances	430,095	775,504	768,900
17	Project Expenses (c)	337,627	513,964	606,056
17a	Adjustment to Project Expenses	-	(82,940)	(86,802)
17b	Adjusted Project Expenses	337,627	431,024	519,254
18	Annual Net Encumbrances	92,469	261,541	162,844

(a) Reflects shift in capital related salary costs from capital to operating budget.

(b) Allowance for inflation of 4.0 percent per year after fiscal year 2024.

(c) Reflects annual drawdown of capital budget appropriations based on project durations and annual encumbrances.

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Flow of Funds - Construction Fund & Debt Reserve Account
For the Rate Years Ending June 30, 2024 and 2025
(\$000s)

Line No.	Description	2023	2024	2025
Disposition of Bond Proceeds				
1a	Proceeds From Sale of Bonds	338,465	385,789	406,740
	Transfers:			
2a	Debt Reserve Fund (a)	8,500	-	-
3a	Cost of Bond Issuance (b)	1,965	2,806	2,959
4a	Refund Commercial Paper	-	-	-
5a	Construction Fund (c)	<u>328,000</u>	<u>382,983</u>	<u>403,782</u>
6a	Total Issue	338,465	385,789	406,740
Disposition of Commercial Paper				
7a	Proceeds From Commercial Paper	-	-	-
	Transfers:			
8a	Debt Reserve Fund (a)	-	-	-
9a	Cost of Issuance (b)	<u>-</u>	<u>-</u>	<u>-</u>
10a	Construction Fund (c)	-	-	-
11a	Total Issue	-	-	-
Construction Fund				
12a	Beginning Balance	523,680	614,573	720,294
13a	Transfer From Bond Proceeds	328,000	382,983	403,782
14a	Transfer From Commercial Paper Proceeds	0	0	0
15a	WIFIA Proceeds	0	9,063	20,772
16a	WIFIA Match Funding Proceeds	0	9,338	20,958
17a	Penn Vest Loan	54,874	83,354	78,438
18a	Capital Account Deposit	23,383	24,295	25,242
19a	Transfer from Residual Fund	16,600	21,071	25,858
20a	Interest Income on Construction Fund	<u>5,663</u>	<u>6,641</u>	<u>7,482</u>
21a	Total Available	952,200	1,151,318	1,302,825
22a	Net Cash Financing Required	<u>337,627</u>	<u>431,024</u>	<u>519,254</u>
23a	Ending Balance	614,573	720,294	783,571
Capital Program Net Encumbrances				
24	Beginning Balance	454,669	507,672	614,431
25	Annual Encumbrances (d)	390,629	577,611	575,956
26	Project Expenses (d)	<u>(337,627)</u>	<u>(470,851)</u>	<u>(541,037)</u>
27	Ending Balance	507,671	614,432	649,350
28	Allowance Commitments Prior to Bond Issue	<u>96,268</u>	<u>95,993</u>	<u>120,059</u>
29	Target Balance	603,940	710,424	769,409
Debt Reserve Fund				
30a	Beginning Balance	189,723	199,328	200,423
31a	Transfer From Bond Proceeds	8,500	-	-
32a	Transfer From Residual Fund (e)	1,105	1,096	4,298
33a	Debt Service Reserve Release	<u>-</u>	<u>-</u>	<u>-</u>
34a	Ending Balance	199,328	200,423	204,721
35a	Interest Income on Debt Reserve Fund	1,945	1,999	2,026

Capital Account Deposit Calculation - User

		10.525%	9.841%	
	<u>2023</u>	<u>2024</u>	<u>2025</u>	
A	Net Cash Financing Required	\$ 337,627	\$ 431,024	\$ 519,254
B	Cash Funded Capital Ratio	<u>11.8%</u>	<u>10.5%</u>	<u>9.8%</u>
C	Cash Funded Required	\$ 39,982	\$ 45,365	\$ 51,100
D	Residual Fund Deposits	<u>16,600</u>	<u>21,071</u>	<u>25,858</u>
E	Capital Account Deposits	\$ 23,383	\$ 24,295	\$ 25,242

(a) Amount of Debt Reserve Account estimated based on outstanding and proposed debt service payments.

(b) Cost of bonds issuance reflects actual cost in FY 2023, assumed 0.61 percent of issue amount in FY 2024 to 2025, and assumed 1.0% of issuance in FY 2026 to FY 2028.

(c) Deposits equal proceeds from sale of bonds less transfers to Debt Reserve Account and Costs of Issuance.

(d) Excluding PENNVEST and WIFIA.

(e) Transfer from Residual Fund to provide PENNVEST share of Debt Reserve Account requirement.

PHILADELPHIA WATER DEPARTMENT
Summary of Existing and Proposed Debt Service
For the Rate Years Ending June 30, 2024 and 2025
(\$000s)

Line No.	Description	2023	2024	2025
Revenue Bonds				
1a	Existing (a)	\$ 187,747	\$ 185,847	\$ 183,090
	<u>Proposed</u>			
	<u>Interest Rate</u>			
	<u>Bond Size</u>			
2a	Fiscal Year 2023 (c)	-	-	-
3a	Fiscal Year 2024 (c)		\$ 16,075	\$ 25,096
4a	Fiscal Year 2025 (c)			16,948
8a	Total Proposed	-	16,075	42,044
9a	Total Revenue Bonds	\$ 187,747	\$ 201,921	\$ 225,134
Pennvest Loans				
10a	Pennvest Loans - Parity Pennvest (d)	10,935	12,031	16,329
Commercial Paper				
11a	Commercial Paper	900	900	900
WIFIA				
12a	WIFIA	\$ -	\$ 17	\$ 956
13a	Total Senior Debt Service	199,582	214,869	243,318

(a) Projected debt service amounts include debt service for all Water and Wastewater Revenue Bonds and Revenue Refunding Bonds

issued prior to July 1, 2022 and the Water and Wastewater Revenue Bond Series 2022c (issued in August 2022).

(b) Projected debt service for the Water and Wastewater Revenue Bond Series 2022c (issued in August 2022) included with Existing Bonds.

authorization based on 5.50% interest rate;

and assume issuance during the first quarter of the fiscal year.

(d) Projected debt service amounts assume interest only payment for the first year of the bond authorization based on 6.00% interest rate;

and assume issuance during the first quarter of the fiscal year.

(e) Includes projected PENNVEST Loans.

Philadelphia Water, Sewer and Storm Water Rate Board

Outline for the Simple Model

Amawalk
Consulting Group LLC

March 20, 2023

Notice to Recipients-Users of the Model

The Philadelphia Water, Sewer and Storm Water Rate Board has provided this Model and Model Outline (the “Model”), which includes formulas and preloaded information, to facilitate participation in the 2023 General Rate Proceeding and the Board’s own consideration of participants’ proposals and comments. The City of Philadelphia owns the Model but makes no representations or warranties regarding the Model and its accuracy or completeness. The Model is provided “as is” and “with all faults.” Each participant is responsible for any testimony that involves the Model. The City grants a nonexclusive, revocable license to use the Model on the conditions that the direct or indirect recipient not use this Model, or permit its use, for commercial purposes, and not make any changes to the Model except to enter data solely in the cells marked for “User Input.” The City is not responsible for any defects, including computer viruses. The City is not responsible for any consequence of any recipient’s use of or reliance on the Model.

Model Outline

The material presented herein is preliminary in nature and subject to change.

Introduction

Purpose of the Model: to replicate Table C-1A (Base Rates Excluding TAP-R Surcharge) as used by the City of Philadelphia Water Department (“PWD”) in its General Rate Filings and easily incorporate changes made by the User of the Model to illustrate the effects of certain changes on revenue requirements, the percentage change in those requirements, debt service coverage and other parameters. It enables the Rate Board to quickly see the estimated effects of its determinations during a Rate Proceeding. The Model is not intended to calculate the costs of service, calculate individual rates or estimate the impacts of changes on customer classes or customers. The User is cautioned that any changes made as a result of User Input provide estimates of the impacts on revenue requirements; actual impacts will be calculated by PWD. No guarantees or warranties are made that changes made by the User will provide the same results that the PWD will calculate. Any changes made to the formulae in the Model may invalidate such estimates.

Date and scope of the Model: This Model is being used for the 2023 General Rate Proceeding. The PWD has filed for rate adjustments for its 2024 and 2025 fiscal years that begin on July 1 of each year. The Model includes data provided by PWD for 2023 (updated to reflect its projections as of the date of the filing under the 2023 General Rate Proceeding). The 2023 data is provided for information purposes. Data is provided for 2024 and 2025 to reflect the PWD proposals for those years; the Model also includes projected figures for 2026 through 2028. It is noted that the Rate Board is only considering rate proposals for 2024 and 2025 in this 2023 General Rate Proceeding.

Source of inputs to the Model: Table C-1 summarizes the projected revenue requirements, percentage changes in those requirements, debt service coverage and other data as part of a General Rate Filing. The PWD provides an Excel version of Table C-1A (Projected Revenues & Revenue Requirements, Base Rates Excluding TAP-R Surcharge), together with Table C-1B (Projected Revenues & Revenue Requirements, TAP-R Surcharge Excluding Base Rates), and

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Table C-1 (Projected Revenues & Revenue Requirements, Base and TAP-R Surcharge Rates). For purposes of this Model, we use Table C-1A, Projected Revenue and Revenue Requirements, Base Rates Excluding TAP-R Surcharge. The Model adds data from Line 17 of Table C-1B as provided by PWD in order to complete the additions and withdrawals to the Rate Stabilization Fund to reflect funds attributable to TAP-R. The following supporting Projection Tables are also provided by PWD as part of its Filing in a General Rate Proceeding:

- C-2: Projected Rate Stabilization Fund and Covenants Metrics Performance
- C-3: Projected Receipts Under Existing Rates
- C-6: Projected O&M Expenses
- C-7: Projected Capital Improvement Program (CIP)
- C-8: Projected Flow of Funds - Construction Fund & Debt Reserve Account
- C-9: Summary of Existing & Proposed Debt Service

The data from the tables (i.e., C-1A and C-2 through C-9) provided by PWD is included in the Model in each of the numbered, shaded lines. The Simple Model then adds a corresponding new line "a" after most of the existing lines, typically in an un-shaded format, except for the lines highlighted in orange and for Table C-7, as noted herein. The lines with the letter "a" reflect computations performed within the Model to reflect changes made by the User of the Model. The "a" lines that offer opportunities for User to provide inputs are highlighted in orange with numbers shown in **red**.

Projected Revenues and Revenue Requirements Worksheet (Table C-1A, Base Rates Excluding TAP-R Surcharge): The Simple Model replicates the figures for Table C-1A from the Advance Filing, adding a corresponding line "a" after each of the existing lines. The notes below refer to the content/sources for each of the "a" lines.

- Operating Revenue figures for lines 1a (Water Service Existing Rates) and 2a (Wastewater Service Existing Rates) are from the Table C-3: Receipts Under Existing Rates and will reflect changes made in Table C-3 by the User, if any. Line 3a (Total Service Revenue - Existing Rates) will add the results of Lines 1a and 2a.
- Line 4a is the current year and no additional revenue can be added to this line.
- 5a through 9a reflect the calculated additional revenue that is needed in each year for the columns of 2024 through 2028. Each line also shows the calculated percentage change in revenue requirements in the Calculated % Increase column. Revenue requirements and the calculated % change are not entered in lines 5a through 9a but rather are determined from inputs in other locations in the Model including O&M expenses, debt service, Rate Stabilization Fund additions and subtractions and other assumptions. The Calculated % change in revenue requirements is based, in large part, on the Total Additional Service Revenue Required (see below).
- **The one change that the User can make in lines 5a through 9a is the number of months that the first year of a rate increase is in effect. This input has an effect on the Calculated % Increase; the longer the period that the % increase is in effect, the less of a % increase in revenues is needed in that first year to satisfy the additional service revenue required.** Since recent increases have been effective September 1 which is two months after the start of the fiscal year; the Model uses 9.794 to approximate the result presented by the PWD. (The number of months for the calculation is lower than the

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number of months remaining in the fiscal year, because bills issued during the first month will include some billing at the prior rates. The spreadsheet automatically adjusts the number of months an increase is in effect (10 in this example) to the effective number (here 9.794.) The full effect of a rate increase is achieved in years after the initial year. **If a User wishes to change the number of months that a rate increase applies to, it is suggested that the User subtract the difference in the number of months from the assumed base figure of 9.794. In other words, the base figure anticipates a September 1 effective date; if a November 1 effective date was desired, then the User should subtract two months from the existing base figure or $9.794 \text{ minus } 2 = 7.794$.**

It is noted that the benefit of a revenue increase in a given year continues as an increase in the revenue base in subsequent years. The value of the benefit in future years mirrors the trend in line 3a; i.e., if revenues under existing rates decline in future years then the value of the benefit declines at the same pace and if revenues under existing rates increase in future years then the value of the benefit increases at the same pace.

- 10a (Total Additional Service Revenue Required) is equal to the addition of lines 4a through 9a. However, the amount required in each year is calculated further down in the C-1A worksheet in lines 129 through 143 of the worksheet under the sub-heading "Calculation of Additional Service Revenue Required", which draws information from sources in the Model to generate the additional service revenue required in each year; no User input is required in lines 129 through 143 of the worksheet.
- 11a (Total Water and Wastewater Service Revenue) reflects the addition of line 3a (Total Service Revenue - Existing Rates) plus line 10a (Total Additional Service Revenue Required).
- 11xa (Other Income) is included in C-1A, recognizing that this line is blank in the most recent General Rate Filing. It is included in the Model for potential future inputs.
- 12a (Other Operating Revenue) shows figures from Table C-3: Receipts Under Existing Rates. **The User can alter the Other Operating Revenue by changing Table C-3 Projected Receipts Under Existing Rates, lines 8a (Other) and 13a (Affordability Program Discount Cost).**
- 13a (Debt Service Reserve Interest Income), 27a (Subordinate Debt Service) and 28a (Transfer to Escrow) are included in C-1A, recognizing that these lines were blank in the most recent General Rate Filing. These lines are included in the Model for potential future input in these lines.
- 14a (Operating Fund Interest Income) and 15a (Rate Stabilization Interest Income) shows figures from Table C-3: Receipts Under Existing Rates.
- 16a (Total Revenues) equals the sum of lines 11a through 15a.
- 17a (Total Operating Expenses) shows figures from Table C-6: O&M Expenses and is displayed as a subtraction against revenues.
- **18a (Rate Stabilization Fund Transfers) can be modified here by the User. By altering the figures in this row, the User can increase or decrease the end of year balance in the Rate Stabilization Fund, while simultaneously making less or more funds available to meet the revenue requirements. Line 18a can be additions, subtractions or zero transfers.**
- 19a (Net Revenues After Operations) equals the sum of lines 16a through 18a.
- 20a (Debt Service on Outstanding Bonds), 21a (Pennvest Debt Service), 22a (Debt Service on Projected Future Bonds), 23a (Commercial Paper Interest) and 24a (WIFIA

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loan) are from Table C-9: Summary of Existing & Proposed Debt Service. These lines are shown as subtractions against revenues.

- 25a (Total Senior Debt Service) equals the sum of lines 20a through 24a and is shown as a subtraction against revenue.
- 26a is a computation of Senior Debt Coverage (line 19a (Net Revenues After Operations) divided by line 25a (Total Senior Debt Service)).
- 27a (Subordinate Debt Service) and 28a (Transfer to Escrow) are from PWD; these were zero in the most recent General Rate Filing.
- 29a (Total Debt Service on Bonds) equals sum of lines 25a (Total Senior Debt Service), 27a (Subordinate Debt Service), and 28a (Transfer to Escrow). 29a is shown as a subtraction against revenue.
- 30a (Capital Account Deposit) is from Table C-8: Flow of Funds - Construction Fund & Debt Service Reserve. The User cannot alter the Capital Account Deposit for this General Rate Proceeding. See Table C-8 for changes the User can make to the total cash being used for construction. Line 30a is shown as a subtraction against revenue.
- 31a (Total Coverage) equals line 19a (Net Revenues After Operations) divided by the sum of: line 25a (Total Senior Debt Service) plus line 27a (Subordinate Debt Service) plus line 30a (Capital Account Deposit).
- 32a (Residual Fund, Beginning of Year Balance) - the initial year is provided by PWD; in each subsequent year it equals the prior year ending balance (based on figures provided by PWD).
- 33a (Interest Income on Residual Fund) is provided by PWD.
- 33xa is included in C-1, recognizing that this line is blank in the most recent General Rate Filing. It is included in the Model for potential future inputs.
- 34a (End of Year Revenue Fund Balance) is calculated but assumed to equal the PWD figures in the corresponding lines: Line 19a (Net Revenues After Operations) plus line 29a (Total Debt Service on Bonds) plus line 30a (Capital Account Deposit).
- 35a (Deposit for Transfer to City General Fund) and the offsetting line 37a (Transfer to City General Fund) are provided by PWD.
- 35xa is included in C-1A, recognizing that this line is blank in the most recent General Rate Filing. It is included in the Model for potential future inputs.
- 36a (Transfer from the Residual Fund to the Construction Fund) is from Table C-8: Flow of Funds - Construction Fund & Debt Service Reserve. It is shown as a subtraction against moneys available in the Residual Fund. **The User can alter the Transfer from the Residual Fund to the Construction Fund by changing the percentage of capital to be paid for with cash (the Cash Funded Capital Ratio) in the Model Worksheet C-7,8,9 CIP - Debt Service, row 145, labeled B. Transfers to the Construction Fund from the Residual Fund plus Capital Account Deposits in each year equals the cash to be used to finance construction in that year (in lieu of using the proceeds of bonds). The Model keeps the Capital Fund Deposits the same as proposed by PWD; altering the Cash Funded Capital Ratio changes the Transfer from the Residual Fund to the Construction Fund and thus the total annual capital cash contribution. It is noted that more or less cash used for construction results in a corresponding decrease or increase in bonds issued to pay for construction which then either decreases or increases debt service on those bonds. It is also noted that by changing the Cash Funded Capital Ratio, the Transfer from the Residual Fund is changed,**

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resulting in a greater or lesser amount of revenues required to pay as cash for construction. If the User wishes to change the aggregate year-end balance of the Rate Stabilization Fund or the combined Residual Fund and Rate Stabilization Fund, the deposits/withdrawals from the Rate Stabilization Fund should be changed in line 18a. It is noted that line 34x is used to compute the change in the revenue requirements attributable to changes in the amount of cash to be used for construction which is then reflected in transfers from the Residual Fund to the Construction Fund.

- 38a (Transfer to Debt Service Reserve Fund) are provided by PWD.
- 39a (End of Year Balance) is calculated as the sum of lines 32a through 38a, with the result being equal to the values provided by PWD.
- 40a (Rate Stabilization Fund, Beginning of Year Balance) - the initial year is provided by PWD; in each subsequent year it equals the prior year ending balance.
- 41a (Deposit to/withdrawal from Rate Stabilization Fund) - the values are based on User input for line 18a.
- 42a (Deposits to/from the RSF for TAP-R) are provided by the PWD.
- 43a (Rate Stabilization Fund, End of Year Balance) - is calculated as the sum of lines 40a through 42a.

Beginning with row 129 and continuing through row 143 of the worksheet for Table 1-CA, the Model includes a table that is used to compute revenue requirements. This is a supporting calculations table which has no User inputs and should not be modified by the User.

Supporting Tables

Receipts Under Existing Rates Worksheet (Table C-3): The Model replicates Table C-3, adding a corresponding line "a" after each of the existing lines. The notes below refer to the content/sources for each of the "a" lines.

- **1a (Water Sales Receipts), 2a (Sanitary Sewer), 3a (Stormwater): The User can make changes by line item in each year. PWD can be requested to separately estimate the impacts of differing assumptions on water consumption, number of customers, rate of bill collection, etc. For example, the User may want to see the estimated impact on receipts of an incremental 1% consumption change by year for Water Sales Receipts and Sanitary Sewer, or each 1% change in the efficiency of bill collection. These requests can be made "off-line" and then the User can make changes by line item.**
- 4a (Subtotal Wastewater Service Receipts) reflects the sum of 2a (Sanitary Sewer) plus 3a (Stormwater)
- 5a (Total Water & Wastewater Receipts) reflects the sum of 1a (Water Sales Receipts) plus 4a (Subtotal Wastewater Service Receipts). Line 5b simply calculates the difference between the amount shown in 5a compared to line 5, reflecting the aggregate changes (if any) made by the User above; line 5 serves no function in the Model other than informational purposes.
- 6a (Penalties), 7a (Miscellaneous City Revenue), 9a (Federal & State Grants), 10a (Permits Issued by L&I), 11a (Miscellaneous - Procurement), 12a (City & USEF Grants), and 14a (Release From Debt Service Reserve) are all as provided by PWD.
- **8a (Other) The User may make adjustments in this line. The change will be reflected in line 15a (Other Operating Revenues) as noted below.**
- **13a (Affordability Program Discount Cost): The User may make adjustments to this line recognizing that it is currently zero since the cost is separately recovered through TAP-R.**
- 15a (Other Operating Revenues) equals the sum of 6a through 14a, the subtotal of all User changes for those lines would be reflected in this line
- 16a (Debt Service Reserve Fund), 17a (Operating Fund) and 18a (Rate Stabilization Fund) Interest Income are provided by PWD.
- 19a (Total Interest Income) equals the sum of 16a, 17a and 18a.
- 20a equals the sum of 5a, 15a and 19a and is the total of all Receipts incorporating User changes.

Any User changes affecting Water or Wastewater Receipts by year in Table C-3 will be shown in Table C-1A as line items 1a or 2a, and 3a. Figures from line 15a (Other Operating Revenue) of Table C-3 are shown in line 12a (Other Operating Revenue) of Table C-1A.

Projected Operation and Maintenance Expenses (Table C-6): The Model replicates Table C-6, adding a corresponding line "a" after each of the existing lines. The notes below refer to the content/sources for each of the "a" lines.

- **1a, 2a (Personnel-related Expenses) The User can make changes by line item in each year. Line 1a reflects staffing levels, wages/salaries and wage/salary escalations, among other factors. Line 2a reflects Pension and Fringe Benefits Other than Pension. 3a is the sum of 1a and 2a. PWD can be requested to separately estimate**

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the impacts of differing assumptions on staffing levels, escalation factor, etc. These requests can be made "off-line" and then the User can make changes by line item.

- **4a, 5a, 6a, 7a (Purchase of Services) User can make changes by line item of expense in each year, covering Power, Gas, SMIP/GARP and Other.**
- 8a (Subtotal) is the sum of 4a through 7a
- **9a, 10a (Materials & Supplies) The User can make changes by line item of expense in each year, covering Chemicals and Other.**
- 11a (Subtotal) is the sum of 9a and 10a
- **12a and 13a (Equipment, Indemnities & Transfers) The User can make changes by line item of expense in each year.**
- 14a presents a Subtotal of Expenses prior to Liquidated Encumbrances. It is the sum of lines 3a, 8a, 11a, 12a and 13a.
- **15a (Liquidated Encumbrances) The User can make changes in each year.**
- 16a (Total Expenses) is calculated as the sum of 14a and 15a.

The Total Expenses by year in 16a reflecting all changes made by the User are shown in Table C-1A as line item 17a.

Projected Capital Improvement Program (CIP) (Table C-7): The Model replicates Table C-7, adding a corresponding line "a" after only line 17 (Project Expenses). The Model assumes that the CIP will not be altered, only the Project Expenses can be changed. The Project Expenses reflect the estimated amount of cash actually needed in each year for capital spending. The notes below refer to 17a.

- **17a (Project Expenses) The User can make changes in each year. Please note that changing the Project Expenses results in changes to the Residual Fund Account Deposits for construction, the Transfer From Bond Proceeds, the Bond Issue and resulting Debt Service (Tables C-8 and C-9, as appropriate).**
- 17b is the sum of 17 and 17a and reflects the projected cash required for capital projects each year. The results of 17b are carried forward to Table C-8: Flow of Funds - Construction Fund & Debt Service Reserve Account, line 22a (Net Cash Financing Required).

The data provided by PWD includes line items for encumbrances and adjustments; these are included in the Model for information purposes but are not used. Project expenses must be paid through the proceeds of bonds or cash, so changes in Project Expenses alter the funds needed from a combination of the proceeds of bonds and cash.

Projected Flow of Funds - Construction Fund & Debt Service Account (Table C-8): The Model replicates Table C-8, adding a corresponding line "a" after each of the existing lines. The notes below refer to the content/sources for each of the "a" lines.

- 1a (Bond Proceeds) is calculated and equals 2a (Debt Reserve Fund), plus 3a (Cost of Issuance), plus 4a (Refund Commercial Paper), plus 5a (Construction Fund). The figures in 2a and 4a are from PWD.
- **3a (Cost of Bond Issuance) can be changed by the User; such changes will impact the Bond Sizing and resulting Debt Service.**
- 5a (Construction Fund deposits) equals 13a (Transfer from Bond Proceeds) which is computed as follows: 21a (Total Available), less 20a (Interest Income on Construction

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Fund), less 19a (Transfer from Residual Fund), less 18a (Capital Account Deposit), less 17a (Pennvest Loan), less 16a (WIFIA Matching Funding Proceeds), less 15a (WIFIA Proceeds), less 14a (Transfer from Commercial Paper Receipts), less 12a (Beginning Balance).

- **5a can be changed by the User by making an adjustment to the Project Expenses (line 17a of Table C-7).**
- 6a (Total Issue) equals the sum of 2a, 3a, 4a and 5a.
- 7a through 11a (Disposition of Commercial Paper) are equal in each line to the figures provided by PWD.
- 12a (Construction Fund, Opening Balance) - the initial year is provided by PWD; in each subsequent year it equals the prior year ending balance (provided by PWD).
- 13a (Transfer from Bond proceeds) is described above.
- 14a (Transfer from Commercial Paper Proceeds), 15a (WIFIA Proceeds), 16a (WIFIA Matching Funding Proceeds), 17a (Pennvest Loans), 18a (Capital Account Deposit) and 20a (Interest Income on Construction Fund) are equal to the values provided by PWD.
- **19a (Transfer from Residual Fund) can be changed by the User in the Model Worksheet C-7,8,9 CIP - Debt Service, row 145, labeled B, by altering the Cash-Funded Capital Ratio.**
- 21a (Total Available) equals 22a (Net Cash Financing Required) plus 23a (Ending Balance).
- 22a (Net Cash Financing Required) equals 17b from Table C-7.
- 23a (Construction Fund, Ending Balance) equals the figures provided by PWD which represent line 21 minus 22.
- 24 through 29 (Capital Program Net Encumbrances) are equal in each line to the figures provided by PWD.
- 30a through 34a (Debt Service Reserve Fund) are equal in each line to the figures provided by PWD.

The cost of debt issuance, the cash required in each year as well as the level of cash-funded versus debt-funded can be changed by the User with a resulting impact on the principal amount of debt to be issued in each year, which impacts the debt service calculations in Table C-9.

Summary of Existing & Proposed Debt Service (Table C-9): The Model replicates Table C-9, adding a corresponding line "a" after each of the existing lines. The notes below refer to the content/sources for each of the "a" lines.

- **1a (Debt Service on Outstanding Bonds) is currently equal to the values provided by PWD but can be changed by the User.**
- 2a through 7a represent debt service on anticipated future borrowing; the bond issue sizing in each year is from Table C-8. Changes made by the User in the Cash Flow Adjustment (Table C-7), as well as the Cost of Bond Issuance and the Cash Funded Capital Ratio (Table C-8) will be reflected in both the Total Issue line (6a of Table C-8) and also in the Bond Size column of Table C-9.
- **The User can change the interest rate assumptions on future bonds in each year, with a resulting impact on debt service (by formula) in lines 2a through 7a.**
- 8a (Total Proposed) is the sum of 2a through 7a and reflects total debt service on proposed future bonds.
- 9a (Total Revenue Bonds) is the sum of 1a and 8a.

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- 10a, 11a and 12a (Pennvest Debt Service, Commercial Paper and WIFIA loan) are from PWD and are not changed by the User.
- 13a (Total Senior Debt Service) will reflect the sum of debt service by year adding 9a, 10a, 11a and 12a, including all User changes. Figures shown in line 13a are also shown in line 25a (Total Senior Debt Service) in Table C-1A.

Combined Utility: Projected Rate Stabilization Fund & Performance vs. Covenants (Table C-2): The Model provides a summary of key parameters and their values, as proposed and as modified by the User, together with targeted values for those parameters, as appropriate. For example:

- End-of-year balances in the Rate Stabilization Fund and in Combined Residual Fund and Rate Stabilization Fund
- Debt service coverage (Senior, Total and Senior from Current Revenues)
- O&M Actual to Budget Ratio
- Rate Ordinance Requirement Compliance
- Cash-financed construction deposits
- Cash-financed construction as a percentage of total construction \$ needs

No inputs are made by the User in Table C-2; all figures are either drawn from other tables in the Model or provided directly by PWD.

	FY 2024	FY 2025	Summary Category	Notes
1				
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17				
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17				
18				
19				

	Based on PWD-I-1		Summary Category	Based on LKM & JR Workpapers		Difference		Notes
	FY 2024	FY 2025		FY 2024	FY 2025	FY 2024	FY 2025	
SUMMARY CHECK								
1	Revenue (Schedule LM_JR-1, Line 3a)	(\$5,610)	(\$5,871)	Rev	(\$5,610)	(\$5,871)	(\$0)	(\$0)
2	Other Operating Revenue (Schedule LM_JR-1, Line 12a)	(\$8,915)	(\$8,915)	Other Rev	(\$8,915)	(\$8,915)	\$0	\$0
3	Interest Income (Schedule LM_JR-1, Lines 14a and 15a)	(\$1,821)	(\$1,999)	Int Inc	(\$1,821)	(\$1,999)	\$0	(\$0)
<i>O&M Related Adjustments</i>								
4	Class 200 - Other (Schedule LM_JR-3, Line 7a)	(\$1,445)	(\$9,285)	200	(\$1,445)	(\$9,285)	\$0	\$0
5	Class 300 - Other (Schedule LM_JR-3, Line 10a)	(\$1,298)	(\$2,570)	300	(\$1,298)	(\$2,570)	\$0	(\$0)
6	Class 307 - Chemicals (Schedule LM_JR-3, Line 9a)	\$0	(\$11,442)	307	0	(\$11,442)	\$0	(\$0)
7	Class 400 - Equipment (Schedule LM_JR-3, Line 12a)	(\$323)	(\$757)	400	(\$323)	(\$757)	\$0	(\$0)
8	Class 800 - Transfers (Schedule LM_JR-3, Line 13a)	(\$323)	(\$640)	800	(\$323)	(\$640)	(\$0)	(\$0)
9	Liquidated Encumbrances (Schedule LM_JR-3, Line 15a)	\$208	\$3,290	Liq Enc	\$208	\$3,290	\$0	\$0
	Subtotal (Schedule LM_JR-1, Line 17a)	(\$3,180)	(\$21,403)		(\$3,180)	(\$21,403)	\$0	\$0
9	Debt Service (Schedule LM_JR-1, Line 22a)	(\$5,009)	(\$11,836)	DS	(\$5,009)	(\$11,836)	(\$0)	(\$0)
10	Debt Service Coverage (Schedule LM_JR-1, Lines 34a and 34x)	(\$8,729)	(\$8,543)	DS Coverage	(\$8,729)	(\$8,543)	\$0	\$0
10	Total	(\$33,264)	(\$58,567)		(\$33,265)	(\$58,567)	\$0	\$0
Additional Revenues								
11	PWD Filing	\$80,412	\$162,131		\$80,412	\$162,131		
12	LKM Exhibit (Schedule LM_JR-1, Line 10a)	\$47,147	\$103,563		\$47,147	\$103,563		
13	Adjusted Additional Revenues	(\$33,265)	(\$58,567)		(\$33,265)	(\$58,567)		
14	Difference (Line 13 - Line 10)	(\$0)	(\$0)		\$0	\$0		